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Karine Grand'Maison

AUTEUR DE LA THÈSE / AUTHOR OF THESIS

M.A. (Human Kinetics)

GRADE / DEGREE

School of Human Kinetics

FACULTÉ, ÉCOLE, DÉPARTEMENT / FACULTY, SCHOOL, DEPARTMENT

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TITRE DE LA THÈSE / TITLE OF THESIS

Terry Orlick

DIRECTEUR (DIRECTRICE) DE LA THÈSE / THESIS SUPERVISOR

CO-DIRECTEUR (CO-DIRECTRICE) DE LA THÈSE / THESIS CO-SUPERVISOR

EXAMINATEURS (EXAMINATRICES) DE LA THÈSE / THESIS EXAMINERS

Charlotte Beaudoin

Pierre Trudel

Gary W. Slater

LE DOYEN DE LA FACULTÉ DES ÉTUDES SUPÉRIEURES ET POSTDOCTORALES /
DEAN OF THE FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES

MENTAL SKILLS OF
ELITE IRONMAN TRIATHLETES

Karine Grand'Maison

LL.L, University of Ottawa, 2001

LL.B, University of Ottawa, 2002

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ABSTRACT

Elite athletes use mental strategies in a wide variety of sports to enhance performance (Mahoney, Gabriel, & Perkins, 1987; Orlick & Partington, 1999; Schomer, 1987; Tammen, 1996; Ungerleider & Golding, 1991). High-level athletes have been found to use mental strategies before, during, and after competition (Orlick, 2000). Little is known, however, about the psychological strategies that Ironman triathletes use to race successfully. The question of how these triathletes mentally prepare to be their best in competitions has not been addressed in the literature.

The purpose of this study was to explore the mental skills employed by elite Ironman triathletes by exploring the following research question: How do elite Ironman triathletes get themselves mentally ready to be their best during competitions?

The present study provides meaningful insight into how elite Ironman triathletes mentally prepare. The main areas addressed include detailed race planning, following personal routines, focusing, controlling discomfort and other distractions, dealing with nutrition, having confidence in one's abilities, using imagery, staying positive, and connecting with one's body.

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INTRODUCTION

Triathlon is an exciting and relatively new sport that came to life 25 years ago in Hawaii. The legend alleges that in the midst of an argument concerning who was in better shape, swimmers, runners or cyclists, John Collins had the somewhat novel idea of solving the matter by putting together the Waikiki Rough Water Swim, the Round the Island Bike race and the Honolulu Marathon, all in one single race. It was at that moment that the Ironman[®] triathlon (or ultraendurance triathlon), an ultimate test of human physical and mental capabilities, was born (IronmanLive, 2004).

Since the foundation of the International Triathlon Union in 1989, the sport of triathlon has gained worldwide recognition and now has over a hundred affiliated national federations (International Triathlon Union, 2004). More recently, triathlon has exploded into a major sport, with a shortened distance race making its first Olympic appearance in Sydney in 2000. Triathlon has also emerged as a popular form of active recreation, and of the six million triathletes worldwide, it is estimated that 150,000 people in the United States and 50,000 in Canada participate each year in a multi-sport race (USA Triathlon, 2004; Triathlon Canada, 2004). With the Hawaiian Ironman World Championship still one of the most prestigious triathlons in the world, the Ironman triathlon is rapidly gaining popularity among triathletes (Triathlon Canada). Today, it has evolved to become a thriving competition that brings ultra fit athletes from various backgrounds together.

The Ironman is a three-discipline event consisting of a 3.8-km swim, a 180-km cycle, followed by a 42.2-km marathon run. Elite Ironman triathletes are exceptional

ultraendurance athletes. The race preparation of elite ultraendurance triathletes is astonishing. Their weekly training schedule will typically include at least 12 km of swimming, 370 km of cycling and 70 km of running, totaling an average of over 40 hours of physical training only for some of the top athletes (Tinley, 2003; O'Toole, Douglas & Hiller, 1989). The race itself is an extremely intense challenge taking from 8 to 17 hours to complete. The excessive level of strenuous physical exertion required of the triathletes can lead to several medical problems such as dehydration and heat exhaustion, often complicated by hyponatremia (Hiller et al., 1987). This grueling event pushes the limits of human endurance and consequently demands considerable mental toughness simply to complete the distance (Schofield, Dickson, Mummery, & Street, 2002).

Despite the growing popularity of Ironman races, little is known about the psychological strategies that Ironman triathletes use to successfully accomplish their mission. The purpose of this study was to explore the mental skills employed by elite Ironman triathletes. This study explored the following research question: How do elite Ironman triathletes get themselves mentally ready to be their best during competitions?

The study was carried out by interviewing 10 elite ultradistance triathletes. Elite athletes were defined as those individuals whose pursuit of excellence in sport has led to success in competition at the professional level (Baillie & Ogilvie, 2002). More specifically, success for this study means that elite athletes have placed first or second in major Ironman races. In-depth interviews were conducted with a semi-structured interview guide consisting of questions designed to explore how these elite triathletes get themselves mentally prepared for important competitions.

No previous study had specifically addressed the mindset of elite Ironman triathletes. It was believed that this study would lead to a better understanding of the psychology of success in Ironman events and other ultraendurance sports and would also provide practical strategies that could be of value to increasing numbers of Ironman triathletes who want to safely and successfully pursue their endeavors.

REVIEW OF LITERATURE

Due to triathlon's recent emergence as a popular sport, not many studies on Ironman triathletes could be located except for those looking into the extreme physical demands placed on these athletes. This chapter gives an overview of the current literature in regards to the psychology of Ironman triathletes, starting with a general layout of studies carried out on the psychological skills and characteristics of elite athletes. Then, it reviews the studies carried out on certain psychological characteristics of short-distance triathletes, and those of endurance and ultraendurance athletes. Finally, the state of knowledge on the psychology of Ironman triathletes is examined.

Psychology of Elite Athletes

It is common knowledge that elite athletes possess certain psychological characteristics or resort to particular mental skills in their endeavors, in addition to their physical, technical and tactical training. In a landmark study that combined both interviews and surveys, Orlick and Partington (1988) uncovered the psychological elements to which Olympic athletes attribute their successful performances. As a result of the extensiveness and idiographic nature of their investigation, the study opened up, for the first time, a window on the intangible world of athletes' psychological training and preparation.

Orlick and Partington (1988) found that mental skills were an extremely important aspect of an athlete's performance. In fact, a quantitative analysis showed that athletes' mental readiness was the only statistically significant factor, among mental, physical and technical readiness, that was linked to their final Olympic ranking. From the

qualitative analysis, several elements of success emerged as part of mental readiness, namely having a total commitment to pursuing excellence, engaging in quality training, which includes daily goal-setting, competition simulation and imagery, as well as engaging in quality mental preparation for competition. For elite Olympic athletes, mental preparation encompassed having a refined competition plan, a competition focus plan, an ongoing post competition evaluation procedure and a distraction control plan.

Orlick and Partington's (1999) research and consulting experiences have vividly identified important links between level of performance achievement and certain key mental strategies. An elite world champion as well as national team and university athletes were studied to compare the mental strategies used before, during and after competitions. An effective pre-competition focus, pre-competition distraction control, competition focus, competition distraction control, and post-competition learning characterize the mental approach top performers bring to quality performance. Finally, Orlick (2000) combined his findings into a very simple yet complete model, the Wheel of Excellence. The Wheel's seven elements, which encompass all the mental skills drawn from previous research as well as over 25 years of consulting experience (Orlick, 1980; Orlick & Partington, 1988, 1999) are labeled commitment, belief, positive images, mental readiness, constructive evaluation, full focus, and distraction control.

The different pieces of literature do not agree on a definition of the word *elite*. Studies on triathletes and endurance athletes have defined elites as: participants in the U.S. Olympic trials (Ungerleider & Golding, 1991; Silva & Appelbaum, 1989); runners with race times below 3 hours for males and below 3½ hours for females (Schomer,

1986); participants in international competitions (Tammen, 1996); athletes having placed fourth or better in national championships or world championships (Mahoney, Gabriel, & Perkins, 1987); and athletes having national or regional abilities only (Antonini-Philppe, Reynes, & Bruant, 2003). It is clear that very few studies were conducted with *the best* athletes. A too large definition of elite has two drawbacks. First, investigating regional-level athletes on their mental skills does not account for the fact that some people simply have superior physical talent which can compensate, but only up to a certain level, for poor or even nonexistent mental abilities. Second, Orlick and Partington (1988) clearly demonstrated that mental readiness provided the only statistically significant link with final Olympic ranking. This means that even within that segment of the athletic population, not all athletes actually possess exceptionally strong mental skills. To know what mental strategies really work, therefore, one must look at what the *very best* in the world do, which is what this study attempted to do. Elite athletes in this study were therefore defined as having place first or second at Ironman races.

Additional research has supported the role that mental skills have played in excelling in sport. In a questionnaire-based study assessing the psychological skills relevant to exceptional athletic performance, it was found that elite athletes across 17 sports reported stronger skills in regards to concentration, anxiety management, self-confidence, mental preparation and motivation than their nonelite counterparts (Mahoney, Gabriel, & Perkins, 1987). Despite major limitations (self-reported, true or false answers to a pilot instrument as well as age and gender differences), the results of

this study seemed to converge in many respects with Orlick and Partington's (1988) investigation.

Similarly, a study was conducted with U.S. elite track and field athletes participating in the Olympic trials in preparation for the Olympic Games in Seoul (Ungerleider & Golding, 1991). The authors surveyed the athletes about their knowledge on mental practice, imagery and visualization, as well as their practice habits. After having compared the answers of athletes with their Olympic qualification status, the authors suggested that visualization strategies might be related to Olympic athletes' success at the trials.

It seems clear that strong mental skills are required for an athlete to reach a high level in his/her sport and to perform well under high-level expectations or stress. Since triathlon was not a sport studied in the previously mentioned research and has unique physical, technical and logistical demands that require special preparation, a brief review of literature on this specific sport will be presented.

Psychology of Shorter Distance Triathletes

There exist four main formats for the sport of triathlon, depending on the distance to be covered in each of the three disciplines. The Ironman triathlon is the longest form of triathlon, whereas the Olympic Games feature a shorter distance triathlon consisting of a 1,500-m swim, a 40-km bicycle leg, and a 10-km run. Of the few studies conducted on Olympic-distance triathlon, most have focused on the personality characteristics of triathletes as measured by standardized personality inventories. Albeit not directly related to the mental skills of Ironman triathletes, that research may provide a superficial

snapshot of personality traits. Many authors have attempted to understand and explain the rapid growth of triathlon in spite of the claim that it is “not a safe leisurely activity to promote good health, rather it is a test of human endurance which pushes the mind and body to dangerous extremes of exhaustion” (Hosch, 1994). The grueling physical demands on a triathlete’s body can in fact lead to numerous medical problems if some element of balance is not respected. In his survey, Hosch examined the training habits, dietary habits, purchasing patterns and self-perceived rewards of 453 triathletes and analyzed the level of commitment required to pursue this activity. According to Hosch, becoming a triathlete requires adopting a new identity by means of making a series of commitments to the sport. Staying committed is partly explained by the series of conscious overlapping investments that are made by the triathlete.

In addition to being very committed individuals, triathletes have a need for control. According to Hilliard (1988), triathlon can provide this sense of control because athletes feel that the outcome of their race is almost entirely contingent on their own performance. Indeed, triathlons are parallel competitions in which participants are not only competing against each other but also against the clock, and the performance of triathletes is closely related to their devotion to training. Hilliard’s field notes and informal interviews revealed that triathlon, like other recreational activities that have grown exponentially during the 1970s and 1980s, offers its participants an intense personal challenge physically and also emotionally. Triathletes have an opportunity to put themselves on the line, that is, to take the emotional risk associated with fear of failure, to control the action, and to take credit for their accomplishments. In a study that examined

the mood state and motivations of triathletes, the mood state profile of triathletes was found to be similar to the typical positive affective mood profiles of elite swimmers, cyclists and runners, in that they were less tense, depressed, angry, fatigued and confused and had more psychic vigor than untrained individuals (Bell & Howe, 1988).

A second line of inquiry, which may be marginally related to this study, refers to mental skills training programs conducted with triathletes. In a four-participant (three triathletes and one runner) single-subject multiple baseline across individuals design study, Patrick and Hrycaiko (1998) found that a mental training skills intervention consisting of relaxation, imagery rehearsal, self-talk and goal setting was effective in improving all athletes' 1,600-m running performance. Moreover, a positive relationship clearly existed between participants' level of mental skills usage and running performance. The authors selected these four mental skills on the premise that they were the most commonly identified in the research literature as contributors to performance enhancement, but they did not make any suggestion as to whether or why those skills constitute the most effective ones for improving endurance sport performances.

A later study using a package consisting of the same four mental skills more specifically examined the effects of mental training on gymnasium triathlon (i.e. rowing, cycling and running) performance (Thelwell & Greenlees, 2001). The authors used a five-participant (recreational road runners) single-subject design. The results indicated the mental skills training package was effective in enhancing triathlon performance. According to the authors, since a rationale was provided for the inclusion in the package

of each mental skill, the findings provided further evidence to suggest that mental skills training is effective for endurance performance.

On one hand, external validity of the findings is lacking in these studies on mental skills training. The running leg (in Patrick & Hrycaiko, 1998) represents only one aspect of the sport of triathlon, and a gymnasium triathlon (in Thelwell & Greenlees, 2001) does not accurately represent the conditions usually present in triathlon, i.e. with the first sport being swimming and with the event taking place outside not inside, and on real as opposed to stationary equipment. Besides the settings, the gymnasium triathlon was not an accurate of the whole experience in a competitive environment where participants race against each other. In addition, the two studies' assessment of mental skills failed to examine real-life competition, which likely places further demands on athletes; therefore, research needs to be done on the use of mental skills in real competitive situations.

On the other hand, the performance improvement resulting from the use of mental skills supports the idea that elite triathletes need to learn, practice and refine some mental skills in order to reach a higher level of performance. Moreover, upon completing the studies, each participant was asked to complete a social validation questionnaire to provide information concerning the importance of the study and the effectiveness of the intervention, and several coaches were selected to complete a questionnaire that solicited their professional opinions about the experiment and results. The results of these social validation procedures indicated that the participants perceived themselves to have improved their mental skills significantly, and those improved mental skills in turn played a part in the improvement of their performance. All coaches reported that

improvement in running times constituted important results from the intervention. Additionally, all participants indicated that they were satisfied with the delivery and content of the intervention and that they would continue to develop and use mental skills training in the future.

Psychology of Endurance Athletes

A segment of the sport psychology literature more relevant to this study is related to the cognitive strategies and abilities of endurance athletes, including triathletes. This literature focused mainly on how athletes cope with the pain and discomfort arising from the accumulation of lactic acid that often accompanies long distance events. Much of the research has centered on long distance running, especially marathon running, examining the phenomena of associative versus dissociative mental coping processes. In 1977, Morgan and Pollock (as cited in Antonini-Philippe, Reynes, & Bruant, 2003) were the first authors to distinguish between associative and dissociative strategies. While running, an associative strategy would involve thinking about one's feelings, monitoring one's body, and giving oneself instructions. Examples of associative thoughts in their study were: "I am still feeling fine", "my shoulders are stiff", "breathe deeply now", or "three kilometers to go". A runner can also have dissociative thoughts, which are directed towards external cues, mainly to distract from the pain and from the monotony or the running process. "What a wonderful sun!", "I must get the kids to school on time tomorrow", "these cars fume!" are illustrations of a dissociative strategy. Morgan and Pollock affirmed that cognitive strategies were linked to ability, and that while nonelite

runners employed dissociative ones, elite runners utilized predominantly associative strategies in order to endure long distance runs.

Building from this, Schomer (1986) conducted a qualitative research study with marathoners of various experience levels. He reported a strong relationship between the associative mental strategy used by runners and the perceived intensity of training regardless of running experience. Contradictory results came from a study on expert marathon runners by Silva and Appelbaum (1989), who suggested that athletes who placed in the higher half resorted more regularly to associative strategies for the duration of the race than those in the lower half. Tammen (1996) surveyed eight elite middle and long distance runners after trial runs and reported that, as running intensity increases the runners will be more associative in their coping. After 20 years of research in this area, results still support the relationship between associative strategies and faster running in endurance events (Masters & Ogles, 1998).

An interesting finding from Antonini-Philippe et al.'s (2003) study is that women used dissociative strategies significantly more often than men, at every level of ability. Citing some literature on the tolerance to pain, they suggest this could be explained by the different cultural expectations for men and women in relation to pain, as well as by the differences existing in the interpretations athletes of both sexes have about pain.

The sport of professional cycling, with stages of the Tour de France and the Giro d'Italia often lasting more than several hours, may be at the extremity of the spectrum of endurance sports. Greg LeMond, three-time Tour de France winner, said that "suffering is what professional bicycling is all about, and champions suffer the longest" (Abt, 1990,

p. 131). In a paper discussing the concept of being in the zone as it applies to cycling, Lewis (1999) reflected on how it was possible, while suffering and enduring constant and intense pain, for elite cyclists to continue against great odds and overcome injuries, pain and fatigue to finish a race. Lewis suggested that similar to the marathon runner, the cyclist must enter a zone that differs from that experienced by athletes in other sports. This zone would have two critical dimensions: it is an *autotelic experience* (Jackson & Csikszentmihalyi, 1999), and it has the trait of hypnotic susceptibility, “which would allow the cyclist to dissociate from the pain and extreme conditions that must be endured during a race” (Lewis, Conclusion section, ¶ 3).

Whether this focusing ability is called being in the *zone* or something else, the fact is, professional cyclists need a clear focus to successfully complete their races. In the 1989 edition of the Tour de France, with two days to go and a seemingly insurmountable lead of fifty seconds, it was believed that the favorite Laurent Fignon was sure to win. Unbelievably though, Greg LeMond won on the final day, with an incredible margin of 8 seconds, by speeding through the 25-km time trial at an average of 54.5 km/h, almost 5 km/h faster than ever recorded on the Tour. During his time trial performance, LeMond did not want team managers shouting his time. Instead, he emptied his head of all thought except riding as fast as he could: “I didn’t think; I just rode”. His simple strategy was so effective that after his victory, he did not even feel spent: “I almost felt when I crossed the line that I hadn’t pushed myself enough. I felt that I could have ridden at the same pace for another ten miles” (Abt, 1990, p. 191). This powerful example serves as one

illustration of the focus that elite athletes need, within the race, to push through adversity and bring out the best in themselves.

This focusing ability was further investigated in a recent study conducted on elite mountain bike racers. Kabush and Orlick (2001) explored the way these athletes apply mental focus in their training and competitions. Elite mountain bike racing is a risk-endurance sport which requires effective focusing skills for over two hours to deal with challenging terrain and complex logistical demands. Kabush and Orlick found that elite mountain bikers reported that having the ability to concentrate fully on the task at hand, as well as to eliminate possible distractions, was critical to reach their objectives.

Moreover, athletes in Kabush & Orlick's study believed that they needed to thoroughly prepare thorough detailed planning in order to be their best. Dealing with logistical and equipment concerns, getting enough rest, eating well, and checking the course prior to the race were said to be essential to be able to focus on what needed to be done during the competition. These preparation strategies are likely equally important in other longer endurance sports in which athletes utilize equipment, as is the case for Ironman triathlon.

While the term *endurance* may be utilized for events that primarily rely on the aerobic system, which implies that they are lasting at least two minutes, it is clear that Ironman triathletes are part of a sub-category of endurance athletes. The huge contrasts in duration and energy expenditure between typical endurance and ultraendurance sports may warrant the use of different psychological skills to cope with pain and endure over extremely long distances.

Psychology of Ultraendurance Athletes

Arguably, ultraendurance athletes must sustain discomfort and bear intense pain for very long periods of time. The term ultraendurance is utilized for events which duration is longer than four hours (Laursen & Rhodes, 2001). Only three studies could be located that discussed the psychological rather than physiological characteristics of ultraendurance athletes.

The first two were conducted with ultra-distance runners. One was a case study that focused on the role of the sport psychology consultant in helping an ultra-distance runner accomplish his plan of running 800 kilometers through some of the hottest and most inhospitable terrain in North America, completing the route in 20 days (Bull, 1989). In light of the psychological profile of the runner and the anticipation of a long, arduous, and often extremely tedious undertaking facing his athlete, Bull designed a mental training intervention that included imagery, associative thinking strategies, periods of systematic relaxation at the end of each day's running, and short-term goal-setting. The evaluation showed that the ultra-distance runner had developed his own idiosyncratic forms of imagery as a means of improving his confidence and coping with boredom. Moreover, as cumulative fatigue was evidenced towards the end of the journey, the runner was also encouraged to engage in a great deal of self-talk, in the form of positive self-statements, to maintain his motivation and confidence.

The other study was set out to examine the cognitive orientations of ultramarathoners competing in a 100-mile run. Acevedo, Dzewaltowski, Gill, and Noble (1992) assessed constructs of confidence, competitive orientation, and commitment to

running as well as investigated cognitions of ultramarathoners during racing by means of forced-choice and open-ended questions. They found that ultramarathoners were more confident and committed to running than athletes in other sports. Also, ultramarathoners reported using cognitive strategies like visualization, reading prerace paraphernalia, setting goals, self-talk and thought control in training and racing to more effectively cope with the challenge and discomfort of running ultramarathons. Moreover, 75% of them reported having external thoughts during a race, related for instance to music, friends, sexual fantasies, imaginary conversations, philosophical reflections, and admiring the beauty and adventure of the course.

The third piece of literature on ultraendurance events is a very recent study conducted on elite Mount Everest climbers. Burke and Orlick (2003) explored how these climbers prepared mentally for the climb and what types of mental strategies they used to overcome obstacles on the mountain to successfully reach the summit. Elite high altitude climbing is a high-risk challenge that is performed in extremely adverse situations over a long period of time, often extending over many weeks. The final push to the summit may take more than 12 hours, making elite Mount Everest climbers ultraendurance athletes. Burke and Orlick found that several elements were crucial to athletes' successful performances. In order to be and feel mentally prepared for the climb, athletes spoke of the necessity of thorough planning and developing mental strength by constantly pushing their physical limits and level of discomfort. As for the ascent, all athletes mentioned that having a strong ability to endure discomfort and continue climbing through the physical strains was extremely important to reach the summit. Also, almost all elite climbers

discussed how focusing strategies allowed them to perform through obstacles and to achieve specific objectives.

Ironman triathlon differs from ultra-marathoning or mountain climbing in that it is one of the most demanding *single-day* events. It has yet to be determined what mental skills are used to cope with these exceptional physiological conditions.

Psychology of Ironman Triathletes

The most interesting study to date on the psychology of Ironman triathletes has examined the cognitions of experts and non-experts Ironman triathletes. Using a video montage protocol to help recall, Baker, Côté, and Deakin (in press) identified triathletes' cognitions and divided them into passive, active and proactive thoughts. An example of an active thought would be, "I've got a list of things, kind of a routine that I go through... like warming up, stretching, making sure my gear is all done. I just go through it the same way for every race." An example of a proactive thought would be, "during the last 5 km of the bike I like to quickly go through the transition in my head, so that I remember where I'm going". The authors found that active and proactive thoughts accounted for 98% of total experts' cognitions; the only passive thoughts experts had were during the finishing segments of an event and centered on feelings of accomplishment and reflection. In comparison, only 65% and 57% of the cognitions were active or proactive for the mid-pack and back-pack athletes. Interestingly, 100% of experts' thoughts were performance-related, whereas mid-pack and back-pack athletes sometimes had cognitions unrelated to their performance, such as focusing on high fiving people or looking good for the finish line photo. Unfortunately, four periods of important high decision-making

times during an ultraendurance triathlon were not analyzed in the study due to protocol limitations: being passed in the swim, hitting the wall on the run, choosing when to ingest food and other nutritional supplements, and mechanical difficulties such as flat tires. Moreover, the expert group in Baker et al.' study was defined as having a finishing time of under 9½ hours, which does not mean the athletes are *elite* in the sense of the previous definition (in 2005, an average of 20 triathletes finished under 9½ hours in each Ironman).

The other reported studies on Ironman triathletes have focused on investigating anxiety patterns. It was stated that “pushing the limits of human endurance capabilities” (Hammermeister & Burton, 1995, p. 29) offered a delicate relationship between the tremendous challenge it constitutes and its possible perception as a threatening experience. Since this relationship may also change at any time throughout lengthy races, anxiety levels were thought to have a significant impact on performance. Hammermeister and Burton conducted a quantitative study, using the Competitive State Anxiety Inventory-2 and demographic and postrace questionnaires, to assess the precompetitive anxiety levels of triathletes and to determine whether and how precompetitive anxiety influences performance for ultraendurance competitors. They found that athletes participating in the Ironman were indeed more cognitively anxious and reported higher physical anxiety than their single sport of half-Ironman counterparts, but no significant relationship was established between precompetitive anxiety and performance. The authors however suggested, based on a negative correlation between negative thoughts of racing badly and performance, that the anxiety-performance relationship may exist for

endurance athletes; data collection procedures in their study may simply have confounded the results.

Two additional studies have investigated precompetitive anxiety in Ironman triathletes. Linking theory, also called Conditional Goal Setting, proposes that certain individuals are vulnerable to depression because they believe that achievement of life goals are necessary prerequisites to the abstract goals of happiness and well-being. It was found that athletes who show the general trait of linking are more likely to show depressive symptoms and will also experience higher levels of precompetitive anxiety (Schofield, Dickson, Mummery, & Street, 2002). Further analysis suggested that athletes scoring low on a complex self-definition scale were more likely to set conditional goals and to have increased somatic anxiety (Schofield, Dickson, Mummery, & Street, 2001).

A final study on ultraendurance triathletes is worthy of mention. In trying to predict performance in an Ironman event, Burke and Jin (1996) took into account several physiological measures, the history of performance as well as five sport psychology constructs, namely self-efficacy, motivation, confidence, and cognitive and somatic anxiety. The authors found that prediction of performance for experienced triathletes was far more accurately done when consideration was given to triathlon performance history and self-efficacy (self-confidence) statements as opposed to relying solely on the physiological variables. Burke and Jin's recommendation for the use of a more holistic approach to predict performance as well as Baker et al.'s (in press) findings that experts Ironman triathletes have more performance-related active and proactive thoughts suggest that cognitions and psychological skills indeed play a crucial role in the athletes' success.

Since the participants in both studies were not at a world-class standard, it may be that mental skills are even more important for elite Ironman triathletes.

Ironman triathletes train fifty hours a week throughout the year to ultimately compete in only one or two Ironman races each season. The duration, intensity and extreme environmental conditions encountered during ultraendurance triathlon combine to produce physiological stress not seen in shorter triathlons or marathons (Laursen & Rhodes, 2001). The Ironman is so tough that triathletes do not compete in more than one or two races a year besides the World Championships. This unique characteristic of Ironman triathlon and its consequences on the mental skills of athletes was found nowhere in the literature.

After a thorough review of the limited amount of research on the psychology of ultraendurance events, and more specifically the Ironman triathlon, it is clear that no previous study has done what this study proposed to do, that is to conduct in-depth interviews with elite world-class Ironman triathletes to explore the following research question: How do elite Ironman triathletes get themselves mentally ready to be their best during competitions?

METHODOLOGY

This chapter presents the method of investigation I used to answer the research question. The rationale for the qualitative research design of this study is presented first, followed by the data collection and data analysis procedures.

Research Design and Data Collection Procedures

The most appropriate (and perhaps only appropriate) way to explore the mental skills Ironman triathletes utilize in preparing for and successfully completing an Ironman event is through in-depth qualitative interviewing. A semi-structured interview format allowed me to gain an in-depth understanding (Rubin & Rubin, 1995) of the mindset that elite Ironman triathletes bring to their competitive experiences. Open-ended questions about triathletes' mental skills enabled the detailed exploration of the various strategies they use to be fully ready for competition day. Moreover, asking triathletes how they focus to deal with the many challenges that occur during the actual race provided not only knowledge of the mental skills required to succeed in the very demanding sport of Ironman triathlon, but also with an in-depth understanding of the context and the way in which triathletes apply those skills in real-life situations.

Qualitative interviewing allowed me to gather detailed examples of my participants' experiences. I was able to distinguish what may be common and what is unique in their preparation and skills. Moreover, by asking relevant probing questions to follow up on open-ended questions, I gained a deeper understanding of the athletes' worlds and the meaning they give to their own preparation and competition. It is hoped that this understanding will expand the current sport psychology knowledge as it relates

to ultraendurance sports.

In-depth interviews enabled me to first capture the richness and complexity of elite triathletes' experiences and then to explain these experiences in a comprehensible way (Rubin & Rubin, 1995). In this section, I present how the data was collected within the chosen qualitative design. Researchers have established standards to judge the quality of qualitative research. One of those is the precision of the study's method, which may be attained by describing the procedures and the instrument with sufficient detail for others to conduct a similar study (Lincoln, 2002). This search for precision warranted a multi-faceted data collection section, divided in four basic parts: the first is related to the researcher herself; the second, to the main instrument of research; the third refers to the participants in this study; and the fourth describes the recording procedures.

To ensure the collection of the highest possible quality of data I have undertaken several actions before engaging in data collection to enhance the trustworthiness of the results. I have taken many steps to improve the overall quality of my study in response to Lincoln's (2002) *emerging criteria* for quality in qualitative research. I discuss those steps throughout the data collection and data analysis sections rather than as separate attributes because I believe research is a systematic inquiry that requires care and thoroughness as an integral part of the process.

Preparation of the Researcher

In qualitative research, the researcher plays an important role in the process due to his/her stance in relation to his/her participants. In contrasting the features of quantitative

and qualitative research, Bryman (1988) acknowledged that qualitative researchers aimed at getting close to their participants and at “becoming an insider” (p. 96) in order to better understand the participants’ world. I did not need to become an insider for this study; however, I had to be aware that my preconceptions may have affected my relationship with my participants because I used interview as my method of data collection. Rubin and Rubin (1995) summarized clearly the influence I might have on the data collection process when they said that “the interview is affected by the researcher’s personality, moods, interests, experiences, and biases” (p. 12). Therefore, I intended to be as open as possible in documenting where I stood in relation to my participants, firstly by discussing here my own experience as an Ironman triathlete, and secondly by talking about the importance of keeping reflexive notes.

Personal Experience

One of the first emerging criteria of quality research mentioned by Lincoln (2002) is called *positionality*. Simply stated, positionality recognizes that any text will be tainted by the experiences and ideas of its author, and that being honest and authentic about one’s contextual background is the best way to ensure high-quality research. A useful means of raising my awareness of my own biases was for me to engage in what phenomenologists call “Using personal experience as a starting point” (Van Manen, 1990). I am a competitive triathlete, and in order to get a better sense of what completing an Ironman triathlon is, I decided to dedicate an entire summer of my life to train for an Ironman. Shortly after having successfully completed it, I wrote a personal description of my experience as I lived it. This exceptionally intense experience certainly allowed me to

better grasp what “pushing the limits of human endurance capabilities” (Hammermeister & Burton, 1995, p. 29) really meant. It should be noted that I was not racing but only trying to complete my Ironman, which prevents my full comprehension of what elite triathletes experience.

The next logical step was to get interviewed on what I had experienced myself as an Ironman competitor, thus being the first participant in my study. I had the wonderful opportunity of being interviewed by someone who is very knowledgeable in qualitative research. Dr. Beaudoin allowed me to talk about my race in a way that nobody had previously asked me to do, and this part of the experience was not only truly enjoyable but also incredibly useful to have a heightened awareness of my research topic. The interview was conducted using a set of questions that I had developed specifically for my future interviews; Dr. Beaudoin’s interview allowed me to refine my interview guide to better suit the needs of my research.

Being a triathlete may have impacted my research process in two main ways. On one hand, doing an Ironman has reinforced my belief that the athletes need fine-tuned mental preparation strategies and strong psychological skills to be successful in the sport of Ironman triathlon. I also expected that elite athletes consider their mental readiness important and that they take conscious steps to refine their skills. This ‘bias’ as well as a strong interest in future consulting with triathletes led me to anticipate that *all* my participants would reveal many detailed mental skills. I was cautious, however, not to ‘generalize’ my experience because not all athletes have access to or choose to engage in sport psychology training like I did. It may have been that their skills were just innate or

the triathletes were not conscious of them, or they may even have had different tools for success.

On the other hand, my knowledge and understanding of the dynamics found in the triathlon sport culture, as well as the particular jargon used by its participants is wide enough to appear legitimate. My legitimacy allowed me to have a closer relationship with my participants, to get more in-depth answers, and to ultimately explore their experience in a deeper way. Obtaining more authentic responses from my participants was the first step in ensuring the trustworthiness of my study.

Credibility

Maxwell (2002) has suggested that the issues of instrument validity and reliability rely largely on the skills of the researcher, and that it is helpful that the researcher have some familiarity with the phenomenon being studied, have good investigative skills, and have strong conceptual interests. As a competitive triathlete myself, I have a good understanding of the world of triathlon and a comprehensive knowledge of the specific language used in that sport. I have developed strong skills in interviewing after having taken the Qualitative Data Analysis in Sport Studies (APA 6100), Micro-Counseling (EDU 5871), and Counseling Skills and Approaches in Sport, Physical Activity, and Health courses (APA 5997S1), and as a result of working closely with my advisor, and from conducting and analyzing pilot interviews.

Reflective Notes

Another important emerging criteria used to assess the quality of qualitative research refers to the concept of *reflexivity*. In simple terms, reflexivity is the process by

which the researcher reflects on his/her involvement in the research while immersed in it (Lincoln, 2002). As he/she investigates, the researcher engages in a critical reflection on his/her own actions, thoughts, and the inherent contradictions that form in his/her life. The continuous reflection brings about 'lessons learned' and thus the possibility for the researcher to enter an altered state of consciousness "for the purpose of understanding with great discrimination subtle differences in the personal and psychological states of others" (Lincoln, p. 337). An increased consciousness has a direct impact on the data collection because it enables the researcher to obtain more meaningful information from interviews.

A very attentive attitude is a key component of meaningful communication and connection between individuals. My attending behavior allowed me to elicit deeper and more significant answers from my participants, and to appreciate a larger share of their rich and complex experiences. Since the beginning of my study I have kept personal reflections in a journal; these reflective notes contribute to an increased understanding of my topic for they contain insights on the data collection and analysis phases.

Additionally, maintaining a reflexive journal improves the trustworthiness of my research because it enhances its credibility—by identifying my own assumptions and perspective and how it taints my analysis; its applicability—if my notes suggest that the findings would likely be similar in other contexts, for instance in other ultraendurance sports; and its dependability—by taking the record of methodological decisions made during the course of the study into account when interpreting the findings.

Instrument

I used qualitative interviewing to collect data on my research topic. A *conversational guide* was set up as an overall framework to keep the interview well-focused on the subject (Rubin & Rubin, 1995). This section describes the pilot interviews I conducted and how they served to shape the final version of the interview guide.

Pilot Interviews

The four interactions I had with high-level triathletes as well as my own experience of being interviewed influenced the way I wanted to conduct my research interviews. Qualitative interviewing design is said to be *continuous*, in the sense that the first interviews have more of a discovery role where the researcher constantly redefines the way to gather information according to how participants understand the matter (Rubin & Rubin, 1995). For me, this process has occurred mostly in the pilot phase of my project.

My initial interaction with a high-level triathlete was an informal interview with an Olympic athlete who spoke at a triathlon training camp I attended in November 2002. What originally was “only a little question” about her mental preparation naturally turned into two intense hours of conversation on the details of her psychological skills! I was amazed at her interest in my questions, and it made me realize that this was a very important, yet rarely discussed issue, for those athletes. What struck me most, however, was the fact that the mental aspect of her sport was so clear in her mind that I barely had to ask any questions at all, as she would just go on and easily cover all aspects of the

topic. During our conversation, the triathlete raised the issues of intensive preparation, race *zone* feeling, refocusing after distractions (especially pain), imagery, commitment, belief, goal-setting, positive thinking, and post-competition evaluation. It can immediately be noticed that these issues, although sometimes labeled differently, encompass all the elements of the Wheel of Excellence (Orlick, 2000). Even if this athlete was an Olympic-distance triathlete and not an Ironman triathlete, I supposed that her experience could certainly become a reliable framework to draw from in future interviews. I also learned the importance of knowing the racing background of the athlete to be better able to follow her when she made references to particular races.

Almost a year later, I conducted an interview by phone with another elite athlete who finished in the top five at the most recent Ironman Triathlon World Championships in Hawaii. After having chatted for several minutes, I started off the interview with a question previously elaborated with my supervisor: "In racing Ironman triathlons, how is your mind important?" This broad main question proved to be very effective to enter the subject in an open way, and led to a wonderful conversation in which she brought up many crucial elements of her performance. To get more detail on some of her statements, I used probes that I had designed from race reports she had posted on the Internet. She discussed many themes, namely visualization, preparation and planning, positive images, distraction control (before and during competition, including pain), commitment, post-competition evaluation, confidence, and especially focus. Again, those ideas correspond to the elements of the Wheel of Excellence (Orlick, 2000). I also added a question about taking time away from triathlon, and she acknowledged doing so, but I did not probe for

the reasons why it was important for her. This interview increased my confidence that my main question would have the capacity to lead the entire conversation on the right path to answer my research question.

The next major refinement to my set of interview questions came after my own interview by Dr. Beaudoin with the guide I had provided her. In this guide, I had additional questions on what it takes to win the Ironman World Championships, on the specific challenges encountered by triathletes, difficult weather conditions, and life balance issues. The interview was tape-recorded, transcribed and informally analyzed with my supervisor and our research group members. Two changes to my guide emerged from that process. The first one relates to Dr. Beaudoin's suggestion to start the conversation with a question that encourages the "conversational competence" of the participant (Rubin & Rubin, 1995); the one I used was: How did you get into Ironman triathlon? The second change came after I witnessed Dr. Beaudoin utilize a technique we had discussed in our research group, that of asking a form of the *verbal grand tour* question proposed by Spradley (1979) (as cited in Rubin & Rubin) to elicit more quality information. Indeed, asking the interviewee to *walk me through* the sequence of events in a particular race can be quite useful to help the participant add details in her account.

Finally, my real pilot interviews were made with two Ironman triathletes in the Ottawa region, one of them having recently won an Ironman race. These two interviews, and especially the first one, created a great opportunity to retest my guide and the results proved conclusive. A review of the transcript with my research colleagues revealed that certain points could have been probed in more detail; I went back to the triathlete to

clarify those issues using follow-up questions. Overall, the main topics discussed were focus, detailed planning and preparation, race assessment, mental rehearsal, distraction control, confidence, positive thinking and commitment. I believed this portrayed a representative picture of the substance I would get from my participants.

Besides, I noticed clear differences in the mental skills development or integration level of these two Ironman triathletes. The first one (who has achieved better results) was more confident in what he was doing, whereas the second one was always questioning the effectiveness of her mental practices. This reinforced my belief that I should try to interview the *very best* Ironman triathletes to explore the preparation, mindset and focus required to *excel*. Finally, my reflective notes indicated that apart from being truly attentive to details and meanings I also needed to be prepared to use steering probes to keep my participants on target when momentum would carry them too far away.

Interview Conversational Guide

My interview conversational guide stemmed from the preliminary work mentioned in the previous section and was adapted to cultural interviewing. Its structure respects the seven stages of qualitative interviewing; it consists of an introductory question, a main grand tour question, reminders for probing, and optional questions (Rubin & Rubin, 1995). The probes—used to get details, nuances, and clearer and more complete answers—did not need to be specific because they would flow naturally from the conversation. The simplicity of the guide offered a great flexibility (Rubin & Rubin) required both to adjust its design to the needs or experience of the participants and to answer my research question more thoroughly.

Participants

This study was carried out by interviewing 10 elite ultraendurance triathletes. Elite athletes were defined as those individuals whose pursuit of excellence in sport has led to success in competition at the professional level (Baillie & Ogilvie, 2002). More specifically, success for this study means that elite athletes have placed first or second in major Ironman races to ensure that participants had the depth of experience and knowledge I was seeking. Out of the ten triathletes, nine had won one or more Ironman races and the other's best finish was second. Many participants also placed well at the Hawaii Ironman World Championship (see Table 1).

The data collection phase was conducted during the 2004 competitive season. A purposive sampling research strategy was used to choose the participants (Maxwell, 1996). With each participant I conducted an in-depth, face-to-face interview that lasted approximately one hour. The triathletes participated in one of the following three major Ironman races: the Quelle Challenge Roth triathlon (Roth, Germany, July 4th), the Opel Ironman Germany triathlon (Frankfurt, Germany, July 11th), and the Ironman USA triathlon (Lake Placid, USA, July 25th). Personal connections allowed me to contact the Quelle Challenge Race Organizer, who agreed to send an email to all elite athletes registered for the race. This email contained an attached letter informing the athletes of the purpose of my study and my desire to interview them. The athletes were then free to communicate directly with me via email if they agreed to take part in this study. I sent the same letter to the race organizers of the other two events, at the email address posted on

the websites of the events. When necessary, other participants were contacted through referrals by triathletes already interviewed. Finding participants through references by personal acquaintances and other participants is called *snowball sampling* (Ray & Ravizza, 1988, as cited in Eklund, 1993) and is believed to be an excellent way to collect authentic data. In this study, the interviewed triathlete would mention the study to another triathlete, and if the second athlete was interested in participating, he or she would contact me by email or phone.

Table 1

Career Highlights of Participants

Pseudonym	Best Placing	
	Ironman Race	Hawaii World Championship
Vince	1 st	1 st
Robert	1 st	1 st
Paul	1 st	2 nd
Steve	1 st	6 th
France	1 st	7 th
John	1 st	9 th
Mary	1 st	10 th
Michelle	2 nd	13 th
Mathew	1 st	Did not compete
Dany	1 st	Did not compete

The interviews took place either before or after the race, based on the athlete's preferences and at a time and place the athletes found convenient. Regardless of whether athletes were interviewed before or after a particular competition, they were all able to recall great details of past races where they were successful and specific mental skills related to those successes.

Recording Procedures

All interviews were recorded with a standard-quality recording device to ensure that subsequent verbatim transcripts respected the accuracy of the participant's accounts. The recording also allowed me to listen to the first interviews in search of possible emerging themes before conducting subsequent interviews. All interview tapes are kept under lock in Dr. Orlick's office.

Data Analysis

The exploration of the mental skills of elite ultraendurance triathletes is more meaningful once the accounts of each participant's subjective experience are completed and joined together to form an integrated explanation of both the commonalities and the differences (Rubin & Rubin, 1995). To do so, it is helpful to have a method of data analysis that enables efficient organization and handling of interview materials. The analytical process had in fact started from the moment I conducted pilot interviews because they prompted me to reflect on the various skills triathletes used, their strategies to apply those skills in competitive settings, and an early indication of the importance they attach to the mental aspect of their sport.

Transcribing and Coding Procedures

One of the best ways to get the most meaningful information out of qualitative data is through a coding process. Interviews were first transcribed verbatim and sent back to their author via mail or email. This member-checking step gave participants the opportunity to comment on the accuracy of their transcript and modify it if necessary. No

changes were made by the participants on their original transcripts. All interviews were then re-read in their entirety to allow for ideas to emerge. Interviews that seem the most comprehensive were chosen to elaborate a coding scheme. Coding consists of categorizing the materials into *meaning units* (Tesch, 1990), which is done by reading each sentence of the texts, extracting its idea, and assigning it to a specific category or node. The categories generated from the analysis of the first interviews formed the coding scheme that was used to code the rest of the interviews. When a new idea emerged after the scheme had been elaborated, all interviews were then reviewed to ensure their original categorization was still accurate and re-coded when necessary.

The coding process was carried out with *NVivo*, software designed specifically to help researchers with the analysis of qualitative data. The *Qualitative Data Analysis in Sport Studies* course, in which I went through the entire coding process with real interviews, proved to be valuable *NVivo* training. Once all the material was coded, the analysis continued by searching for encompassing themes in the interviews and by linking ideas together. The purpose was not to stick a label on every sentence and classify them into a rigid model; rather, care was taken to respect and include the nuances, variations and unique characteristics that reveal all the richness and depth of the participants' accounts.

Trustworthiness

Peer debriefing further enhanced trustworthiness of the study. Moreover, weekly meetings with my research group offered an opportunity for an external evaluation to be

done. Members of the research group, including my supervisor, Dr. Orlick, helped me categorize parts of text and find appropriate nodes to fit them into. Coding is mostly based on common sense, and having outside colleagues challenge me on the categories or on the assignment of data into one node instead of another was an important step in the process to increase the overall quality of the analysis.

Lastly, special attention was paid to participants' descriptions of mental skills and strategies. Indeed, the process of analysis "is a reflexive activity that should inform data collection" (Coffey & Atkinson, 1996, p. 6), and through pilot interviews I realized that sport psychology terminology is still largely unfixed. Athletes are sometimes unsure of the *correct* term to name what they are doing, or they may use various names for the same skill. Keeping this in mind, I tried to ask enough probe questions to enable a categorization of ideas that truly reflected participants' intent and experiences.

RESULTS

The purpose of this study was to explore the mental skills employed by elite Ironman triathletes. To be their best in competitions, Ironman triathletes prepare themselves mentally before events, find ways to tap into their inner energy reserves during races, and have a mental attitude conducive to long-lasting success. This chapter first presents what triathletes do to thoroughly prepare themselves mentally before their competitions. Second, it introduces the various skills and strategies utilized by triathletes at the time of a competition to race well in this demanding sport. Third, it sets out the necessary ingredients of a mental attitude that can sustain long-term success.

These skills or strategies used by triathletes to prepare themselves mentally are presented in the form of an analytical perspective, in which some discussion takes place in the results section. I believe the findings are more meaningful if they are presented simultaneously with a discussion of the context in which they are applied—the harsh reality of competition. The results are also interspersed with several pieces of information given by the triathletes which—although they do not constitute a specific skill or strategy—bring about a broader outlook on, and a deeper understanding of, the experiences and mental preparation of Ironman triathletes.

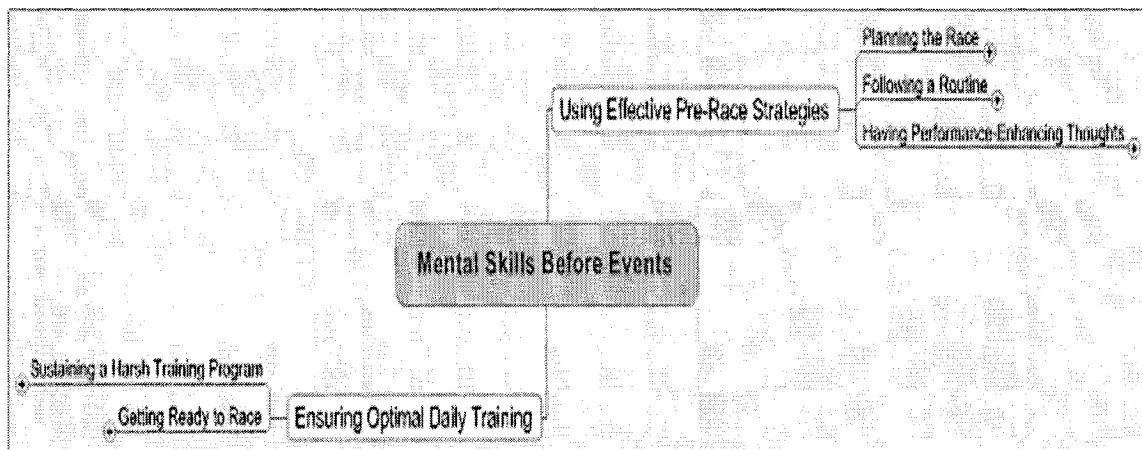
Mental Preparation Before Events

Investing a substantial amount of preparation seems to be an prerequisite for participants to reach the highest level in their sport. Quality preparation leads to quality performance, and elite triathletes are no exception to this rule. To thoroughly prepare for

their competitions, they do a considerable amount of physical training and develop effective pre-race strategies. Figure 1 presents the skills they use before important events.

Figure 1

Mental Preparation Before Events



Ensuring Optimal Daily Training

The training itself for an Ironman triathlon is a huge challenge given the nature of what many consider the Toughest Day in Sport (Babbitt & Lampley, 2003). An extraordinary amount of aerobic conditioning is required because of the need to become highly proficient in each of the three disciplines—swimming, biking, and running. As Robert said, “[I train a lot], but I think the others train a lot also [...] I think for a race [of] eight hours, you have to train a few hours a day. You can’t do an eight-hour race with only a few hours of training.” Anecdotal evidence reports that this 1997 winner of the

Hawaii World Championship trained up to fifty-six hours a week; this corresponds to eight hours of training, every single day of the week (Lenénaff, 2001).

To ensure optimal training in such an ambitious fashion for months, triathletes' mental preparation entails the use of self-regulating skills and the testing of race strategies.

Sustaining a Harsh Training Program

Based on the data, triathletes need to successfully face tremendous challenges and avoid making costly mistakes in the course of their daily training to make sure they use their physical abilities and resources to the fullest.

Meeting the motivation and injury challenges.

Participants have noted several challenges they face in training. Two challenges seem to affect almost all triathletes: sustaining motivation and dealing with injuries. To overcome them, triathletes find a way to maintain a high level of motivation both within individual workouts and throughout the entire training phase. When asked whether his mind was important in Ironman racing, Steve answered,

Your mind... I think it's not just in the race. It's the whole package, I think the training, because it is such a monotonous sport, monotonous workloads, I think your body gets in, it has its bio-rhythms so as it gets tired, mentally you lose motivation so your mind plays an important role in the fact that it keeps you motivated.

It is difficult to maintain a high level of motivation during long workouts, let alone keeping it high over several months especially once the training takes a toll on athletes' bodies. Indeed, the biggest challenge of Ironman for France is,

The training. Not the race day. Just training, the hard hours you have to put in leading into it, so the months before. The six- or seven-hour bike rides, the two and a half- to three-hour runs, and having to get up the next morning and do it again and again and again and again.

To prompt themselves to sustain training, triathletes use a variety of approaches. For instance, good performances are what give incentive to Dany: "Results like yesterday, that's my motivation. And I always try to win one race again, and win one race again." Similarly, it is to perform well that Robert trains so much. He says,

When I ride 180 km really fast in training, nobody's interested in that, nobody cares. But if I ride a fast time on Sunday, then you have the time and it's an official race, and basically that's why you're training, because you want to have a good race, a fast race.

Others push negative ideas aside in order to keep going. Steve says, "You have to try to remain positive; when you're not positive, reinforce your positive thoughts because many times in training you're like... pfeew!" For him, being positive means,

For me, I worked before I did sport, I was an accountant [...]. For me, remembering how monotonous and mundane being an accountant was, which is to a lot of people the real world. I think this keeps you motivated because I don't want to ever go back to that. [...] But I try to use that approach and think "Ok,

what else would I be doing today? I'd be at work." [...] That's how I try to keep myself motivated, and say you know, [what I am doing is] good.

Finding joy can have a strong motivational influence on the desire to train. For several triathletes, having fun is a key part of the experience in helping them continue with their daily training. Robert says,

Ah, the training, the training is more fun for me, because there's no pressure. I can go fast if I feel strong, but I can also go slow [...]. So usually it's very fun training, and I like to be outside, and train in nature. And I also often go to Spain in the beginning of the year, it's spring time there, and here it's winter, and it's nice, usually it's nice and warm, and it's nice to ride a bike, it's beautiful in the countryside. So it's usually a lot of fun to train.

For Mary also, doing what she likes everyday is her way of meeting the motivation challenge. She echoes the feeling reported by Robert:

I have a lot of fun. Training is still a lot of fun for me, to do triathlon and to be out there in nature, I think it's just amazing, it has to be fun. Even if it's my profession I really like it. And it's the nicest thing, I always say, on Monday morning everybody goes to work in the office and you go on your bike and just go for a ride or go for a run.

The second challenge in Ironman triathletes' demanding physical preparation is learning to deal with injuries. Injuries are either acute or as Mathew pointed out, "my body breaking down too", because of the overuse effects of the rigorous training required for Ironman racing. Here again, triathletes' minds are what helps them get through

obstacles to ensure optimal physical preparation. In the case of injuries, the challenge often comes less from the pain that may accompany the injury and more from not being able to train. As Mathew explains,

It's very hard [to be injured] because it is such a good part of my life, training, so I don't do too well. Last year I fell in the shower [...]. It was very hard because I wanted to train but it was so hard to breathe [...]. But that thing is so frustrating because you can't prepare and race as I would like to because of it. That was hard for sure.

When hurt, athletes use two coping mechanisms: they take steps to speed up the healing and prevent eventual physical damage, and they try to stay patient and positive. When injuries happen, athletes feel temporarily helpless. To deal with that, Mathew tells us what he did to recover more quickly:

I kept training as much as I could. I tried everything, I tried the chiropractor, I tried to wear a brace, I tried anti-inflammatories, I did everything I could, but something like that it's just time. You just have to wait it out. So I had to be somewhat patient, but it was hard.

In addition to being patient, "It's very important [...] to stay in a positive [frame of mind]". Being positive is what John feels helped him get through a major injury:

So it was hard, but I had good support, [my spouse] was supportive and I knew that, you know, I'm always pretty positive. I'm a firm believer that if you think of the best, often that will happen, push you in that direction. It doesn't always come true necessarily, but I'm a firm believer that if you expect something bad to

happen usually it will, as opposed to if you expect the best will happen it usually does. [...] And I think honestly that it got me through that year a lot, because I didn't, I had to just believe because I wasn't seeing actual proof [of improvement].

Taking matters in hand while being positive and patient is of great value but cannot free Ironman triathletes to perform to full capacity if they are sick. Ironman triathletes are always on the verge of illness as their bodies can barely recover from all the physical work. Although sickness seems less threatening than injury, triathletes actually dread it more because it can prevent them from racing and thus from earning their living. For example, Paul explained what he would do if he got a cold before a race:

It's very difficult, if something happens and you know you're not 100%. Then you say ok, is it worth racing? Maybe you should just not do it. Or you say, "Ok, if I do it and it's 95%, is it still good enough?" But for an Ironman race, it's an exception, you can't go into an Ironman race and say ok, it's just 95%. It doesn't work. [...]if] there's something before [the race] that really bothers me physically then I wouldn't be racing.

Dany expressed a similar concern, by saying that what could prevent him from being his best on race day was if he "would get sick, the week before the race. That's what I'm always afraid of. That's always worst case, to get sick one week before the race." He then added that if that were to happen, he would not compete: "No, no, no chance, no chance. If you have some problems like you twist your ankle, maybe I would go. But if you get a sore throat or a fever, it's gone, no chance."

Although choosing not to race when sick is the best thing to do, it certainly remains a frustrating decision to make after months of dedicated tough training. Being able to make sound decisions plays a crucial role, however, in enabling athletes to sustain such a severe training program.

Making the right training decisions.

Finding the perfect training plan is a difficult task for many reasons, ranging from the uniqueness of each body's reactions to physical stress, to the largely unproven training methods of this relatively new sport. Ultra-endurance athletes walk a fine line between being maximally trained and being overtrained. Vince explains,

Peter Reid once said, I think it was [after] his second victory in Hawaii, he said that he suffered so much that he wanted to train so much that he could do the Ironman or that he could win the Ironman without suffering. And this is impossible. And he was so overtrained that he had his big problems, and he gave up here in Roth, and for one year he was out of order.

After his win in 2000, Peter Reid was indeed overtrained. He ended up quitting nearly every race he entered that season, including the 2001 Ironman Hawaii and the 2002 Ironman Australia. He had blood in his stool, a reduced white-blood-cell count from physical stress, and a red-blood-cell count so low that doctors were testing him for terminal illnesses like cancer (Outside Magazine, 2003).

Another consequence of tipping this delicate balance from having superior physical preparation to being under-recovered is a kind of mental fatigue that may have negative repercussions in races. Paul explains in a colorful way that,

Triathletes are more lethargic because they train so much, some of them are brain-dead [...]. There are certain brain chemicals that are, I mean, important for your mental strength for a race. If you overtrain, if you have too much stress, if you run down on [brain neurotransmitters], then you can't focus because you are not willing to suffer or work hard because you are brain dead.

What are those decisions that are carefully considered? Paul was the most explicit, saying they are,

Daily training decisions. When to do your long runs, everything, all of these little details, what equipment to choose, what to train, who are your training partners, what is the intensity, or what's the mileage, quantity, etc. Every day you have to make these decisions. You have to plan ahead, but even if you have a plan for the next weeks or months, every day, every hour you make new decisions because you have to adapt to what is happening.

To help them figuring out what the best training schedule is, some triathletes resort to the services of a coach. In that case, the challenge for athletes lies in keeping a say in the program, otherwise they risk making judgment errors because "they might be too over motivated, not flexible, they have been told by coaches and other people you have to stick to your plan, and they never learn[ed] how to deal with [training] issues by themselves" (Paul).

Other triathletes prefer to decide for themselves. On one hand, Mathew tells us that he is happy being his own coach because "just to get to know that person, what works, what doesn't, can they take the mileage, can they take a big taper, no taper, it

takes a while to know”. On the other hand, “the one thing is I sometimes will be, I’m not tough enough, maybe not making myself work hard enough and sometimes not making myself rest enough before a race.” With or without a coach, rest seems essential to prevent overtraining, but this is difficult to do for some highly motivated triathletes who “don’t want to train, but they do train because they have this thing in their mind [that says] ‘you have to keep going every day’” (Paul).

Ensuring triathletes will be at their best on race day “is not always easy to do, but training-wise, it’s experience”, says Robert. Paul advises that wanting to train all the time “is the wrong attitude, because I mean you have to be committed to train, but you have to know when to say no [...and] after a while, feel refreshed”. Moreover, for him, making good training decisions is clearly a mental ability:

There’s also mental strength [needed] to deal with all these little hurdles in the daily training and not to stick to a plan too much. You have to be strong enough and confident enough to say ok, I don’t need this, I can change my plan, I can do this tomorrow or I can do a shorter bike ride. Or maybe the weather is good and I do a seven-hour bike ride. You always make little decisions every day.

Participants say that making sound daily choices and developing the much-needed ability to take a break when necessary are an important part of their mental preparation. And through a combination of a motivated-enough-but-not-too-much attitude, joy, positive thoughts through injuries, experience, and mental strength, they can sustain a grinding training program that leads them to race day. There is more to optimal preparation for competitions than just the physical conditioning.

Getting Ready to Race

Used wisely, the unending hours of training can serve another important purpose: they can constitute a practice session in preparation for the competition to come. Ironman triathletes are well aware of the opportunity training gives them to do a run through of the race. They enhance their mental preparation before events by using their training time to get two additional benefits: becoming more familiar with the race and testing effective race strategies.

Familiarizing with the upcoming race.

As a race approaches, triathletes start to think about it more and more often. Some participants think mostly about their competitors and try to gauge their own fitness level. Steve mentioned that during his training this year, he often thought of Lothar, the winner of last year's race. He said, "I know this race, Lothar is here and we've raced so much around the world and I know [his strengths], as he would know my strengths. You think about [it], 'Oh, I wonder if he'll keep up on the bike, I wonder how he is.'"

Other triathletes use training sessions as a rehearsal of what they want to happen on race day. Before competitions, Michelle finds that engaging in visualization both at home and during training sessions prepares her mentally:

A couple of weeks before a race, especially if I have done the race before, I'll be finishing a long bike or I'll be finishing especially a long run, and I'll just kind of visualize myself coming down the chute, the finishing chute, at the end of that workout.

John takes his run through exercise one step further, saying it will serve him during the race itself. He explains very eloquently the importance he places on thinking about his future race while in training:

You know what I do a lot, when I'm training? A lot of times I'll train in Boulder, especially in the run, I will imagine myself in a race situation. And that helps me do one thing that's very important, which is imagining myself in training when I'm racing. See what I'm saying? So when I'm training, if I'm finishing a long run and sometimes I even try it out for most of the run, I will envision myself on the course or against certain competitors. So I might imagine here I'm running, and there is Lothar Leder and Chris McCormack, and the people I'm competing against. So I'm pretending that I'm there in that situation.

And that maybe gets me a little more motivated for the training session, but what it does is when it comes down to the race, I'll very often recall those times when I was training and I had a strong run or a strong bike or whatever the case may be, strong swim. And so if I've already got that imagery of me racing these people then it makes it easier, kind of transfers more easily and I can think this is just like in training. So what I do is if I'm in the race and I'm thinking, "God, I'm really hurting here", I just think of a certain day.

And I'll go into the race with three or four days in my head already selected where I can imagine, "Remember that bike ride when I was riding and I was just unstoppable? I was beating everyone, I was stronger than anyone, I felt great, I've felt better than I ever have. I was racing them up the mountain",

whatever it is. I will remember that and then I call that back. So then, as I'm on that hard section of the bike or on the run, I'll look and I'll just imagine my surroundings being that home spot in Boulder, where I'm on that same run course, where I'm on that same bike course, and everything is just as I've done before and I was unstoppable. And I basically just try to keep that level up there.

Q: You said [the workouts were] already selected?

Yeah, usually I'll have three or four, a swim, one particular swim workout because the swim is so short, maybe one or two workouts, a bike workout and a run workout, maybe one where I did a bike and a run. I just think about three or four workouts in my head like I already have them. Because you go through the workout and you say "this is gonna be the one of those that I'm gonna call on because it was just so good you know, this bike ride I felt so good, and I'm gonna remember this forever, I'm gonna remember this in a race". And you think about it when you're in a race, it's just like that day.

Thinking about an upcoming Ironman, whether on the bike or while running prepares triathletes to race better by familiarizing themselves—in their mind—to what is going to happen on race day. This rehearsal can also get more tangible by doing practical experiments and testing race strategies.

Testing race strategies.

It does not seem that one can expect to react perfectly in a race situation when faced with something he/she has never experienced before. Thus, to be as prepared as possible triathletes mention that they need to practice certain strategies before they can

actually apply them in the particular circumstances of a race. Training is the best opportunity to discover one's physical limits, experiment in different environmental conditions, rehearse the entire racing process, and to give new strategies a mindful try.

For triathletes to be able to race for 8 or 10 hours, the first step is to get to know their body extremely well—how it reacts in specific conditions and what it can endure over long periods of time. This awareness starts to form as soon as triathletes engage in training sessions designed to stress the body so that it adapts to incessantly bigger workloads. Indeed, John indicates that during his swim warm-up for a race, he is “just assessing my body, how it feels, are my arms feeling Ok, do I feel sluggish, do I feel achy, just [the] kind of stuff I think about whenever I’m warming up for a swim workout.” By discovering in advance what exactly their body can handle over a long period of time, triathletes carry into the race a superior level of confidence in their abilities. Mathew explains that he develops his race plans based on training experiments:

I’ve tested my heart rate a few times, [...] I know my threshold is about 160 [pulsations per minute] for running only, if I was doing a running race. But a long race like an Ironman, I would stick probably under 150. And I found doing intervals, I was able to hold a really good pace, between 3:40 and 3:45 [minutes] per kilometre when my heart rate is 140. So I did that in training before so I knew that if I could keep my heart rate at 140 on the run I’d be running four minutes a kilometre, that would be a three-hour marathon, and that would be enough to win, or be very competitive anyway. So that’s why I figured well, I’m gonna keep it at right what I did in training, 140, or maybe 145 but no higher, while [before]

sometimes I was going up to 160, 165 and then my body felt apart because that's too much lactic acid.

Participants have expressed that they not only fine-tune their body for the specific challenges of a race, but also learn to know how it responds in various weather conditions. The heat, the wind, the sun, or the cold play an important role in a sport like triathlon because conditions can have a huge impact on the athlete's energy expenditure and, as a result, his/her body reaction. Mathew gives the best example of this: he advises that the best way to prepare for different weather conditions is,

I guess training in it. For sure, if I have a scheduled workout I do it regardless of the weather. If it's cold, if it's windy, if it's snowing, whatever I try to still do what I have to because that's half the race. So I try to do what I had planned to do. If I get a flat, I try to fix the flat and keep going. I rarely, rarely will change a workout because of the conditions. Because I know in the race, I'm going to get the same thing and I think it helps in a way, I haven't not finished a race, I finish it. Because I train in [tough and maddening climate] and by training in those conditions, you prepare.

Once a triathlete's body is under (relative) control, the second step that emerged from the findings was to figure out the most effective racing strategies. Races have peculiar characteristics that can never be simulated completely in a training environment. Here again, becoming truly comfortable with—and having firsthand knowledge of—every distinctive feature of the racing process appears to improve triathletes' overall

mental preparation. To rehearse the *real* racing process Paul participates in what he calls preparation races:

All the other races are just preparation races, I don't focus on [those] races that much. [I do them] because it gives me some leg speed, some experience with my equipment, but I don't need them for my physical abilities. I just need them for mental sharpness and race experience, how to position yourself at the start, how to go through the transition area. These things are never the same in training as in competitions. So I go through this in a few preparation races.

Other participants use races, sometimes even Ironman triathlons, to try out new plans of action. For instance, John enters preparation races that—although important are not the ultimate goal of his season—with the aim of readying himself for the World championships in Hawaii. In the following quote, he reveals in a very detailed way how he uses an Ironman race to enhance his preparation by testing a tactical stratagem:

This [Ironman] race for me is not, my focus this year is Hawaii, number one focus. Number two focus is this race for sure. And if you split the race into halves this is my focus for this half of the year. One of my big goals for this race is to test myself. And to push my limits and to use it as a trial run for Hawaii. So I'm hoping that in Hawaii this year I'm gonna [...] have a swim that keeps me in contact with the group [of main contenders]. I'm hoping this year to be with that group, because I know that last year I rode alone, I finished ninth and I outran all but two or three people ahead of me. So I thought "Well, I did that on my own, if I'm with the group and I outrun five or six people I could be up at the front." So

that's something that I want to try, it's something that I want to be in the position to do.

Knowing that in Hawaii I want to be in the group—to swim with the group, I want to ride with the group and I want to run whatever—this [Ironman race] to me is my trial ground. This is my test, if I can go out there and try to see what it's like. Maybe I can ride with the group maybe I can't, maybe I don't feel comfortable. Maybe I have to be further back. Or maybe I have to be further ahead or maybe I can't even make it, maybe I'm not fast enough to swim with the group and I have to ride by myself anyway. Either way I look at it, I want to try and use this race as a test for what will work in the future. But it is a mystery to me how [I'll do it]. I have to develop some new strategies [because] I've forgotten what it's like to be in the group. I have to get comfortable with it [... and] I need to figure out what it's like, what I need to do to allow myself to sit in.

In brief, to be their best, Ironman triathletes go through a pre-performance phase which serves as an imperative mental preparation for competitions. In this stage, they sustain a harsh training regimen—in spite of drops in motivation, injuries, and errors in decision-making—and use training sessions as a valuable means to get ready to race. Once triathletes have trained optimally for months, using effective pre-race strategies will put the finishing touches to their preparation for competition.

Using Effective Pre-Race Strategies

Numerous thoughts, feelings, and emotions will surface in triathletes' minds in the last days before their competition. The helpful thoughts (and behaviors) participants in this study choose to have can be divided into three main categories: planning the race; following a routine; and using performance-enhancing thoughts.

Planning the Race

Participants mentioned that thoughts and feelings about the upcoming competition become more and more frequent as race day approaches. Paul remembers,

You go through all the stages, but it's not like stage one, stage two, it's like chaotic: you think about the swim and the next minute you think about the transition area or the finish line and then you go back to the swim, and you always have thoughts about the race constantly, months before the race and the closer the race gets, the more intense these thoughts get and you visualize the race.

In Ironman triathlon, where the action spans over eight hours, a plethora of contingencies with unforeseeable consequences on the outcome of the race add even more challenge to an already tough sport: varying weather; flat tires and bike mechanical troubles; crashes; difficulties with a piece of equipment or clothing; drafting penalties; stomach problems and other negative body reactions due to nutrition and hydration (or lack thereof); mistakes; discomfort, muscle cramps, pain and even collapses; mental "bad patches", and, most importantly, changes in race developments due the timing and triathletes' ability to deal with their own string of challenges. Unlike athletes whose only

task is to focus on executing the right moves, Ironman triathletes must cope with the acutely unpredictable nature of their sport.

To prepare themselves better mentally and reduce pre-competition nervousness, triathletes in this study try to anticipate what is going to happen over the course of the event. For them, planning the race is a means of dealing with stress because for many participants, “Just not knowing and not being out and not thinking you have control over what’s coming [...], I tell you, is a horrible feeling” (France). Good race planning is achieved through making plans and rehearsing possible scenarios during the days leading up to the competition.

Making plans.

“Like I said, everyone has a plan for the race.” For Steve and others, the advantage of having a plan is obvious: it serves as a guideline to facilitate decision-making during the triathlon. The value of a race plan is justified by France’s saying, “I never used to plan [...] like that so much. But I find now that it helps [...] to keep me turned on and to keep me focused on what I’m doing.”

Plans of action are usually used to determine in advance where triathletes would like to stand—ideally—relative to their competitors when the race unfolds. This is why John argues that plans are specific to each race: “Yeah, I guess you have [a plan] in mind and again, that all depends on the race that you have, who your competitors are, what’s your goal, what your best strategy is against the competitors.” He goes on to explain in more detail how he had to adapt his usual race plan for his next competition:

And so that's where, for this race on Sunday that's not gonna be the case. [My usually conservative plan] suits me a little bit more, but now I know that if I get out there and I get out in the swim and I ride my bike conservatively, I know that I'm gonna be lost. I know [my competitors] are gonna take off, I know they're gonna go as hard as they can as a group, and they follow the media vehicle, and they're gone. And if I'm waiting by myself hoping they'll come back, they won't [Laughs]! And so now my strategy changes: I say well, what worked for me in the past, is not gonna work here. I have to go out more aggressively, and so my goal will be different, my strategy will change. So I will try and race other people's race instead of my own race. And I'll see if it pays off.

A concrete example of a race plan is offered by France, who gives an overview of her whole triathlon:

The swim, the only plan I have on the swim is to get on someone's feet and stay there for as long as I can. To get in the pack and stay there and try and conserve energy. Obviously, the first part of the bike I try and catch as many girls as I can, so I can start leading, and I control the racing. That's what I like, I like to be able to control the race on the bike. And from then on in, once I have done that, establish that lead and get control, then it's just about maintaining that lead, keeping myself fuelled, and trying to get off the bike in as good a shape as possible for the run. [...] But the run, I break down [into parts]. So I've broken it into the first 4K section, then the section along the canal, then the turnaround, then the long section back...

Good plans were said to have two main characteristics. Firstly, Michael emphasizes that a race plan needs to be flexible:

When I'm out there, a lot of it is, it changes and I think that the flexibility is key. So you go into [the race] with a definite plan. I could tell you my plan, start to finish right now, and we could talk in a week and I could say it was nothing like that at all. I changed everything, or I changed half of it, or I changed some of it. Because I think even my mental plan might be one thing, but when you get out there you have to take what the race throws at you, you know there's always something you didn't anticipate.

Secondly, Vince reminds us that most of the time, the best plans are in essence simple or uncomplicated: "Usually I always have the same plan: Attack, attack, attack! [Laughs]. It's simple like this."

Rehearsing possible scenarios.

Trying to foresee what can possibly happen is another means by which several triathletes plan their race and, as a result, enhance their mental preparation before events. Paul gives a concrete example of the nature of this pre-race strategy:

For example, Robert is attacking and he's going very strong, should I go with him or should I stay with the pack? I'm swimming and I lose the contact with the main group and I have to swim by myself, so how do I deal with this *mentally*? What might be the *positive thoughts* that I can have in that moment? [... And] how do you deal with the cold or with the heat or with rain? What kind of equipment will I use when this happens? [my emphasis]

Triathletes seem to be more comfortable dealing with how the race develops once several scripts are thought of. France has one optimal scenario and from three to six alternative options to choose from “depend[ing] on how it goes on the day. And what I do is, I just [...] wait and see how I go on the swim, and then depending on how that goes then I take the [appropriate] scenario.”

Elaborating scenarios is an analytical process in which triathletes imagine different race setups and reflect on potential ways of dealing with them beforehand. The scenarios are not mandatory reactions. “But it’s not like, ‘if this happens, then I do this’, but some kind of, ‘if that happens, what would be a possible way of solving that situation?’”(Vince). Rather, they are an aid to make the right decision in the heat of the moment:

You go through different possibilities: How might the race develop? And then you try to find a solution. If this happens in the race, you have at least thought about it before, then it’s easier to find a solution because sometimes you have to make quick decisions. (Paul)

Rehearsing possible scenarios serves an important purpose: it prevents triathletes from becoming discouraged when something unanticipated happens. Here’s how France explains why this strategy is indispensable:

If I just get myself that one [optimal] scenario, which is I’m gonna lead the race from the bike, and no one is gonna catch me and I’m gonna win, if you just think like that, and you don’t prepare for, “Ok, maybe she will catch me”, when it does

[happen] it's *soooo demoralizing*. Because you haven't given yourself the thought that it could happen, that often you just give up straight away.

John speaks about the other side of the coin when he says that practicing—beforehand—the ideal response will attenuate the negative impact of something “terrible” happening:

I could come out of the water in the lead or with the group and I could have a flat tire right away, so what happens? It happened to me before. [...] So what if I have that, what if I lose 10 minutes right away? I'll put that scenario in my head, and I'll go through it and I'll say well, is the race over? No. Can I still win? Maybe not. Can I still get third? Yeah. Can I get fifth? Absolutely. Can I get in there? Yeah. 10 minutes isn't the end of the race, it's a long race.

Based on the data, it appears that rehearsing many possible responses constitutes a fundamental strategy that guards triathletes against eventualities and leaves them with a positive outlook on the race. With race day fast approaching, triathletes turn to their individual pre-competition routines.

Following a Routine

Respecting routines or personal habits before an important race is the second pre-performance strategy participants found beneficial. In the days leading up to the event and on race morning, Ironman triathletes follow patterns that they have found helpful to their performance. These routine actions are derived from past races and tested several times, and enable athletes to have confidence in their preparation.

Lead-up days.

In the last two or three days leading up to the race most triathletes do three things: 1) they prepare for the race; 2) they rest as much as they can physically and mentally; 3) they mental rehearse the race.

The first thing Ironman triathletes do before a competition is ensure all their equipment is ready for competition. Following preparation patterns that work for them contributes to triathletes' mental readiness by engendering a favorable sentiment that nothing is left to chance. France found peace of mind in the days leading up to the race by cleaning her bicycle, arranging her clothing, preparing her foods and fluids, and making sure everything was in order:

Yes, oh yes, everything is spic. And I'm the type of person [who] cannot start the race without my bike being perfectly clean. I mean, it's got to be spotless. It's like my outfit that I wear, it has to be perfect, even from the hat to the sunglasses, and everything. And even though it's not about what you wear or what you look like, it all adds to comfort, and it all adds to your confidence and if you feel good about yourself and if you think you look good on your bike, your bike is running well, that's one less thing you have to worry about, one less thing you can think, "Oh, my gears aren't really working, there could be a problem on the bike or my knicks that I'm wearing are a bit uncomfortable, that could start to hurt on the run." If you can cut all of these things that could go wrong, then all you need to concentrate is on how you go.

For Steve, the day before the race is usually “the day of packing and planning for the race, which is: swim, what do we need, the bike bags need to be done, we get the bike all fitted out, what calorie consumption we’re gonna take in the race”. Once again, having everything ready contributes to the feeling of being well-prepared. Mathew comments,

Yeah, I plan everything the night before, I have everything, even my pills on the table lined up, I have everything, my watch there, all my clothes here. So as soon as I get up, I put everything on, take my pills, drink, my food’s there. Before I go to bed, I have everything ready. And I think that helps knowing that everything is on pace. So I don’t have to... it makes it a lot less stressful to know that everything is according to time. [...] I have done all that stuff way ahead of time, and tried to really minimize the things I have to think about so I can just focus on warming up and preparing my body for the day rather than the other things around me.

Finally, having their equipment perfectly ready is a prerequisite to racing their best. On the contrary, if a piece of gear is not suited to the situation, this could undermine one’s chances to win. Vince reminds us that little things are important:

Yeah, [little things] can ruin your race. For example, if you use a disc wheel and you don’t have the disc adapter for pumping up and you get a flat tire and you can’t pump up, then the race is done. And you ruin yourself by being an idiot, by being stupid. Or some people, they always have the same replacement kit for the race, and they never ever look into the kit so the tube is very old and everything is rusty or not usable anymore.

While readying themselves, the second thing triathletes do is rest as much as possible—both their body,* to ensure they have plenty of energy on race day, and their mind, “So that mentally, I feel fresh for the race, [which] means that I have enough fire in my heart to do the race” (Mary). Sleeping and taking naps are an effective way for triathletes to recharge their physical and mental batteries.

They also engage in distracting and enjoyable activities in an attempt to relax themselves and to suspend—if only temporarily—the feeling Dany describes “as going to a jail, and knowing that the next day you lie under a guillotine”. Watching television, going to movies, or reading a book are common means triathletes use to “get out of the mind set that I’m racing the next day” (Michelle).

The third pre-race strategy Ironman triathletes use in the lead-up days to enhance their preparation is to mentally rehearse their race. “I mentally prepare [...] by going over and over in my mind, what I’m going to do, how I’m going to shift the gears...”, “[for] preparation and confidence” (Mathew). It seems that the closer the race gets, the more beneficial it is for participants to direct their attention to the things that fall within their circle of influence:

I think the most important thing, and Steve said this to me the other day, and I’ve been saying it in my head over and over, “You can only control what you can control.” I can’t control if Mary catches me, and I can’t control if I’m not first off the bike, but I can control how I run. So don’t waste energy trying to think “what if Mary catches me in the first 10K”, because I can’t control that; I can only control how I go. (France)

Under their control lie thoughts on performance-relevant things such as form, control, pacing, and hydration and refueling. For instance, Michelle explains that,

When I go through the race in my mind, I go through the cues that I'll be using, [...] trying to stay on someone's feet, don't lose the draft, [...] pull back with the heel, and especially on the run, cues like to relax the shoulders, lean forward, quick light feet, [...] little things that I know that as I get tired I tend to slack off on.

Triathletes will also use mental rehearsal to practice reminding themselves "to be very careful not to take it out too hard and to keep control" and to go over "even things like minimalizing the amount of mistakes I could make, so ok when I get into transition one: helmet, sunglasses, shoes, arm warmers on if it's cold, to the bike on" (France).

Ultra-endurance events such as Ironman triathlon are all about energy, and regulating one's energy level which is essential to perform optimally. Participants said that they rest as much as possible before important events so they can draw upon maximum reserves on race day. As will be seen in later sections, they also take extreme care to manage their energy level within the competition. By going through ideal race behaviors in their minds beforehand, triathletes are more likely to perform to their potential: Michelle will, for instance, visualize *calmly* handling the changing of a flat tire "so that I don't get upset or waste energy". Another example of practicing the right response is France's detailed moment-to-moment plan of action for turnarounds and after turnarounds:

When you get to the turnaround ok, use the turnarounds to take that energy from the people, because I know there's gonna be plenty of people at the turnarounds. Use those people to take my mind off the pain that I'm in, because I know I'm gonna be in pain, and then once I get out of the turnarounds I get back on the canal again, then I go back to technique, back to keeping nice and relaxed, back to thinking about my legs, thinking about quick turnover. So that's how I do it, and I've done it for the entire run. [I am] trying to find a way to stay relaxed, stare straight ahead, stay focused, but still use the energy [of the spectators] to keep me going. But without giving them any energy back.

Triathletes are careful not to mentally rehearse too much (because “it is still energy-zapping”), yet they consider mental rehearsal to be an important pre-competition tool—especially when it is done mindfully:

And if you do [mentally rehearse] you have to believe in this. And there were some races where I [saw myself crossing the finish line first] and was so convinced I would win that I really had no doubt that I wouldn't be the winner, if everything went right. (Paul)

Morning of the race.

It's finally race day! Following a well-planned routine can become part of an effective pre-race strategy because Ironman races start as early as 7 a.m. Some triathletes wake up (“If I sleep, yeah [Laughs]. If I sleep I wake up...”) as early as 3:15 a.m. to have breakfast, put appropriate clothing on, get equipment ready, pump up the tires and still have “enough adequate time to go for a little jog, or a little swim and be not rushed. I

guess my biggest thing is not be rushed before the start.” (Michelle) The more automatic tasks become, the quicker—and less stressful—they are to accomplish. This is why triathletes find it useful to rely on the comfort of a good routine in their final preparation.

What elements become part of the routine is something very personal; taking a warm shower, going repeatedly to the toilet, putting the gear on, checking the bike computer, doing small warm-ups. What counts, many participants insist, doing what one usually does:

I just try to do the same [things that] I’m doing every time: having breakfast, two cups of coffee, two slices of bread with cheese and one slice of bread with marmalade or honey, and preparing my water bottles and going to the bike.

(Dany)

Naturally, a huge part of a routine in ultra-endurance races is related to the pre-event meal. Since Ironman triathletes are constantly concerned with maximizing their energy level, food is of utmost importance. When asked what he did upon waking up, Steve answered:

Yeah, make sure I have enough fuel. I have those tins out there of liquid food. I have one of those, I make sure there’s enough fuel, enough calories. I count my calories, I make sure I’m drinking and eating enough, and starting with the race with a full tank. That’s my primary concern race morning, is getting enough fuel. Because a lot of people get nervous, and they forget to eat and with the nerves they’re burning off energy and they don’t replace energy. And a lot of people start Ironman three quarters full, three quarters’ tank. I want to make sure I start with a

full tank. Calories in, make sure you drink, drink, drink, and drink and that's what I try to reinforce myself as I get into the transition area. I make sure that I've eaten enough, drink, drink, try to get the calories in. Then I'm just watching the time. Knowing when the start is, going through my warm-up routine. Just a typical routine that I do for pretty much every race: I start with a run, then the bike then the swim, so that you finish in the water for the start of the race.

Once the body and the equipment are ready, there is one last thing to prepare before starting the race:

Then it is a procedure that I went through so many times. I have this breakfast that I eat every time, I get my stuff, which is mostly already packed the day before. I get to the race, I pump up the tires, I fill up the water bottles, do my stretching, and get the race numbers and warm-up and then try to have *positive thoughts*. [my emphasis] (Paul)

By giving us a glimpse of the necessity to get his mind as ready as his body and equipment are, Paul leads us to the last part of triathletes' systematic pre-competition game plan.

Having Performance-Enhancing Thoughts

The third pre-race strategy triathletes utilize to ensure they carry a positive mindset into the race is having performance-enhancing thoughts. By keeping tight control over what goes on in their mind before an important event, participants seek to ascertain that their thoughts will work *for* them and not *against* them; this is accomplished through the use of confidence-enhancing thoughts and distraction control strategies respectively.

Confidence-enhancing strategies.

Participants in this study were skilled at the art of finding reasons to believe they would perform their best. These reasons can be objective or subjective, and serve as a guarantee that triathletes will start the race with full confidence in themselves and their abilities.

Objective grounds for confidence are based on previous training sessions and races. Michael prefers to rely on “just pure hard data or the numbers I see. If I’m on the track and I see these numbers or I’m on the bike and I feel this way [...] with respect to the speedometer, that’s what gives me the confidence”, whereas France likes to build her confidence from concrete results she got recently: “I mean, I can look at the Australian Ironman and say ‘Yeah, I did a 9:10, that’s my best Ironman [finish time], I came second, I’m in good form’”. Mary discloses she tries to focus solely on her strengths: “My strength is running so if I see France and I know [...] she can only run a 3:15 [marathon] max, and I’ve done a three-hour Ironman so [...] I can still catch her on the run. It’s just to remember your strengths”. For Vince, positive past events also serve to gauge his future performance with respect to the other competitors:

[It makes you feel confident] if you have had good results, you know if you have beaten somebody in a race... it’s very important to beat somebody at least once. If you have beaten Lothar Leder, you know, “I have beaten him so why shouldn’t it happen today again?” So it’s possible for you.

Other confidence-enhancing thoughts, however, have a less tangible nature. This is probably because at least for some there are a limited number of truly objective race-

related sources of confidence, especially for triathletes since “the problem with Ironman is that you don’t have many races you can do” (Vince). On the contrary, athletes can find many more subjective—internal as well as external—reasons to be confident they will achieve their goals.

Triathletes in this study have enumerated various bases from which they derive confidence, and the language used by the athletes attests the sources of confidence are real. Here is France, recounted how training sessions leading up to the race are important to her feeling thoroughly prepared:

I am confident with my bike, because I had some good bike rides. And I’ve never had a bad bike ride in Ironman, even when the rest of the race might not have gone so well, I’ve always had a good bike ride. So I’m *confident* with the bike; and the run, you know I’ve been running well all year, and I had my fastest marathon run in Forster this year, the Australian Ironman. I just have to keep telling myself, there’s no reason why I should be nervous about the run because I’ve done the training and I know I can run well. [my emphasis]

She also adds how external reinforcement can do wonders for her when it comes from people she trusts:

[...] the week before, when I was in Frankfurt training with Katja Schumacher, who I know is fit at the moment, she’s always fit, and she’s doing Frankfurt Ironman. And we did our last long run together, it was a 2 1/2 hour run, and it was hard because she is a slightly better runner than me, and we had three 5K, three 5K efforts do to, and I pushed her. And she is the runner! So she said at the end,

and it was a simple thing that she said, but it's really given me *confidence* going into this race, she said, "I'm glad I'm not racing you in Frankfurt." So just something so small, and I'm gonna use that and I know *now* that when I go through a bad patch in the run, this is one of the things I'm gonna use. [my emphasis]

Confidence can be derived by consistently looking for strengths and developing strengths. Mathew explains how this helped him believe he could succeed:

That's why I run for the running club as well, and I think that tests you [...] and to really push myself against [good runners]. And [to] not give up: coaches and others know that I don't give up, I'm consistent, and then that helps for your confidence.

In the same vein, Steve defines how his training methods enable him to believe 100% in his preparation:

I'm a very hard trainer. I always tend to recycle [training partners] a lot only because I think mentally I like standing at the start line thinking: "There's not a person here who's trained harder than me." So for me that's a positive, when I'm standing at the start line or in there swimming, fighting in the water, going, "Ok, we've got eight hours of pain. But no one here has been through what I've been through." And I need to [feel this way] in every race I do. It gives me confidence.

It is common for some doubts to run through your mind before an important competition. In the days leading up to the race, thoughts like "Oh, I haven't done enough training, I feel bad, my back [aches], Oh, she looks fit" or worries about what others

competitors are doing are likely to surface. France speaks for many participants when she acknowledges, “I do think the worst part about racing is everything until the gun goes off, that unknown, you don’t know what’s gonna happen.”

Triathletes have found effective strategies to deal with negative thoughts and feelings, especially the morning of the race, to enhance their confidence and start the race fully prepared. Focusing on one’s readiness is the best way to control insidious doubts about one’s preparation: “There’s always doubts, so that’s where confidence builds in and you have to just have confidence in yourself that what you’ve done is the best you can do.” (Mathew) John instructs us more precisely how to take control of doubts:

[If you doubt whether you are ready for the race], well there are two ways of looking at this: One, you’re not quite ready and you’re gonna freak over it, you’re gonna worry and you’re gonna go into it with a little less confidence and you’re gonna perform [badly]. Or, you’re gonna tell yourself, “It’s race week, I’ve done everything I can possibly do, I’m completely as prepared as I’m going to be, I’m ready” and you be confident. Because there’s absolutely nothing you can do race week. Like if I suddenly realize “Oh shit! I forgot to do a 20 mi. run that I really needed to do, I’m not as prepared as I thought I was”, if I think that and I stew over it and I dwell on it and I think “Oh my gosh I’m not prepared!”, then I’m screwed. If I tell myself, “That didn’t matter, it is actually better! Because if I had done it, I’d be a little tired” or something, this is the point where you twist it. [...]

You have to erase that and say, “That’s bull shit, I’ve done everything I can to be ready”, and you just have to believe it.

Nervousness is something that can “waste too much energy too soon”. For many, race morning is “the worst time”, emotionally speaking, because “it’s just this heightened, anxious, nervous feeling, you’re like, ‘ohhh, I just got to go!’, and thinking of it at the very moment it’s horrible, it’s a horrible feeling” (John).

Triathletes have identified ways to cope with nervous feelings. For example, Mary sets aside a moment to “calm down [...] just with slowly breathing”; Michelle “just kind of tell myself to [stay calm and collected]”; Paul makes an effort to have positive thoughts like, “Oh, I really feel good energy in my arms and my legs”; and Mathew tries to not think about the race too much “just [to] kind of let your mind at ease, because I know it’s going to be a long day where you’re going to have to mentally focus for a long time. So you give your mind a little bit of a break”. Another way to deal with the nervousness is to interpret it in a positive light:

I think nervousness is a good thing. You need this for racing, you need this extra; without being nervous it would be like a training ride, and that’s not enough to be good. You need an extra kick. [...] You have to see it like, “Ok, I’m nervous, but it will help me to race faster, push harder or go harder. [...] I’m nervous ok: it means my body knows I have to race soon and then because I will have a lot of adrenaline that will help me to go faster.” (Robert)

By now, triathletes have left the comfort of their home or hotel room and have arrived at the race site, swarmed with serious and anxious competitors. Participants who have planned what on-site perspective they want to carry into their performance are more

likely to have positive feelings before the start. Steve' on-site perspective is both confident and enthusiastic:

“This is it, yeah, beauty!” As a professional, I think that's you what you trained for. That's what I try to look forward. The race is the bonus, it's the training that's the monotonous part, the training in the rain and the wind and the cold, and the time away. The race, it's always the best so I'm excited. It's like, here finally, this is it. I've never been nervous, like a lot of people ask me, Are you nervous for this race? Not at all. I don't think about it, it's like, “This is cool, I'm going into the battle, let's rock-and-roll. You want to beat me, try to do it. And if you do, well done.”

Distraction control strategies.

Having an on-site perspective plan is important, but acting on it when things go wrong suddenly becomes much more challenging. Distractions can be very stressful if they are perceived as threatening the athletes' readiness. One of the worst distractions that Ironman triathletes can face is to have a problem with a piece of equipment. Mathew recounts a time where he made a mistake:

In Florida, I forgot my wetsuit and I realized my wetsuit was in the hotel. For me it's a poor start, I need my wetsuit! [...] Ohhh, it's very hard, it's really hard to stay calm. I was really on the edge, “Oh, what is going to happen, is [my girlfriend] going to have the time to get back in traffic and park and all that. I don't have my wetsuit, I don't have my wetsuit...” And really it wouldn't be the

end of the world, but I guess for me if you travel a long way for a race, you prepare so hard to do a silly mistake and forget your wetsuit...

Distractions always trigger an initial negative reaction; but it is how athletes manage to control the distraction, and get back to a more positive focus, that is important.

Let's hear how Mathew coped with his forgotten wetsuit:

I thought "Well, I am going to warm up and hopefully when I get back from warm up [my wetsuit] will be there." I just went on as if nothing happened. At first I was really tense or stressed, or on edge, but then after I said, "Well, that's not going to help, I need this negative energy out, and warm up and do what I could do. Focus on what I can do, not what I can't."

Everything considered, re-focusing on what triathletes need to do (what is within their control) is the best distraction control strategy they can use to ensure they are thoroughly ready for the competition. With the race start going to be anytime soon, triathletes know they better "stay right in the moment, and just pay attention to what I'm doing and what's right around me" (John). When asked if he sometimes had potentially distracting thoughts before the event, on the outcome of the race for example, Robert answered:

[No.] It's usually not so much about the race; it's only things to make sure that the race will be fine, like I said that I have my drinking bottles, my swim goggles, my wetsuit, and the Vaseline and everything. Not so much like, "I will ride like this or I will run like this". It's more all the things to get there [...] like, "Is the bike ok? Are my running shoes ok? [...] What will I wear when the weather gets

cold, or will I put a jacket on if it's raining on the bike? What will I wear on the run?" [I'm thinking about] things like this, and not so much, "What will I do when Peter Reid is coming?" [...] Because it's like two weeks or three weeks before [the race that] I think, "What can happen? Will I be there after the swim? Where is a good place to attack on the bike? Or what can I do, when they go on the bike?" But on race day, I don't think about this anymore.

A last piece of advice from Mathew:

[In] the last 10-15 minutes I'll probably be in the water thinking more about my swim stroke, "Ok, this is what I'm going to do, this is how I'm going to swim", focus on all those things, reminders [that] you have to do this, how to swim fast. And then when the swimmers line up, [...] you] want to have a good position and see where you want to go for the swim and set yourself up.

Triathletes, like Mathew, have thus far ensured a thorough mental preparation for their event through optimal daily training and the use of effective pre-race strategies. They are now treading water, patiently waiting for the gun to go off, confident in their readiness. But will an optimum mental preparation (combined with a prime physical readiness) be sufficient for triathletes to perform their best? Probably—as long as they focus on the right things during the race. Robert reminds us,

Yeah, [performing at my best] is the biggest problem. When you train, [...] when you have enough time to train you're motivated to train, [...] you get better and

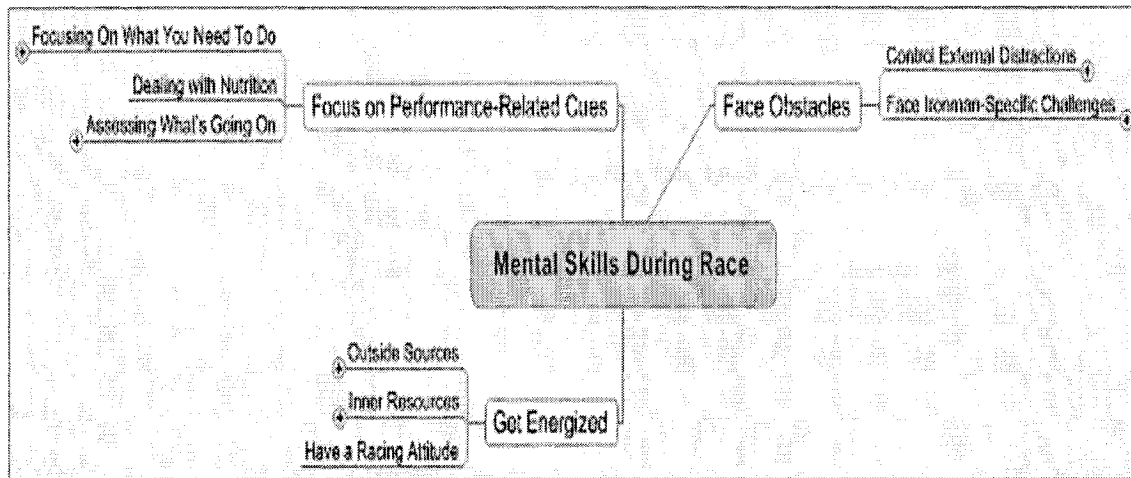
better. But the problem is to be at 100% on the 11th of July, that's the biggest problem. To be 100% on race day.

Accessing Inner Energy Resources during Races

Thorough mental and physical preparation are necessary ingredients for success. However success in Ironman triathlon ultimately depends on what goes on in the minds of the participants *during* the race. How they choose to direct their attention or focus is key to utilizing their well-trained body's abilities to the maximum.

To perform their best within the competition, elite triathletes draw upon three inner resources: focusing on performance-related cues, overcoming obstacles, and getting extra energy. Figure 2 summarizes the skills triathletes use or the actions they do to access their inner energy resources.

Figure 2

Accessing Energy Resources during Races*Focus on Performance-Related Cues*

Ironman triathletes in this study direct their focus towards the things that help them race to their full capacity. From elite participants' experiences, it seems that having a focused connection in ultra-endurance events (like Ironman triathlon) requires that attention be directed to three main performance-related elements which take turns in capturing triathletes' attention: the physical movements they perform, nutrition concerns, and the assessment of what is going on with their body and with their competitors.

Focusing On What You Need To Do

Logically, the first performance-related cues triathletes focus on once the race is underway are the physical movements they need to execute. Triathletes discussed similar physical reminders to help them swim, bike and run at their best. If certain athlete quotes

appear repetitive, it is because they emphasize how important and powerful a good focus is.

Swim.

“And then the gun goes off, and you swim!” The following quote is a very illustrative account of the focus Paul needs to swim his best:

I focus on what actually happens, because there’s so many things happening around you in the swim: people hit you in the face, they grab your swim cap, they pull your feet, people swim faster, you try to get behind their feet to draft, you have to swim in a straight line, you see the buoys, ok, you don’t want to waste time and try to swim a straight line, you have to swim around the buoy and then look at where is the next one. So you’re constantly dealing with what really happens at that moment. Your breathing, the stroke, the cadence, do I have to pick up the cadence? Or do I have to do a longer stroke? Am I kicking well enough, or do I have to kick stronger? And in the end I have to relax to save my legs. [...] you’re just focusing on what’s happening. You have to react at all times to the situation around you.

The importance of focusing on the right things cannot be overstated. By necessity, triathletes’ attention needs to shift from one performance-relevant cue to the next.

In triathlon, the performance-relevant cues are varied in nature and bring about different types of focus—sometimes inward, sometimes outward. During the swim, *focusing on what you are doing* therefore has several meanings. Let’s look at the

elements brought up by Paul, beginning with outward cues, to explain what triathletes think about to swim at their best.

Surely, at the start of the race, one's mind should be busy thinking about *swimming*, at the exclusion of everything else. Ideally, elite triathletes want to position themselves in the fastest group of swimmers called the lead pack, and stay there for as long as possible:

On the swim, I need to find a group, sit in that group, and stay in that group for 3.8-K. And that's all I think about. [...] Nothing else. I don't think about the bike ride, I don't think about anything, I just think about staying in that group, and not losing their feet, because that's gonna be my ride to the finish. (France)

By following other swimmers, triathletes engage in *drafting* in an attempt to increase their speed without spending more effort. Drafting is thus a priority, as Michelle tells us:

[It's] easier to swim behind someone than it is to pull. So one of my areas that have been a weakness is that I tend to get dropped from the pack, and then I end up pulling the chase pack. So it's very important to be very focused on keeping on someone's feet, and reading what's going on in front of me in the swim. Honestly, that's all I'm thinking about at that moment.

Drafting allows for tactical maneuvers to be made. A good example of an outward focus in swimming is provided by Vince when he explains what he focuses on after the first 10 minutes:

The start, for the first 800 m, you just push, push, push, push, push. [...] Then, “Hey, maybe at the turning point I can attack” if you know that somebody is on your legs, or maybe he takes the lead and I can swim on his feet. At the next turning point, I will have a look how far we are in front. If you are at the turning point, and you see the gap is big, “Yes! Push even harder!” Because you know if the gap is not very big, then you have to think about if it’s worth it to go on, or if it’s easier for you to drop back to the others to save energy.

Once the race is underway, triathletes find it is a good time to turn inward and focus on the physical cues that propel them. Steve gives a good example of what he thinks about at that point in the race:

[When] the group starts to establish themselves, then my focus is just staying where I am, staying with the front guys. [...] My aim is just to keep my tempo, the things that I’ve trained, the pace I’ve trained at, which is usually in the front group. Long strokes, like you’ve done so many times in training, long strokes. That’s all I think about.

Elite Ironman triathletes spend from 45 to 50 minutes in the water. Can they think “only” of swimming during the entire swim segment? If distractions creep in, the challenge then becomes one of re-focusing on what they need to do to swim their best. John explains what he does if his focus wanders away:

I found myself before swimming for maybe 25 minutes and I’m starting to get a little bit bored and I’m thinking, I hope I feel good on the bike today. Suddenly that’s a bad [thought], my swim will start slowing. If I start thinking that, I think,

“Forget about the bike, completely forget about the bike, I just tell myself, Put that out of your head, back on the swim, you’re thinking about your stroke”. I find something in the swim that will keep me on task, keep my mind right there, like thinking about my elbows or thinking about something in my form, my hand, my head position, my breathing rate, whatever it is specific to the swim.

Transitions.

Transitions from one discipline to another are a very important part of triathlon; some even call it the fourth discipline of the sport. In transitions, athletes get rid of the clothing and equipment they were using and get what they need for the next segment. The transition area is the place where endless racks support over 2000 bicycles and where more than 4000 identical bags, containing personal belongings, are gathered. For instance, in the *Swim-to-Bike* transition, or T-1, athletes need to take off their wetsuit, goggles, and swim cap, follow the designated route to their bag, from which they take out their biking shoes, sunglasses, and helmet, put them on, find their way to their bicycle and jump on it.

During transitions, it is very easy to waste precious time that will be extremely hard if not impossible to make up. Mere seconds sometimes determine the final outcome, seconds that might have been lost during the transitions. Before a race, France sets aside

[...] times when I might go into the room and have some quiet time and close my eyes and I will think about going through everything, even things like minimizing the amount of mistakes I could make, so ok when I get into transition one, helmet, sunglasses, shoes, arm warmers on if it’s cold, to the bike on. So I go through

little bits like that, and even though I know we're only talking about saving 30 seconds until a minute or two minutes, which overall is not a lot, but it's still two minutes and hopefully if this race goes the way it should go, that's how close it should be.

Being really quick in transition does not require any additional fitness, only practice; losing unnecessary time in transitions is therefore frustrating. Triathletes prepare themselves for transitions ahead of time in three ways: practicing the movements and rehearsing transitions physically and mentally before a race. Mary recalls how she often went over equipment changes to ensure they were as efficient as possible: "I stayed for half a year in Australia [...] and we practiced transitions all day, it was really hard work." Secondly, the transition areas are different in every race, so Steve "walk[s] the transition chute so you know where your stuff is so [when] you get out of the water you just follow your path, what you've done in training". Thirdly, triathletes engage in a mental rehearsal of their transitions, as Paul explains:

Then for the transition area, [for] every move you have to know exactly what you have to do.[...] You have to know where your bike is, what's in the bag, where is it, what to put on first, the order of all the steps, you have to have already gone through this before.

Q: You mean, go through this mentally?

Yes, in your head, before it happens. You have to go through this the day before, the weeks before.

In addition to pre-race preparation, most triathletes visualize how they will go through T-1 during the race, towards the end of the swim: “200m out from the transition, I’m starting to think about the bike. I might be kicking a bit more to get some blood into the legs, and I’m thinking ok, where’s my bike, I picture where it is.” (Steve) Finally, the last mental strategy used to accomplish efficient transitions is to think exclusively about what exactly needs to be done when doing the transitions:

[In transition one] it’s like, get out of the water, who’s gonna help me take the suit off, what do I need to get, what’s going on at that absolute moment, not what’s going on a couple of minutes down the road. I need my shoes right now, I need my helmet right now. Everything is as I’m doing it. (Michelle)

Bike.

For the elites, the bicycle leg—the longest one in Ironman triathlon—takes between 4½ and 5½ hours to complete. A leisurely Sunday rider may wonder how anyone can stay motivated to do the same repetitive physical movements for such a long time, essentially alone. Indeed, Steve says that in his first Ironman, “this was my biggest concern. I was like, what the hell am I gonna think of for 4 hours? I remember thinking, ‘How boring, it’s gonna be soooo long!’ And I was absolutely amazed how quickly it went.” Afterwards, he credited his distorted feeling of time to a busy mind, because “you’re thinking so many things”. But even though there are many things to think, “It’s easy to let the mind wander because for the bike [...], you’re out there for so long in an Ironman” (Michelle); this is why triathletes must have performance-relevant cues:

“Whether it’s on your heart rate, or on your speed, or your rpm, or somebody else, you have to stay focused.” (Mathew)

Similar to that of the swim, a focus consisting of alternating cues is often used on the bike. This quote from Paul gives an idea of the required focus, which will be expanded upon in the following paragraphs:

Then you go on the bike and it’s the same thing: the shifting, the pace. You focus on your legs, because sometimes your legs get tired in the beginning, they might still be cold from the swim. You want to get information, [...] who’s ahead of you, who’s behind you. You grab the first drinks at the aid stations, and you see your competitors, Are they trying to get closer? You look at your speed, you look at your average. You pay attention to your cadence, do I have to shift to a bigger gear or a smaller gear? So that’s what you think about on the bike.

At first, many triathletes have an internal focus, tuning in with their body, which requires time to divert blood from the arms to the legs. France explains that

I focus on trying to get into a rhythm as soon as I can on the bike, because you don’t feel great for the first 10 to 15km on the bike, because you’re still tired from the swim, you haven’t got your cycling legs yet. So I concentrate on trying to get into a rhythm, feel good, get my heart rate down as quickly as possible.

Then, most triathletes turn outward and want to get feedback on how their competitors are doing. For instance, Robert wants to know “from the journalists on the motor bikes or the spectators, where the others are, how much is it to the lead, [...] and where are Peter, and Cameron, and Tim DeBoom, [...] behind or in front?” But as he so

aptly points out, “It’s good for the head if you know what’s going on; but I mean, even if you don’t know anything, [there’s no choice] you have to go.”

Competitors can also be used as part of a planning strategy. John incorporates them in his race plan and uses cue words to focus on what he needs to do:

[I] think, “Ride with this group. No matter what, stay with the group. Don’t let that wheel get away or don’t let that pack move on, or don’t let a gap form”. I know the way they race here, they ride really really fast. And it’s gonna be, especially on the first loop, faster than I’m gonna want to ride, because I don’t, because that’s just not the way I usually race. I know for me it’s gonna be a matter of “Go, Go, Go!” I’m gonna be thinking, “Stick with them, it’s worth it, don’t let them get away”.

Whatever their tactic may be, Ironman triathletes need to constantly return to their body throughout the race to ensure their body works as it should. A good way to keep on top of everything is to be

thinking in small increments all the time. [...] Because it’s not 4½ hours, it’s divided. You’re like ok, there’s an hour, have I got 500 calories in? Yep, boom! Start again. Making sure you’re fueled up, fueled up, fueled up. “Oh, I’ll grab a cookie! Have I got enough water? What gear am I pushing? Is the pace good?”
(Steve)

At the end of the bike segment, triathletes get back to the transition zone to execute the *Bike-to-Run* transition. Similar to the first one and usually faster, T-2 consists

of dropping the riding gear and putting on running shoes, cap and fuel belt. The athletes are now ready to tackle the last, but not least challenge of their race: the marathon.

Run.

The last leg of the Ironman triathlon consists of running a full marathon, 42.2km, on legs that are already tired. At that point, the 3.8km of swimming and 180km of biking have already started break triathletes' bodies down. After more than five hours of hard aerobic work, the challenge is bigger than ever to keep an effective focus. But it is also crucial: "[The run] that's the end, I mean, you know if you lose focus, you're gone. You'll lose spots, you'll lose places." (John).

Focusing on what needs to be done during the run means several things, including getting body feedback, eating, looking at one's competitors or thinking of one's technique. The first thing most triathletes do as they get out of T-2 is to assess how they feel and try to get into a comfortable running rhythm. Some, like Vince, are very proactive in trying to feel better: "After 180k on the bike the feeling is horrible so you just hope to get rid of that feeling as soon as possible. And this is what you think of, 'Hey, my legs, start running! We have to run!' [Laughs] " Others, like Michelle, prefer to give their body time to readapt:

Finally, when I get out on the run I'll be thinking about, "Ok how do I feel? What hurts, what doesn't, what do I need to relax, what pacing do I think I could hold right now?" And then once I get through how my body feels, I get to the first aid station and I decide what I'm gonna take in. Sometimes I don't want to take a lot in right at the beginning of the run and let my body go from being on the bike to

running. So that's my next thought after I see how my body feels. [...] My second priority is nutrition, "Ok, what do I need to take in?" [...] Because you're thinking, 400 meters out from the aid station, what do I need, what am I going to do, what am I going to take in? Sometimes I have salt tablets, or electrolyte tablets so I need to make sure that I get those in my mouth before I get to the aid station so I can go through and just get the drink in without tumbling with all the stuff.

An aspect of ultra-distance events that conceals a crucial challenge is pacing. Athletes must be patient enough to stick to a pace they will be able to maintain for the whole duration of the race. For that, Ironman triathletes pace themselves on the run:

You get off the bike and the first thing I'm thinking about is, "How are the legs feeling? Oh! They feel good", and then my whole race now for the run is structured around my watch. I go: ok, boom start the watch. I go for the first kilometer, too fast or too slow. And usually it's too fast, because the hype and the pump, so you tend to just adjust your pace, you take your fuel in, and the run, really, is quite easy for the first 10 miles. [I tell myself] "Just stay controlled, stay on the pace, this is the pace, try to stay relaxed." Obviously, you want to know where the competitors are, you're thinking, How far in front am I? How good are they looking?

As Steve just pointed out once the body, nutrition and pace are under control, triathletes' focus shifts outward to their competitors. They want to know where everybody stands but also how they are doing. The relatively slower pace of ultra-

endurance events allows for interesting analyses. Mathew gives an example of how he used his interpretation of his competitor's feelings to decide what he needed to do as they were only 15 meters apart after more than 200 km of racing:

When [a competitor] passed me, he wasn't going very far in front of me, he was just 15 meters, 25 meters in front of me for like the next mile, next mile, next mile, then I thought I'm getting closer to him, closer to him, next thing I know, hum, he's not looking that great. "Maybe he is not going to run away with this thing!" And I kept my heart rate the same and then I ran beside him for a bit and he didn't look that great, I didn't think he looked that strong, so I said "Well, I might as well go and see what happens."

This competitive instinct is what drives most elite Ironman triathletes to keep going even though their body is experiencing major discomfort. To maintain a good running pace, many focus on rivals they need to catch. John is always thinking about the competitor in front of him: "I'm thinking that person is coming closer, coming closer, coming closer. And that will generally take up a lot of my thoughts during the whole run. [I'm always] thinking there's someone up there I gotta catch, always someone to focus on."

Likewise, Mary needs to always focus ahead. She recounts one time she was running in second position, how she was totally concentrated on trying to pass the race leader; but when she did, with only 1 km to go, she had nothing else to focus on:

Because it was really at the limit, my running, really really at the limit you know, there was a big chance that I blew up. [...] Yes it was a really high risk, my [pace]

was really fast. [Finally] I passed her and then it was like, at kilometer 41, I knew now I got it, I knew she was 200 m behind. But I was so tired that I started to feel a little bit dizzy. It is like, you know you reached your goal, and then your body... Before [passing her] I had no problems [focusing] at all because I was really concentrated but then when I reached my goal I started to feel dizzy, and it got really hard [to continue].

When this happens, what do triathletes do? Paul relates the story of a competitor who became the race leader when he passed Paul:

[He] passed me with 2000m to go [and] my quads were cramping up, because I really got these spasms, I couldn't run faster in the downhill. And he said after the race, that he was at his limit. He had this goal to catch me, and when he caught me, he thought he couldn't go any faster, but he knew he had to go faster to drop me. So he told himself, "There's another competitor ahead. You have to catch another one."

Towards the end of the marathon triathletes' bodies, often lacking fuel and at the limit of cramping, start to break down. At that point, a crucial task-relevant focus is on technique. Mary used this focus to win a race:

I just concentrated on running. Just running, breathing, and my technique. I just tried to lift my knees a little bit higher, to work with my arms and [to breathe well]. And at this time I really tried to concentrate on the running stuff, not on something else, I didn't think of anything else [...] I always try to stay relaxed in

my jaws because if you start [tensing your jaws] your whole body is cramping and getting tense.

To race their best, triathletes focus the step ahead. Throughout the swim, bike, run, and transitions, most of the time they are thinking about what they are doing at that precise moment. And to be able to do this, ultra-endurance triathletes must ensure they have enough fuel and fluid to sustain their effort.

Dealing with Nutrition

Ultra-endurance triathlon lasts for a minimum of eight hours. Elites race at a hard enough pace to cause an energy expenditure that far exceeds what their body can metabolize from its own reserves. Even the best trained athlete could not finish an Ironman triathlon without taking in additional calories. Therefore, the second performance-related cue Ironman triathletes focus on during a race is their eating and drinking strategy.

To make sure he races at his best, John acknowledges that “I mean, the key is nutrition for me. I use a lot of fuel and I have to always be, I just have to be on top of that, I have to make sure that I have [enough energy].” When asked how he thought was the mind was important in Ironman racing, he included nutrition in his answer, saying:

I think [the mind] is the most important thing. I look at the people who are at the races and everyone of us has done, I mean with little differences, everyone has done enough training to be the fastest or to go out there and to win or to be right with everyone. And I think where it matters is, one of several levels is what you do in your head and that can be as far as your strategy, your nutritional plan.

Appropriate nutrition must be “figure[d] out because you can do too much or you can do too little. You have to do just enough.” If a triathlete does not drink and eat enough, he/she likely will fall apart on the run, when his/her body will have exhausted all the glycogen readily available. On the contrary, if a triathlete puts too much food in, “it’s the opposite where [your mind functions well], but your body just slows down, and everything in your body, all the blood in your body goes to your stomach. You’re processing everything, and your legs can just shut down.” (John)

To add to the challenge, the amount of drinks and food a triathlete should have is dependent upon an always changing variable: the weather. John explains how the conditions can impact his nutrition plan,

[...] when they are different from what I anticipated, or maybe if it’s hot, if it’s not hot, or if I get a lot of head wind, because the more head wind or the more hills, it’s the more energy you expend, and so with the higher temperature you might need to up the calories or need to up the fluid intake.

So the question becomes, how much do they eat? Triathletes ensure they handle nutrition concerns efficiently by deciding either in advance or during the race how much food and fluid they will have. For example, Mathew eats

As much as I think my stomach can take. I try to have eight gels, two gels an hour, and one power bar every hour or two. I try to, it’s hard to digest the food when you’re going at such a hard pace but as much as I could physically put in and digest. I would put like a whole 300 calories an hour, I figure I need.

There is a drawback to not establishing the strategy in advance: the normal feelings of thirst and hunger can sometimes be suppressed in a context of physical exertion added to high levels of adrenaline. Vince says that his nutrition plan is “decided only by feeling, [based] just on how I feel. But sometimes this doesn’t work out.” In contrast, Steve determines his nutrition plan well before race day and hence knows exactly what he will consume and when:

For me, it’s like ok 500 calories in per hour: I’m gonna have a Cliff Shot every 15 minutes, I’m going to drink that bidon of water within this hour, I’m going to have this in surplus in the hour to make sure you replace it. It’s amazing every 15 minutes you’re riding along and you’re like “Ok, there’s an aid station: Cliff Shot, drink and then it’s 120 calories”, and when you start counting calories it’s amazing how quick that part goes.

But even a set plan might not be the ultimate solution. Indeed, according to many, “the key to Ironman is to be flexible.” For instance, John explains that his plan [is] very well-planned, but then it’s flexible. [...] I will not have anything for the first 30 minutes and then the next 30 minutes I have a certain amount of fluid. And then from 60 minutes to 120 minutes, I have this amount of fluids and this amount of food and then it increases slightly from 120 minutes to 180 minutes, and so forth. But I have it dialed in so for each hour that I go through, I know what I should be taking. So yes, you have a plan that is very specific, and I know that during this period of time I’m gonna follow this plan, but I also know that if

the conditions are a little easier I go a little less, if they're a little harder I go a little higher.

Michelle also prefers to let her body be her guide when it comes to nutrition. She has a plan, but also believes that “you have to be flexible so if I’m burping or my stomach is getting upset I need to back off, so I also need to take that into account.” Because no single amount of food and fluid is appropriate for everybody in every circumstance so triathletes have to discover what works best for them. They test various options during both training and tune-up races to find out the most appropriate diet. Like most triathletes Michelle “know[s] what works for [her], as far as food and drinks [...] It’s just what’s worked with training and what’s worked with racing in the past”. Nutrition plans can always be improved, and this is why some triathletes, like Mathew, continually keep experimenting:

And as well something different I tried is, any time I had a gel, I had water to wash it down with. It’s a lot better to not having too much electrolytes [...]. I washed down water, I had bars with water and then I had Gatorade in between. I found it worked a lot better for my stomach, I didn’t have to go to washroom, I had no stomach problems at all this time.

Once triathletes know what works best for them, they make sure they drink and eat accordingly. Yet there are so many performance-relevant cues triathletes have to attend to that nutrition can sometimes become forgotten. Thus to perform at their best triathletes must keep track of their calorie consumption. While John “just memorize what am I going to do, what is my [nutrition] goal”, other athletes like to have concrete

reminders. John's fiancée "writes it down on a card and takes it on her bike. She says that's what I'm supposed to do, in case you lose focus, you know what to do." Likewise, Michelle

know[s] how many calories roughly per hour. So I know I need to take these many gels or drink this much of the water bottle [...] I have a clear water bottle, so I know how much I've actually had out of it and I think "Ok, I've been on the bike for two hours, and I should be halfway through this bottle".

Similarly, Vince assures that following a routine helps to ensure proper nutrition: "by doing the same things all the time it helps you to get through it" because the athlete knows exactly what to do.

Assessing What's Going On

With the body.

For Ironman triathletes, one of the cues most relevant to performance is certainly their body. To perform at their best for 8 to 10 uninterrupted hours, triathletes are in tune with an instrument that, although extremely well trained, does not respond with the predictable regularity of a machine.

Throughout the race, triathletes unceasingly assess whether their body is functioning well or not—and react accordingly. At times this is an easy task. For instance, when John feels a cramp or a muscle pulling: "[If I think] 'Oh! My legs shouldn't feel this way' I'm trying to figure out how to get it go away. I'm pretty in tune with my body and I know when something bothers me, I can stretch and make it go away". But the cause of feeling bad and uncomfortable is sometimes less clear:

First thing you do [when you feel bad] is you think, “What could this bad patch mean? Is it something I did or have been doing, is my nutrition off? Do I need to take salt tablets, do I need to take a gel, do I need to take a drink or is it because I’m riding too hard, or because I’ve been sitting in that position for too long? Is there something I haven’t done or I have done that I need to change?” So you need to change, you need to assess the body, assess everything that you’ve done and you make those changes.

After the triathlete assesses what was going on within her body, he/she must take action. Some triathletes are very proactive when solving a problem: when things do not go according to plan, they remember to control what they can, and to take things just one step at a time:

So if I’m losing time on the bike, number one: if I’m not tired maybe it’s because that guy is going too fast. If I am tired and I’m losing time, the first thing is, what can I control? Maybe it’s fuel. Let’s get some fuel, let’s drink, let’s shift the gears, maybe I’m pushing too big a gear, rest the back. Just take your mind off [the fact that I am working hard], control the things you can control and ride out of the storm (Steve).

I concentrate on who’s up the road if I’m not in first place. Trying to catch them, trying to think what I can do to shorten that gap, whether it be getting some more food in, concentrating on my form, or let’s try to pick it up just a little bit for this section, let’s try and run a little bit faster to the forest, let’s run fast to the forest

and then we'll back it off a bit, see how we will feel. So again cutting it into little sections. Just little bits at a time, because that's all your head can handle (France).

If they want to finish the race with the best possible performance, triathletes have no choice but to take body issues very seriously. Vince uses an interesting analogy to describe the importance he attaches to getting his body to function as effectively as possible:

[When you have a problem] you are very much reduced on some thoughts, on some things. It's like when you are very, very, very, hungry. You just think, "I have to get something to eat. No matter where, no matter what, no matter how much it is, I just have to get something to eat". And in racing it's always, you know when children want something it's like, "I want the ball, give me the ball, give me the ball, I WANT THE BALL!" Nothing else. If you tell them we have another ball, and we have this and we can get ice cream, no. I want THIS. And it's the same kind of thought in racing. I need THIS. I have to do THIS. And you know you try to avoid anything else. For example, I have to get some water at the next aid station. IMMEDIATELY. My mouth is dry because I have taken a gel and I need the water NOW. Or I get [...] irritated: I need a sponge to get rid of that.

Once their body is under control, triathletes then turn to their environment.

With the competitors.

Ultraendurance events are seemingly endless struggles between rivals. Because Ironman triathletes spend many hours surrounded by the competitors they wish to beat,

assessing them becomes a necessary part of the performance. For instance, Michelle explains that during the swim she continually *reads the pack*: “Just who’s surging, who’s staying comfortable, who’s in front of me, so it’s more of a just understanding what’s going on in that moment so that I don’t get dropped.”

Triathletes must remain aware of who is where, but even more important is to gauge how their competitors are feeling. John gives the example of what he focuses on when riding:

I’m thinking, you’re assessing other people, like he looks pretty bad or he looks good or whatever. I think you assess that all, so you look around and you see who has a grimace on their face or who doesn’t. You determine who may be is working too hard, and who isn’t.

In this case, determining what others are feeling and thinking reveals several performance-relevant cues which are then used to react in the best possible way. Paul talks about how his sense of empathy helps him to make important tactical decisions, like a surge, during the race:

I’m watching my competitors, are they breathing hard or feeling uncomfortable, do they look scared, or are they prepared for my attack? Sometimes they know it might happen, and they just look at me and wait for this moment. But sometimes even when they expect it, if it’s a certain part of the course where I’m really strong, I attack and it doesn’t help them. But sometimes it’s good to, for example, if there’s a group together, to make sure that I don’t drop them by myself.

Sometimes, I need to have some guys to work with me. I may encourage people

to go with me, I even tell them, “Hey, next hill we’re gonna attack, ok?” For example, [a competitor] is a guy that I did this with a few times and it worked: so many times we were out at the front together and we finished first and second.

In Paul’s case, his competitors may not have been ready to react properly to his surge and this allowed him to claim the victory. However, responding to others’ manoeuvres is a decision that has to be weighed with caution. John tells how he recently decided whether to follow suit or to race his own race based on his assessment of his competitor:

Well in this case, what I did last year I just I saw the guy’s face when I got passed and I knew he was working very hard. And I look at my speed, I look at my effort and I know he’s not that much better than me. I know he’s not gonna ride that fast for that long, I know he can’t. So in my head, I tell myself, “Let him go. He’s gonna blow up” and sure enough, he did. So it was a gamble. [...] But I knew that that guy looked too strained and I thought, well, I just have to let it go and I just ignore it.

Since triathletes put so much emphasis on how their competitors look, they are aware that they in turn are certainly gauged as well. Indeed, an interesting psychological game unfolds in certain circumstances. It is common that when a triathlete passes another, she pretends that everything is going great in order to discourage the competitor even more. Vince knows the rules of the game:

[When] the other person is catching up on you [...] of course you know that if he is overtaking you, he runs very fast. He tries as hard as he can because he wants to

show you, “Hey, you have no chance to follow me. You have NO CHANCE” even though he is also dying. [I already know that] and, that he is going to say something. You always say something, or most of the time, and especially if you like the other person then you just say something. [When I got passed] he said, “Follow me, let’s run together” and I tried, but... Of course he says that, but he is not interested in me doing that.

In summary, to give their best in races triathletes must focus on performance-relevant cues, that is what they need to do to swim well, be quick in transition, bike hard and run fast. They must also deal with nutrition concerns, and assess how their body and competitors are doing and respond in the best possible manner. But what do triathletes do when they get distracted from their optimal focus?

Face Obstacles

Control External Distractions

External distractions are things extraneous to the athlete. Even though external distractions are outside the area of control, they trigger an athlete’s responses in the form of thoughts, feelings and actions. These responses can be positive or negative thereby contributing to or undermining good performance. Athletes must learn strategies to effectively control how external distractions impact their race. The three main external distractions Ironman triathletes mentioned were the race conditions, various problems like getting a flat tire, and their competitors’ accomplishments.

Race conditions.

The first set of external distractions triathletes have to deal with are “the environment and the conditions of the weather”. Naturally, since Ironman triathletes are competing outside for more than eight hours, they are often faced with various weather elements. Strong winds, high humidity, oppressive heat, choppy waves, pouring rain, extreme cold, or a burning sun all can affect athletes’ performance.

Michelle explains that when she is faced with difficult weather conditions, she reminds herself that “It’s not like somebody else has an advantage because it’s cold or hot, or it’s raining or windy, we all have to deal with it. With things like that I just say everyone else has to deal with it.”

Of course, athletes have no control over the weather; however, they can prepare as best they can for different possibilities. France gives the example of her race in Germany:

The summers here seem to be very changeable, and I’m not talking from day to day, I’m talking from hour to hour. [...] It can be 30°C one second, and the next it’s pouring rain and freezing! So that’s something that could affect my race if I don’t prepare for it. And you prepare for that, one, [by] telling yourself that it could happen, and two, [by] putting arm warmers in your kit bag, putting a jacket in your kit bag, and making sure that if it is bloody cold, you use it. So that’s the way.

Choosing the right gear according to a weather that changes—sometimes quickly—may cause mistakes to occur. Finding out that one's equipment is not the most appropriate for the situation may be upsetting and requires the athlete to display distraction-control skills. Vince recalls an instance where he did not make the right choice of wheels:

it was not the smartest decision to use the disc wheel, it would've been better to use just a high profile wheel [because of the wind]. But you have to avoid that negative thought. If you made another decision before, if you decided to use the disc wheel, and you recognize that it's windy, you have to say, "It's not that windy, no, no, it's perfect. We have a lot of down hills, the disc wheel will help me. So it's ok." [Laughs]. You have to [look at the positives] because if you think of your bad decision all the time, you can't push. You can't push.

Finally, once the triathlete has acknowledged that the conditions cannot be changed, it is time for them to re-focus on something more positive, something that will help their performance. For instance, Mathew tried to encourage himself to keep going when he was getting distracted by waves and other swimmers:

In the second half of the swim, because it got really choppy, I had to really think about focusing because of the waves. It was hitting you in the face. It got really choppy when we got out in the ocean, and then I was tired because I hadn't swim enough, and especially I didn't do lake swims. So yeah, I had to really focus on the swim, because of the chop, and then when I started the second loop, I was

slowing down a bit, because the age-group were coming and I was getting hit from the side. So trying to stay focused, [thinking] “Ok, come on. Come on”.

Various problems.

The second category of external distractions include various potential obstacles to triathletes’ best focus: bike mechanical issues, drafting penalty, spectators running in the way, problems with the equipment and, very importantly, the competitors’ performance.

Ironman triathletes cannot anticipate everything that may go wrong in over eight hours of racing; what they can do, however, is rehearse the ideal response they want to have in different circumstances. Before races Michelle rehearses in her mind how she wants to react should she have a mechanical problem with her bike for instance. She imagines

just calmly [dealing with] it, not freaking out, not getting upset. More so rehearsing in my mind so that I don’t get upset or waste energy [during the race]. “Ok, this happened, just deal with it and move on [...]. I’m further back in the race than I expected to be, how do I deal with that? This is what I do”. So this is more just keeping myself calm. [I] try to say this is the best job I can do at the moment, positive affirmations. I just tell myself not to panic. I go through in my mind, this is how I change the tire, this is what I do, do it calmly and I then get back on as quickly as possible. And I’ve also realized that what you think is a long time, is really not. I mean in your mind you’re thinking all of this is taking for ever, but this is not, it really isn’t!

The two things mentioned most often by participants that caused them to be distracted were missing the main swimming pack during the first leg of the race and getting a flat tire. Being dropped from the pack means the triathlete lost the opportunity to take advantage from the drafting effect, which in turn means he/she will likely get out of the water several minutes behind the competitors. Finding a way to deal with the disappointment becomes a crucial task. Mary uses positive thinking to keep going regardless of her position in the water:

If I miss the group? Yeah, it's like a negative thought that's coming in, but you know I try to, you always try to stay positive. If I miss the pack, if I see the group and I didn't know who is in there, I think "Maybe the other girls are behind me", you try to stay positive. But the first thing is a negative thing that comes in your mind. For me, I have to get it out somewhere and try to find something else positive.

The other main obstacle, getting a flat tire, necessitates a more active reaction, as the triathlete has to quickly fix it and get back on the road. A strategy well suited to this kind of distraction is one where the response is ingrained in triathlete's mind, operating automatically. Vince explains how he would react if he got a flat tire in a race:

It's like a program: Boom, flat tire, OK. You know, there's no time to worry about [it], you just pull out the wheel, and repair it, replace the tube, put some air in it, and done. It's like [finger snapping]: This thing happened, problem recognized, then solution. [I don't worry about it], it's not worth it. The problem is there, you have to solve it.

Indeed the best reactions often occur when one does not think too much about what she has to do but rather just *does it*. According to John, triathletes should follow their initial gut feeling and not engage in thorough reflection when faced with most distractions. As we mentioned earlier, many distractions cannot be foreseen:

I think it's dangerous to overanalyze what you do, and if I think too much about what I always am doing sometimes that can decrease its likelihood of working. You don't want to sit there and think about, "Am I supposed to be thinking about this?" You don't want to overthink it, I think that can be hurtful. When I'm out there [on the race course], a lot of it changes and I think that flexibility is key. So you go into [the race] with a definite plan; I could tell you my plan start to finish right now, and we could talk in a week and I could say it was nothing like that at all. [...] Because I think even my mental plan might be one thing, but when you get out there you have to take what the race throws at you, you know, there's always something you didn't anticipate. (John)

Competitors' performance.

Triathletes have no control over the third category of external distractions: the performance—especially *good* performance—of the competitors. An athlete's standing relative to the competitors can have a strong impact on race focus; Robert narrates how he feels when he is not in the position he wants to be in:

Ah, of course, you get disappointed, but it's also, the motivation is not so good anymore. When you feel there's no way to come back, but that the others are very, very strong, then for me it's very hard to be motivated. [...] They say

“Winning is not that important until you win, then it is” [Laughs]. And that’s true: if you have won a big race, everybody expects you to be, maybe not winning all the time but to be close to the winner. And if you can’t do that on [race] day, then it’s always hard. You trained a lot, and you put a lot of time and energy into it, and then you’re disappointed. You think, “Oh, so much training, so much time to prepare for this, and I did this and that, I got to bed early, I ate only healthy foods, I did all this, I didn’t go out much because of the race” and then you feel it’s not working, you don’t feel strong.

Robert mentions that a good performance by one of his competitors can affect him very negatively. Triathletes have learned to deal with this type of distractions. The distraction-control strategies they developed are divided into two main categories, and their use depends on what the specific situation requires. Sometimes, triathletes must purposefully let their rivals go ahead; at other times, they must keep going even though they are behind.

Ironman triathletes understand the value of pacing, that is to be patient enough to go at a speed they can keep for hours, in order to succeed in ultra-endurance races. Moreover, not all triathletes are created equal: some are better swimmers, others are stronger cyclists, and others are faster runners. Thus, to take no chances, triathletes must respect their own strengths—and weaknesses. But to follow a pre-established pacing plan can be extremely difficult in certain cases. John explains that he has a hard time going at his own speed when rivals pass him:

Oh, it can be hard. Because we're so competitive, if you see someone riding away from you, you don't want to let them. You want to do everything you can to prevent that from happening. So it's very hard to sit. If you say "I'm going to ride this pace", and someone else is riding [a faster] pace, it's very hard to shut them out. [...] It's in our nature, in most people's competitive nature, to go and compete and to be forced to go along with them.

To be able to let competitors go when triathletes feel the pace is too fast requires a certain level of self-confidence. The participants share three things they must know to increase their confidence: their strategy, their body, and their competitors. First, Mathew states that for him to not get distracted by competitors' good performance, his confidence must be based on the knowledge that his own strategy *works*:

Sometimes [pacing yourself] is the hard part. But you've got to be confident that what you're doing is right. Because you can go up a little bit, but once you go up too much, then you start building up lactic acid and using up too much energy and you're going to pay for that later. So if you know what your threshold is, you don't want to go over it too much too often. I think you have no choice but to let them go. I may push up a few beats maybe from 140 to 145 to kind of stay close so that way you know you haven't lost it, but I think you don't want to go too high[...]. And then it wouldn't be worth it. I'm better having control and trying to get back later.

The second thing triathletes can use as a distraction-control tool is their own body. By trusting it, they can be successful at letting rivals go, as Dany says:

Yesterday, Paul Zack passed me very early on the bike and he said to me, “Come on, follow, follow, push harder” and I tried. I tried for 100-200 meters and I knew no, that [pace] is too hard in the beginning [of the race]. And I let him go. But it didn’t make me angry. I just let him go and I thought, “Ok, I guess we will see later”. And [after] 20 km I caught him up again.

Thirdly, triathletes can base their decision on their knowledge of their competition. By being cognizant of others’ strengths, weaknesses, and capacities, they are in a better position to evaluate the soundness of the pace. John shares how he managed to follow his own plan to eventually win the race:

I knew my competition. I knew them fairly well, I knew what I needed to do to try and finish first. And basically, as a lot of people went out really really fast on the bike, really fast, I had to let them go. Because I knew that some of these people couldn’t hold that pace, I knew that for me it’s better to come out strong towards the end of the bike. [I told myself,] “Put it out of your head and try to do your own race.”

In the above quotes, triathletes would let their competitors go ahead *on purpose*. Sometimes, however, the distraction comes from the fact that the athlete is being passed or will soon be passed, and wishes to respond to a competitor’s move but *cannot*. This latter type of circumstance can be extremely frustrating and dispiriting because this athlete feels even less control over the way the race unfolds.

Athletes rely on positive self-talk to put their disappointment aside. One way they stay positive is by adjusting their goals or expectations or focus so that success is still

possible. Vince shares his thought process when he sees that the gap between himself and his competitors is closing because they are catching up:

Yeah, then it's hard. Then you think, "Ok, I can't [ride] on my own. When they catch me, try to stick with them." And if that also does not work out, if you're not able to stick with them and they just leave you behind, then you say, "Ok, let them ride and I'll catch them on the run." Or you think "Ok, these two guys or these three guys are in front of me, it's ok I'll still be fourth."

Q: So you never give up.

No, there's always something. In the beginning, you say "Ok, I can't win, then maybe I'm 3rd, and maybe I'm 5th, or at least 10th." That's the aim, get on the podium, get money. If it doesn't work out as you planned it, then your goals get a bit smaller.

Another way to stay positive and focused when disheartened by competitors' manoeuvres is for the athlete to concentrate only on what she *has to do* to perform her best regardless of how others fare. France tells us how dispiriting it was for her to get passed on the run, especially if at a time when she didn't anticipate it:

I have been caught by a girl once that I didn't think was gonna catch me, and it's so demoralizing, it's almost like when they just, as they pass you they take every bit of energy from you, and you just [feigning to throw up]. So you might go from running a 5-min/K pace to 6-min/K pace so I don't want that to happen.

To make sure it does not happen to her again, she designed a thinking strategy that allows her to keep going. She explains,

Because I think the most important thing, and Steve McCormack said this to me the other day, and I've been saying it in my head over and over, "You can only control what you can control". I can't control if Mary catches me, and I can't control if I'm not first off the bike, but I can control how I run. So don't waste energy trying to think what if, what if Mary catches me in the first 10k, because I can't control that, I can only control how I go. So on the run, all I want to think about is controlling how I run, how I get to the next aid station, how I get to the second turnaround, how I get to the finish line. And if Mary catches me at 20K, we'll deal with that then.

In addition, France carries into each race an important lesson she draws from her experience—to never give up:

After Kate caught me on that [race], and then I caught her back, that taught me ok, the race is not over until it's over, and that if you keep doing what you're doing and you keep focused, you can catch them again. So that's something I learned from that race and now I take into my next race. So I will take that into this race: just because someone passes me doesn't mean I'm not gonna see them again.

Recalling a good experience can indeed restore an athlete's confidence that is being shaken by a competitors' good performance. John, in a personal conversation subsequent to the interview, explained how he added a new tool to his bag: his experience. Asked what enabled him to do so well in his most recent Ironman race, he replied:

As for my patterns during the race, I'd say they were pretty much the same. At one point I found myself falling apart and getting caught, and I realized I have a new trick in my repertoire: my experience! I realized that the guy catching me is much younger, and that I have the experience edge. It enabled me to believe that I would get stronger and that he might fall apart, which is just what happened!

Besides external distractions, triathletes are faced some very challenging Ironman-specific internal challenges.

Face Internal Distractions

Internal distractions like doubts, defeat and pain often arise in Ironman triathlon. Responding effectively to internal distractions may sometimes be the greatest challenge. Vince recalls how, when he got passed late in the race, he thought—but should not have—that his competitor was going to win:

I knew then, “No, I won’t win it.” When they said to me that Steve McCormack was just one minute behind me then I knew, I had 2 1/2 minutes [at first], and when it was just one minute, I knew that he would make it. Maybe this was some kind of a mistake, maybe I lost the race at that moment... this is what I think today, but yesterday, I just thought, “Hey, you’re just dead. So whoever runs past you, no way you can do anything about it!” [Laughs]

Internal distractions like doubts or defeat (“I can’t do it”) come from within. They arise from the athletes’ thoughts and feelings. Internal distractions have the potential to take away the athlete’s best focus and they can be recurring—instead of occurring

haphazardly or periodically like external ones—and can therefore become very destructive if left unattended. This is particularly true when one keeps in mind that during an Ironman, triathletes have a lot of time to think. The three main internal distractions Ironman triathletes face are self-doubt, hurt and pain, and bad patches.

Self-Doubt

Here's what Steve said when asked what he thought was the biggest obstacle in Ironman racing:

I think, personally, I think for other people, self-doubt is the biggest killer, it's the biggest killer for anyone. And that's why I like to start any race, feeling like I've done everything I can to be ready for this race. I think if you've got self-doubt, that can kill an athlete. That can take a winner away.

Triathlon participants have identified three sources of self-doubt in Ironman racing. First, triathletes may experience doubt for the discipline in which they are less proficient, like France for instance:

And then on the run, the run is my weakness, that's where I really have to work hard mentally, because even though I've done a lot of training in the last two years for my run, there's still a little voice in my mind saying, "The run is where I'm gonna lose it." With most of my Ironman races, I finished the bike in the top three, and I get run down. That's why the run is still a bit of a thorn in my side. [...] And because I'm still not 100% confident with my run, I don't like to have to chase.

Second, self-doubt may creep in during the competition when triathletes are not performing as well as they would like. They worry about whether they are going to win, do well, or even just finish. “A lot of people struggle with this, people that I know in particular struggle with it: If they’re not in the lead, they’re not doing well. Once that lead is gone [the race is] over. Or once they feel bad it’s over.” (John).

Third, previous bad experiences are a sure source of doubt for any athlete, triathletes included. Steve explains:

The run is always, I’m a runner, but the run still very much intimidates me. I still get very, very nervous. Every Ironman I’ve done, I have led off the bike. So the two where I’ve failed, I’ve failed on the run. So I’ve never had a bad experience on the bike or a bad experience on the swim. My bad experiences have always been on the run. So it’s always been something that, in the last 5 km on the bike I always think “Pfeew, ok that felt good. But geez, I hope I feel good on the run.”

[...] The two Ironmans I’ve failed have been Hawaii. So for me the obstacle is going back there now. In Hawaii this year, I’m going to have rough patches here and now, and I’ll go “Oh, no! Here we go again! I’m failing here again.” Now they are the issues I’m gonna deal with.

Doubts get more powerful and persistent as the race progresses because triathletes become more physically exhausted. France noticed that “towards the end you’re really fighting because you’re getting more tired, and it is harder to convince yourself that you’re gonna be ok.” How do Ironman racers keep their negative thoughts from hurting

their performance? They discussed three main strategies: preparing as best they can, completely putting the distraction aside when it arises, and staying positive.

For Steve, there is no substitute for a good preparation. To deal with the issue he had with his confidence in Hawaii, he wants to be

ready to race, [that is] doing everything I can: I'll be training in the heat, I'm going for Hawaii on a training block for 10 days, to race the course, run the course, learn the course, KNOW the course.

For John, always *moving forward* is what helps him deal effectively with doubts. He is very skilled in the art of putting negative thoughts aside during the race; plus, the nature of triathlon makes it easier to compartmentalize sections of the competition:

I can have a horrible swim, and I come out of the water and think [that] my race is totally shut. I swam four minutes over than I should have, which could happen, I mean, I'll tell you right now I'm very confident that I'm gonna have a good swim, but I could come out of the water four minutes out from where I want to be. That could happen, it's happened before. So if it does, then I just completely [put it aside]. The swim is over. It's done, and it's the last time I think about it until after the race. After the race I can dwell on it for a little while. Or I can come back to it and analyze, evaluate it, but right now, it's over. It's biking forward. And it's so much as, you think ok, mile 10 is over, like I felt bad for 10 miles on the bike. Now that's finished, now it's time, the warm-up is done, now I start my race. And you're always moving forward. [...] I think that's definitely a strength, if you

have the ability to put what's behind, behind you and leave it, throughout, until the very end.

For Mathew, eliminating the doubts by focusing on the positives is what allows him to put negative thoughts aside when he is not doing as well as he would like. He explains that when doubts creep in, what helps him is

staying positive for sure. Staying positive, yeah. It's going to change because in Ironman it's such a long day, you've got to really have positive thoughts because it is so easy to get down, so easy to get discouraged. You can have this big time where your legs feel tired and you just feel fatigued, in the swim you have lost the pack and... [It is] so easy to get discouraged, you have to really say "OK, that's not a big deal" like, you've got to be able to put the negative away and say "You're still doing good, you're still doing fine. It's not that bad, it's a long day, it's a long bike ride coming up". If you can minimize the negative thoughts and just stay under control and just think rationally then it's much easier I find. Just like "OK, think logically and rationally. OK, this is what I'm going to do. I might have lost a minute or two, but an Ironman is a nine-hour, ten-hour race" and just eliminate the doubts by positive thoughts and reinforcing that what you're doing is right.

Doubts decrease our level of motivation and determination; doubts prevent us from focusing on the right things; doubts make it impossible for us to go for it and perform at our best. This is why Ironman triathletes in this study learned to control their

distracting doubts. John calls this skill *mental tenacity*, and he believes that it is one of the most important abilities to possess to be successful in Ironman racing:

For me it's just the tenacity or the toughness [to] just allowing yourself to never doubt. So you don't doubt what you've done, you don't doubt your preparedness, you don't doubt your ability. You're gonna come across times, like if you have a bad patch on the bike or a bad section, you're gonna come across times where the self doubt might creep in. But you just have to be tough and block that out and say "No, that's a bunch of crap. Just from practice I guess, I know it's not true, I know I'm ready." I could sit here and tell you logically right now I'm totally prepared for this race. Physically I've done everything I want. And at that time [in a bad patch] I might not believe that, but you just have to shut out what you think at that time and remember back to the logical conversation, or logical feelings you had before. Yes you're prepared, you're ready. You know you can do it if you just block out any of that self-doubt, you block out any of that wondering, "What's wrong with me? Why do I feel terrible?" I think it's a big part of it for me.

In sum, the best attitude to prevent doubts from hurting the performance of a physically prepared athlete is probably for the triathlete to remind himself/herself that he/she is *100% mentally ready*, that is to remain confident in his/her ability to deal with whatever challenge Ironman day will bring. To race up to her potential, France says being 100% mentally ready is key:

Just believing in yourself 100% and being able to cope with everything that's thrown at you. So if it's a really foul windy day in Hawaii, no problem, I can cope

with that, I know I can still [do it], I know I'm a strong runner and I can still run hard. If it's a really hot day, if it rains even! And when it rains in Hawaii it's worse because it becomes so humid you can hardly breathe, but being able to cope with it, "Oh well, it doesn't matter, I'm not the only one breathing heavy, everyone else is gonna have the same thing, and I'm a better runner so it won't be a problem." So making sure that you can cope with everything that's thrown at you.

Hurt/pain.

The second major internal distraction was to master ways to endure feeling bad over long periods of time. John explains that suffering can become an internal obstacle:

I think internally it's what physically goes on in your body that can be an obstacle. You're not feeling [good] and it's a terrible feeling, because that one more than anything you can't overcome that physically you just have to overcome it mentally.

Elite triathletes usually find the first half of ultra-endurance events relatively easy because their bodies are fit and rested, and because they are going at a pace moderate enough to *go long*. In ultra-endurance sports the pain usually surfaces only in the second half of the event. In addition, its intensity is not as high as that experienced in short-course triathlon or other shorter distance/duration sports. Athletes speak of soreness, dreaded discomfort, extreme tiredness, pain, and hurt. Steve describes the type of pain inherent in Ironman racing:

It's a different pain. I come from short course racing, where the pain is intense.

Ironman pain is just a general fatigue. You're just tired, the muscles are sore, it's a pain I prefer, more than short course pain, which is gut-wrenching you know, blood in your throat, tough pain, that's the pain I don't like. Ironman pain is nice [Laughs].

In the later stages of an ultra-endurance triathlon physical exhaustion builds in, slowly and insidiously. Certainly, Ironman triathletes' bodies are signalling that they are starting to break down. Thus, enduring pain over the last several hours of the race is what constitutes the real challenge for ultra-endurance athletes.

In order to race their best, triathletes have to find ways to keep going even though they are feeling extremely bad. In the following dialogue, Robert touches on this tough aspect of racing:

Q: What is the biggest challenge in Ironman racing do you think?

When you feel *really bad*, just to continue the race.

Q: And how do you continue when it is really bad?

I usually think "Tomorrow I'll have a holiday! [Laughs] So today I have to go hard and in the next days I will have days off from training."

Q: Is that enough to get you going when it's really tough?

Nope.

To push themselves to their limit Ironman triathletes do more than fantasizing about their next vacation. They must have powerful mental distraction-control strategies that allow them to put up with the suffering and still continue to race.

Participants identified three pain-control strategies: remembering previous experiences, thinking positively, and purposefully distracting themselves.

First, past successes can help an athlete push through the pain. Vince points out how positive past experiences helps in these simple terms: “Yeah, you continue [even when you are suffering]. Of course experience helps you a great deal because you know that ‘Hey, I’ve done this 10 times before, so why shouldn’t I go on right now here?’” Michelle also recalls specific workouts or races in which she did well:

I would say, the second third of the marathon is the hardest part. One thing I do is I try to remember really really hard workouts or really hard races that I’ve done in the past and I think about how I made it through. And I sort of recall those moments to tell myself, “You know, you can do this. This isn’t an issue, remember when you did that in the past.” And I tend to use that a lot on the marathon for sure. Because if my body is hurting and my mind tells me “Let’s just quit”, I think, “No, you know I did that workout, and I did that in that race, and it’s worked in the end.” I try to think back to things like that.

Second, triathletes have found that thinking in positive ways helps them tremendously to get through pain and continue to race their best. To help him continue when exceedingly tired, Robert reinforces the quality of his preparation and his readiness by thinking, “Oh, I’ve trained well, I’m fit, and when I suffer the others will suffer too because they also trained of course, but I have done good training and I’m fit.”

Vince, Mathew and Mary give examples of simple confidence-boosting reminders to keep them pushing when it gets tough:

“Just get through that. Oh! man, this is so hard, but I can do it, I will do it.”

(Vince)

You try to have positive thoughts and you try to do the best you can [...] You try to think “Ok, let’s keep my rpm, let’s do 90 steps per minute” so you’re not thinking about, “It’s hard and I’m tired”. You can just think “Ok, 90, ok that’s good. That’s good, my heart rate is 140, ok” then you’re more reinforcing [the positives] rather than thinking how bad you feel. (Mathew)

I just look at the kilometres and think “Oh! You have done more than half [of it] and always find some positive stuff and don’t think about your pain.” [Yesterday] I started thinking to stay motivated, I just tried to push myself like, “I did so much work, and I have my little daughter, she has been at my mom’s place many times and maybe she was missing me [when I was at the training camp] and now I’m not going to give up this race. Just push it through.” (Mary)

Even songs and humour can be used as a form of positive self-talk to lift the athlete’s spirits. France deals with hurt:

by thinking different things. Sometimes by singing songs in my head, sometimes I talk to myself. [I just sing] songs that I’ve heard on the radio, that I like. And sometimes I even talk to myself, I might not even be talking, but I might be

singing to myself like, “Come on, you can do this. Even though I feel like shit it’s all right, and you can do it, come on.” It sounds like crazy stuff, but it works.

Staying positive can also mean keeping hope that things are going to improve. The first thing Mary thought when she started feeling bad on the bike was “Oh, my God! What’s going on today? Hopefully it will get better in an hour.” And whenever John feels bad on the bike, he remains optimistic that his run will go better:

I was just sort of physically ill throughout the whole swim and the first part of the bike and then I had a terrible bike ride. It was my slowest time there ever on the bike and it was just terrible, I was in a bad position. And I thought to myself, “Well, there’s nothing I can physically do to change those [bad feelings], food-wise and in all the strategies I had, nothing could make the physical effects go away.” So I decided to just try to stick with it and get through and minimize the damage and ride as hard as I could. But I told myself pretty early on, half way at least, that I was gonna have a great run, and that I was gonna have my best run. And I had [my best run].

The third strategy that allows Ironman triathletes to keep running even when they are suffering is to purposefully distract themselves from how bad they feel. Even though it may seem counter-intuitive at first, it makes sense if one keeps in mind that Ironman triathletes have *time to think* and they don’t want to be dwelling on the negatives. The very nature of ultra-endurance sports allows athletes the time to engage in thinking about what is going on around them and within them.

Some athletes purposefully distract themselves, with the energy of the spectators for instance, to “take my mind off the pain that I’m in”. Paul relies heavily on this pain-control strategy to keep going. Here, he explains that his best focus for finding relief from discomfort incorporates intentional distraction:

When the race goes on [during the bike leg], then it’s time to start thinking about something else, which distracts you from all this discomfort and pain. [For instance I think] “Oh, it’s really nice here, what lovely spectators, wow! Oh, I know this guy, he’s a friend of mine, it’s nice that he’s here”. Then at the [beginning of the] run, you always focus again, because you have to watch your stride, to loosen up, watch your breathing. And then there comes a moment, hopefully early enough in the race when you can have the same thoughts again, where you distract yourself and start dreaming. Sometimes you think about other things, like you give yourself a reward, “Ok, if I finish this well, I’ll have a big ice cream” [Laughs]. So [you think about] some treats or about things you like, you think about a song you like or a book or a movie you saw, “I want to hear this Vanilla Ice song, and it’s waiting for me at the finish line”. But sometimes you feel so uncomfortable that you have to distract yourself with EASY things, so I count my steps. Like every step from one to 10, every second step from one to 10, every third step from one to 10, every fourth step from one to 10, every fifth step from one to 10 and then backwards. And I do this up and down and by the time I do this once, 3-4 minutes have passed. But my mind is occupied with something

else [other than the discomfort]. [Ironman] is a mix of everything: sometimes focus, sometimes distraction.

There is no exit: pain, hurt and suffering are a part of Ironman triathlon racing. It may temporarily help athletes to have distraction control strategies to deal with discomfort, but in the end participants learned to accept discomfort, redefine it and sometimes embrace it as part of the whole experience. John elaborates on this perspective:

I will stick to my competitors even if it's hurting. Especially if it's hurting. Because I think in Ironman you have to kind of embrace that pain sometimes, and you have to know "That's something I'm supposed to feel." If you're not feeling it, you know, you could probably be going a little harder [...] It's a good pain, that's the feeling that comes when you're working hard, that's what you're supposed to feel like.

France has a similar attitude: she acknowledges that racing indeed hurts for several hours, but this is what Ironman triathlon is all about:

But you know some athletes, you see them training so hard, then the day of a race, they're like, "Oh, I don't want to race, I don't want to do it" and I don't understand that. Because the reason I train is to race. I can't comprehend that sort of thinking, "Oh, I don't want to race, it's gonna hurt." Of course it's gonna bloody hurt! That's the whole idea, it's what a race is! [Laughs]

It is not surprising that all 10 participants discussed pain-control strategies, as physical discomfort is one of the toughest challenges they have to face. The physical hurt,

suffering or discomfort experienced when running a full marathon after a hard 3.8-km swim and a leg-killing 180-km bike ride is extreme, especially during the *bad patches*.

Bad Patches.

In the last stages of the race, triathletes' bodies have consumed all their energy reserves. They are likely to run out of glycogen, a state they call *bonking* or *having a bad patch*. When this happens, it becomes extremely hard for the athlete to keep going. John explains that when you bonk, "Your mind is still working, it's just not working at its best. So your mind is still telling your body to keep moving, it's just not moving that fast any more." With a body hardly cooperating, the role of the triathlete's mind becomes more critical than ever: if the exhausted body is not continuously instructed to move forward, it will simply stop doing so.

During the interviews, five participants made a clear distinction between being in pain and having a bad patch. Steve attempted to contrast the two:

You've got to differentiate between pain and feeling horrible. There's a difference you know, like you can be in pain or uncomfortable but still in control, and that's different to a bad patch I talked about before, where you can be feeling great and have an absolute horrible patch or feel terrible but it's not painful, you just feel weak and tired. Mentally it's tough when it's painful and you have one of those bad patches. That's the toughest combination you can possibly have later in the race, maybe on the run 5 km from home. Your legs are very tired, you're tired, physically exhausted, and you've been pushing yourself and pushing yourself, pushing yourself and suddenly you run out of glycogen, you've got no fuel left

and you suddenly feel terrible, absolutely terrible, weak and tired as well as in pain. That's mentally... it's the most uncomfortable and painful thing and you feel horrible.

Bad patches are the third internal distraction triathletes have to face. They will be addressed separately because it is the very nature of ultra-endurance sports to empty athletes' energy reserves and they constitute a crucial element in Ironman triathletes' mental preparation. This section displays long quotes from the participants who discussed this topic; the special characteristics of bad patches calls for triathletes' own lively words. Participants expressed similar concerns, however several passages from Steve' interview are quoted as he was the most explicit in his explanations.

What are bad patches, or bonking, exactly? John, who also terms this state *central fatigue*, gives a humoristic description of what happens to the triathlete who reaches that stage:

Central fatigue would be just your mind losing focus beyond your control. I don't know if you have ever had it but it's a HORRIBLE feeling. It's when you bonk. So if you have a low blood sugar that can cause it. You know it's just that feeling where, [usually] I notice everything around me, and then when you've got that fatigue, that central fatigue, it's like there could be someone dancing over here, and you wouldn't even know it's there [Laughs]. And you want to keep [central fatigue] off as long as you can. You want to be aware of everything. And there are plenty of races where I've finished and things have happened in the 10-15

minutes after the race that I can't remember. And that's because I think you've basically just used everything, you've let down completely.

Q: And when you start to lose that mental clarity, how do you react?

Well, if you're losing it, you generally don't know it, that's the bad thing [Laughs].

Bonking can have devastating consequences because the triathlete will slow down and lose precious minutes. Vince recounts what happened to him in a race where he finished second a mere sixty-seven seconds behind the winner:

Yesterday, I bonked on the bike and my last 5K on the bike were HORRIBLE. I thought I'd start eating myself up. Then I came into the transition, that's where I lost a lot of time, because I had to stop and eat something. In the transition after the changing tent at the first aid station I started eating rice cake and crackers and everything I could get. [...] I was really afraid that I would not be able to run anymore and I was so happy that after a few kilometres, maybe 2 or 3 km, it became much much better. Yeah I was really afraid. I had [a lead of] five minutes when I came into transition and I thought, "Hey! You have been cycling so hard and you have gained five minutes, but it will be gone like this [finger snap] if you are in that condition." So I just thought about eating. [...] When I was in transition my first thought was "GET SOME FOOD otherwise the race will end here."

One might wonder, what more can a triathlete's mind really do when his/her body has completely run out of fuel? Here again, one's thoughts are of utmost importance. A triathlete's mental abilities may determine the outcome of a race:

Your body is not too smart, you know. Your mind is amazing, your body is not too smart. It starts to think what you tell it. If you start thinking I'm tired or it's hot, your body will react so as to make you tired. It's actually lazy I think, it wants to stop, it doesn't want to be there so it constantly sends these messages that it's uncomfortable. [...] I think that's where the mental side, as opposed to the physical side, is more important, because I think in bad races [I had], physically I could've been very successful, but I allowed the negative and those obstacles to stop my progress instead of meeting them and fixing them or dealing with them and going "Ok, let's concentrate, this has happened and let's focus on what we're doing and deal with this". I allowed that to become an issue that I couldn't get past the barrier. (Steve)

Steve believes that even though it is an excessively difficult obstacle, the problem of bonking is solvable if the triathlete immediately takes steps to make it go away. First and foremost, when triathletes experience a bad patch they must acknowledge that they will likely come back from it. John points out that he has

come to accept that in a race like [an Ironman], you'll have bad periods, but it's not gonna last. I know from experience now that it might last for 20 miles or it might last for 5 minutes, but it's gonna go away. So you just wait it out, you rely on the experience of the past, just like in training, and you say "I can wait and it

will go away”. And to minimize the damages you sometimes can focus on something; if there’s a group you can see, [you might] think about “Oh! I feel horrible but I’m not gonna let them ride away”. Stuff like that. But it comes down to you can’t actually physically change the way you feel, you can just realize that it’s going to go.

When in a bad patch, triathletes feel so bad that they are not even concerned about the race anymore: all they care about is how to make these horrible feelings stop. As seen earlier, Steve is extremely centered on winning; nevertheless, when he is having a bad patch his competitors are not even on his mind:

If you have a bad patch then [you] think “Ok, whew! I’m going through a real rough spot.” And I’ll never think about my competitors when I have a bad patch. You don’t think about that. I’m thinking, “How are we gonna ride this out?” And once you ride out of the storm, that’s when my first concern is, how much time did I lose? And you’re also thinking to yourself, they’re going to have to go for a bad patch too, they’re not superhuman. They are gonna have a bad patch, and like I said, when you’re feeling good, you capitalize and when you’re feeling bad, you can slow it. If you’re capitalizing when they are going for a bad patch, it ends up clearing yourself out. At the end of the day, it’s the person who has the least bad patches who wins the race.

But as reassuring as it is to trust that the bad patch will eventually go away is, it is certainly insufficient in itself to keep the athlete going when the feelings he/she experiences are nothing less than terrible. At that point, an epic combat is underway

between, on the one hand, the triathlete's exhausted body and, on the other hand, his/her extremely willing mind. This is no doubt the hardest challenge of the day:

I always think of it as, it's like your body is trying to punish you for doing this sport, so it goes, "Take that! Feel bad!" And when you show it that you're not gonna stop, it goes ok, it goes back to being good again. Yeah, you have to not give in to your body, because if your body senses that your mind is going to be weak and give in to it, it will SHUT DOWN! It will go, "Yeah, beauty, I win!"

It's like a little battle your body and mind have with your soul. (Steve)

The battle is not a passive one. Of course, participants prefer to take active steps to speed up the process instead of patiently waiting for the bad patch to go away. France and Steve have developed a series of thoughts/actions they have/take when bad patches strike. By engaging in the same pattern every time, a pattern they know works for them, they can trust things are going to improve soon. Each has a personal routine of thoughts/actions, but both include four basic elements: taking fuel in, calming yourself down/reassuring yourself, controlling what you can, and staying positive. Here is what France and Steve do when they are in a bad patch:

I know now that when I go through a bad patch in the run, I go back and think of comments. So my coach on the track, when I do track sessions at home, one of the comments he said was "Oh, your form look so good now." Something so simple. It's meaningful and it's little things that you remember when you go through bad patches in the run, that's what I think about. Sometimes [those comments] just come, other times I have to think about it because you know, I feel like... I feel

like shit. “Nothing is gonna get me out of this”. Then I think, then you have to say “STOP. First of all: food, get some food in, suck it up, calm down, and then you think, Ok, look back when you did that workout two weeks ago with Katja you were running so well, let’s try and see if we can do that.” You know, obviously, things like that might only work for a kilometre or 2 km before you start feeling bad again, but what you start doing is just running from aid station to aid station. And I know that aid stations are every 2 km apart, so what I do is I try and get to an aid station, eat, think of something positive, something someone said or something I’ve said or previous race to get me to that next aid station. [...] And you find the more tired you get, and the later in the race you get, it’s harder and harder. Towards the end you’re really fighting because you’re getting more tired, and it is harder to convince yourself that you’re gonna be ok. (France)

So if I’m losing time on the bike, number one: if I’m not tired maybe it’s because that guy is going too fast. If I am tired and I’m losing time, the first thing is, what can I control, maybe it’s fuel. Let’s get some fuel, let’s drink, let’s shift the gears, maybe I’m pushing too big a gears, rest the back. Just take your mind off, control the things you can control and ride out of the storm. Because your body, you keep telling yourself, it’s normal, this is normal, this is an Ironman. It’s a long day, eight hours. It’s bio-rhythms. You’re gonna have good times and bad times, you expected that, you are going through a rough patch at the moment, and we’ll come good. You know, maybe get some caffeine in and spark yourself up and 9 times

out of 10 you're right at the storm and BOOM! You're back! It's a bad patch, it lasts for five minutes.

I've been in some races where you deadset think you're gonna die and then 10 minutes later, you are Superman again you know, your body is OK. [So] you just deal with that time, it's like time stands still for five or ten minutes, you're sort of dealing with these problems and trying to control, "OK I'm tired, let's have some fuel, let's have a bit of Coke, let's have a Shot, salt tablets, we'll change the gears, we'll adjust." A lot of people have a pattern of things that they might do. For me whenever I tend to go for a bad patch, I always stand up, especially if I'm on the bike I get out of the saddle, I change gears, because you want to change the rhythms, so you might be pushing the gears for so long your body is just in a "brrrrrr same gear". I might pick up the cadence a bit, I might have some food, adjust, have a drink, put some water on my head, stretch my back a bit, get back down and then "OK, let's just ride out of the storm, it's an uncomfortable section" and then your body reacts.

As long as you stay positive, as long as you don't say "Oh no! It's over, here we go, I'm blowing up!"... You've got to just remain in a positive frame of mind. And positive is not saying "Great, I feel great, I feel great!", cause you're not stupid, you don't feel great, you're not going to believe that. Positive is, like I said, it's an obstacle, you're gonna make it, you know it's like OK, here's obstacle one. The day has begun I felt great all day, suddenly I'm starting to feel tired, let's deal with this problem now. OK, what can we do to control, fix this up

and just ride out of the storm. Sometimes it could be 10 minutes, sometimes it could be 20 minutes, sometimes it could be a hill, 30 seconds, you know. And once you rode that out, you actually feel stronger because you think, wow! I just dealt with that. “Ok, we’re back. I’M BACK!” (Steve)

Having an entrenched, proven thought process to deal with bad patches might be the number one skill required of Ironman triathletes to race their best. Otherwise, the physical discomfort is such that they might not even make it to the finish line. As Michelle reminds us, the hardest Ironman-specific challenge is that during the marathon, when you’re having a bad patch,

You want to quit. I mean that’s the biggest thing. It’s really easy to tell yourself to quit.

Q: Or slow down?

No, I don’t think it’s even slow down. It’s “Let’s just quit.”

Get Energized

Ultra-endurance sports are all about energy. Thus, Ironman triathletes’ mental preparation is not restricted only to having a strong focus and effective distraction-control and problem-solving skills. Equally important, no matter how well-developed their pacing and fueling strategies are, Ironman triathletes have to find ways to stay invigorated and activated when their body becomes exhausted. The mind has the unique ability to produce an additional push in certain circumstances: “You NEVER know what

happens when there's just 200 m to the finish line, right? Maybe somebody finds energy somewhere in his body and starts sprinting or something." (Vince)

In a sport of extreme physical, mental and emotional demands, triathletes who have mastered the ability to consciously tune into positive vibes when placed under harsh racing situations will have more energy and thus perform better. Therefore, the question becomes, how can Ironman triathletes tap into their inner resources during the competition to turn their obstacles into an invigorating push? How can they get what Robert labels the *extra kick*?

When you feel you can win, and you're close to the leader, then you can go maybe at 105% or 110% because you know there's a chance, you can catch him. [...] But if you are behind, it's the opposite view, maybe you go at 99%, and your body goes 100%, but the extra kick from the brain is not coming.

Triathletes' spirits can be lifted by both outside and inner sources that are respectively the competitors and the crowds, and positive thoughts, imagery, confidence, and enjoyment. Also, triathletes derive extra energy from taking control and having their own racing attitude.

Outside Sources

Participants in this study have mastered the art of turning to their immediate racing environment, that is their competitors and the crowds that cheer for them, to get additional vim.

Competitors.

The first outside source that energizes Ironman triathletes is their competitors. As they revealed in their interviews, triathletes always seem to feed better off somebody, both in training and in racing for “it’s harder sometimes [when you’re alone] to push yourself”. In addition, having company gives something for the triathlete to focus on instead of his/her discomfort. Being around other people is especially beneficial during the bike segment of the triathlon because of its length.

John explains that in races where he was surrounded by his competitors, “the focus on the bike was a lot different because it’s a lot easier. The more people around you, the less focus you have to have. The more solace, the more focus.” What he means by focusing in this case is that he has to himself direct his attention on performance-relevant cues. When the attention is naturally attracted by something or someone, the triathlete can “just concentrate on [not getting dropped], and push” (Mary).

France says that riding with other triathletes not only simplifies the mental task but also provides her with more strength to surmount obstacles:

[On the bike I think about] where the other girls are and trying to find a group of [men] riders that I can pace off that are good for me. [...] It’s a huge advantage. [It helps] an enormous amount. Because you don’t have to concentrate on setting the pace, someone else is setting the pace for you. You’re just, all you have to do is try to keep that person 10 meters in front. So mentally it’s a lot easier. [If I have to do it by myself] it’s just a bit tougher, because you’ve got to pace, you’re the one in control of setting the pace and sometimes you can get lazy. Sometimes you

can think you're going fast and you're not. So if I've got a guy who's a faster bike rider than me setting the pace out front, I can still stay 10 meters behind legally draft off him, and go a lot faster than I would go if I was out there by myself. And it's amazing how you can push through bad patches if you have someone just there pulling you around.

Having company on the bike gets the athlete pepped. Obviously it is even better if one sees that he is faster than his competitors. When a triathlete breaks away,

It's like a push! How can I say it, if you see the others are not able to follow you, it's like a bonus. You know [very well that] they are trying as hard as they can because they don't want to let me go again. So they rode at 100% and for me, I was maybe at 95% and when you see they still fall behind, it makes you very happy. [...And] if you're in front, you get extra motivation and as long as you stay there, you're more excited about that and it will get more difficult for the others to beat you.

Performing well surely produces strong positive emotions. Steve goes as far as thinking that when he drops his rivals, he takes their energy away:

I set a really good tempo, and I try to draw especially the younger guys into my pace, because I want people with me if I can. Because it makes it a lot easier [when] there's people around you. When you're solo around all day, four and a half hours on the bike it's just lonely. It's good to have other people around. And plus, if they tend to have bad patches and you drop them you take their energy

and you feel good about it. It's like "Yeah, he's gone!" you know, "Good bye, see you later, have a good day!" You sort of steal their energy. I like having people around me and battling with people. I draw from that. I think I take, I get energy from that.

What about if the triathlete is not in the lead? Is there a way he/she can still use his/her competitors to motivate him/her when she is behind? John gives a positive answer to this question:

I try and think about, if I can ever see someone down the road, which I'm sure will happen [because some guys have very aggressive styles here], or let's say I get dropped, or whatever the case may be, looking ahead and seeing people is always a motivator for me to try and catch them.

Connect with crowds.

Added energy also springs from the supporters' and spectators' lively interest. Many triathletes agreed that when "spectators are just amazing it makes for a very positive experience" (Michelle) because you can "use their energy to keep going" (France). One of the races where data was collected in this study is renowned for the enthusiasm of its crowds. "That's why I like this race, the people, the crowd, it keeps me pumped up. More so than if I get to an Ironman in, say, Korea, where there's like five people clapping. It's not motivating for me" (Steve).

How the triathlete interacts with the spectators is a matter of personal preference; some are more reserved, but many of them like to really connect with the crowds. John talks about his relationship with cheering people:

I know a lot of people when they're racing, they don't allow any outside distractions, and they really [have a] tunnel vision, and they're really focused and they don't see anything going on around them. Like if their best friend is standing there yelling at them Go! Go! Go! They just don't see it because they've got this incredible focus and determination, kind of single-track mind. [I] feel like my strategy is a little bit different from that, where I like to be a little bit more aware, and I like to use that positive energy to kind of help myself. It does a lot for me. So if I see people I know, if I see you in the race on Sunday and you yell something at me, I'll smile at you or something like that, and it gives me a little bit more energy. Essentially, the positive, all the positive energy that surrounds me I try to take. And often for me to give it out too I get some back. Some people feel like I can't wave or I can't smile, because it takes away energy, but for me it's more of a flow. [T]hat will keep me, if I'm able to keep positive, I'm able to keep happy, then that does a lot. It definitely moves me a lot forward.

Cheering for athletes is a way for spectators to signify we like them. No need to say, athletes are not indifferent to this demonstration of appreciation. They candidly admit that,

[I think] "What people will think of you when you'll be a hero, imagine if you cross that finish line in first what people will think." I'm not saying it's wrong but really I should be doing it for me, it should be "imagine what *I* will think if I cross this line in first" but I'm the type of person who does thrive off other people. And I like people to think I'm good. I like that, so that helps a lot. So that's why this

race should suit me because there's so many people out there keeping me going.

(France)

You know I think about all the positive things: so many people knowing you here, in your home country, and they will be proud of you, your parents are proud of you, everybody is supportive. In a way it's crazy, so many people like you and want your autograph just because you're a good athlete, huh! I mean in our society it's natural: just because some people play good soccer they are like heroes, like gods, and in a way that's ridiculous. But on the other hand, everybody likes to be adored by others. (Vince)

Besides unknown spectators, personal supporters can do a lot to give an additional push to tired triathletes because of the special connection they have with them. John says a huge source of positive energy he uses comes from

obviously, the people that come watch me race. My fiancée comes on Friday, and that's really big for me to have her out there and see her at various points in the race. My sister and my mom go to a lot of my races, and those three have always been for me my biggest supporters. I mean, I have a lot of good supporters, but those three have always been there from the very beginning, my mom was at my second ever triathlon, and she went to most of them throughout the first three years and my sister too she's been there along the way. And ever since I've met [my fiancée] we've gone to a lot of races together and that sort of thing is very very instrumental in kind of keeping me [energized].

Both competitors and spectators can bring a lot of vitality to triathletes. Since these sources are external to the athlete, however, it is important that she does not rely exclusively on those elements to get the energy she needs. Because as France said when she talked about having men riders to pace off of, “Sometimes it happens and sometimes it doesn’t. I don’t depend on that because once you depend on other people to pull you around; your race is over because it might not happen.”

Inner Resources

Triathletes have learned to turn inwards to derive added strength. The inner energy resources might be the single most thing Ironman triathletes draw upon to perform their best in competitions. It can keep them going when everyone else falters, and it allows the athletes to race to their furthest limits—although as we will see this is not always necessary. Four important invigorating sources were mentioned by triathletes: having unshakable confidence, reinforcing positive thoughts, using imagery, and reminding themselves to have fun.

Have confidence in your abilities.

Triathletes have unshakable belief in their capacity to prevent doubts (which come up easily in times of great discomfort and hurt) from negatively impacting their performance. All ten participants talked about the importance of being confident to succeed in Ironman racing. Mathew addresses the important role confidence can provide:

So I think it’s, confidence, it’s really really big because you won’t give up. You can focus and you know in your mind “I’m just as fit and strong as they are, I’ve worked just as hard as they have”. Even if you’re not having your best day maybe

you'll push a little harder because you know you can do it. So that way you're tougher, and don't give up as easily if you know you can do it and have the confidence to do it.

Triathletes who possess a strong sense of confidence will use it to get a renewed burst of energy to perform their best in races. How do the participants in this study, manage to remain confident in the midst of difficulties and pain? Triathletes experience self-confidence in different ways to. For example, John knows that his own path is the best one for him:

[Confidence is important], oh yeah, absolutely. I think it's very important. Well it is for me. I gain confidence from my path, my training, and if I'm imagining myself on that day, where I felt great, to me it's huge. Like I know from certain things I've done that, this is as good as I can be basically, this is all the confidence I need is I've done it. I've done it in training, I've done it here. I will sometimes measure myself against other people. But I'll say those people are really good and I'm just as good or you know, I think the workouts sometimes have shown me that I can be right there too. [...] the way I like to do it is just on pure hard data or the numbers I see if I'm on the track and I see these numbers or I'm on the bike and I feel this way with respect to my peers or with respect to the speedometer, and that's what gives me the confidence, I know I've done the right thing.

Remembering past successes within the actual race can have a huge impact in a triathlete's beliefs that she can do it again. In the words of Vince,

And then in the race, you say “OK, I have cycled that distance and I’ve cycled even more, and I’ve been training for 11 hours a day, and not only for eight” and all of these experiences build up some confidence in you. Sometimes when you don’t feel that strong, you just remember, “Hey! Well I’ve done a 2½ hour run 4 or 5 weeks ago and I could run so fast it was just great.” These are the things you remember. Or you remember certain races where you had been strong and good. Obviously, triathletes feel radiant energy when things are going well for them.

Being in the lead, for instance, is a sure way to get added spirit. France gives a pertinent example:

And once I have got a good lead, and I can see that it’s increasing and I like that. That just makes me, like in Forster, I can see every turnaround, they were giving me splits and every turnaround I was making time up. And that gives you just so much confidence. So you end up riding better and better and better.

Steve also derives an enormous amount of confidence and vigor from being ahead of his competitors. He admits he wants to “get the splits”—that is where his rivals relative to him—but he emphasizes that

I NEVER—look—back. Never, never, never, never. It’s just, I have a model from running that I learned. I want to know where people are, but I’ll NEVER look for them. Because I always try to think that: I’m in the lead, everyone is feeling equally as uncomfortable as I am, I consider myself one of the best guys in the world at this so anyone who is behind me, is behind me because they’re not as good as me. And they’re feeling just as bad as me. So to catch me, they have got

to make up, they've got to run quicker than I am right now and they can't do it.

These are the things that you think to yourself. I'm running four minutes a km.

I've got a five minutes on Lothar, if he wants to catch me, he is gonna have to do something amazing, something that no one's ever done before. If he does, he has to pay for it. If he catches me and I hold this pace, then he's going to pay for it later on. They are the things you try to [remind yourself of.] Because sometimes you get to a turn-around point and you come back and you'll get the times, but you'll see them for the first time, and you always try to look good. And you think geez, they look good! And you just keep saying to yourself, "Ok they're four minutes back, ok, we're 20 km from home, he has to take one minute every 5 km out of me, he can't do it man! If I'm hanging on to this pace, he can't do it."

Many triathletes can feel very confident when they are in the lead. But what if they are not? Here's what Steve thinks about to get an additional push when he is behind:

[Thinking that I am physically ready for the race] gives me confidence, and it gives me the, when you're meeting those obstacles during the race and there's someone up the road you're going "Oh, My! He's up the road. But I've been through this a million times before, you've done a thousand of these, you've hurt like this a thousand times before, and he hasn't trained as hard as you did". They are the things you're telling yourself, you know, "You're ready for this. Don't be soft. [...] There's nothing more I could've done to be more ready for this race and physically I think I'm the best in the world. So there's no one here who should beat me. So anyone who's in front of me shouldn't be there, and the only person

who's stopping me from winning is me. So when you have an obstacle you deal with it, you deal with this thing otherwise this guy's gonna beat me and he doesn't deserve to beat me, because he's not as good as you are."

Displays of confidence during the race are usually manifestations of a firm underlying conviction that one can do what she set out to do, and do it as best she can. In Vince' opinion, "Apart from all the training and the racing, you have to be a confident person by yourself. This is something you have to bring with you. [...] You have to have the confidence to know that when you give everything, you'll win." Certainly, the triathlete who holds confident and positive self-beliefs benefits from a constant, powerful drive during the whole race—as long as she reminds herself of it when she needs it. Steve' previous quotes illustrated what thoughts he was choosing to have when he was either ahead or behind to ensure a maximum level of energy. Those thoughts likely arise from the overall sense of confidence he brings with him to each component of the race:

But in an Ironman, there's no one I've seen who I cannot swim with, I cannot bike with, and I cannot run with. No one scares me. No one. And I think, if anything it sounds arrogant, there's no one here I don't think I'm a better runner than, I don't think I'm a better bike rider than, and that I don't think I'm a better swimmer than. Maybe there's a few people that are better swimmers, but I think I can outbike anyone and I can outrun anyone. So for me it's a big positive, and I try to think that, you know. I try to start the race thinking...

Q: So you think about that during, or before your race?

Yeah, I always think that when I'm in the race. [And also] it's something I take with me everyday in training.

Q: Every day?

Every day! I think, "Man, you're one of the best, you're one of the best in the world." And that's why I think I train so hard.

What can bring more energy than being sure you will win if you focus on the right things? Paul was lucky enough to experience this feeling on several occasions. He recalls that "there were some races where I was so convinced I would win them, that I really had no doubt that I wouldn't be the winner, if everything went right. [I] kind of knew it."

Reinforce positive thoughts.

Great triathletes ensure that their thoughts stay positive. Finding and emphasizing only positive thoughts is difficult when one's body has become extremely tired, but the opposite—letting negative thoughts wander uncontrolled—can have devastating consequences:

And I think in [my races] that went bad, I allowed outside sources of negativity to move into my race a lot more. Things weren't going my way, I went for a hard section, the pace was fast, it was hot, windy, and it wasn't what I expected, and I allowed those things to influence my race. And once I think you start down, it's like the dark side of the force in Luke Star Wars, once you start with the negative it's easy to quit mentally. And once you switch off mentally in the Ironman, it's over. So I think in Ironman, more so than in the short course, especially when it gets hard and tough, it's very important that you be tough. (Steve)

Michelle agrees with Steve that reinforcing positive thoughts, especially when it gets hard and tough, is crucial:

[I have become] over the years a lot more positive and accepting of things. When things go wrong, I don't freak out or I don't get upset, I just try to turn it around as positive energy. Taking the positive, even if it's just a minor thing. [...] I think that's key.

Positive ideas and feelings as a source of added energy can come from the triathlete herself, who can put difficulties aside and get renewed motivation. This is what Mathew and Mary do when fatigue takes its toll on them:

[I didn't focus on the pain but rather I thought] "Ok, that's good, that's perfect." It's kind of a reminder that everything is going according to plan, it's a reinforcement. And that was the thing with [my competitor], he kind of reinforced that I was still going at a good pace and I was holding on that. (Mathew)

[After a long period of feeling very bad] I felt better the last 30K. So I got really motivated again, I felt better and you know I made up some time on the girls in front of me. I started to think about "OK, I'm gonna start, I'm a good runner so I will try to run as fast as I can", and I started to run at three-hour pace. (Mary)

Positive thoughts can also spring from other sources, like a competitor's remarks. Although triathletes rarely encourage their rivals, when a competitor caught France and commented positively on her performance, she took great advantage of it:

I had a massive lead this year, I think 12 or 12 1/2 minutes, and everyone out there thought I was gonna win it. [...] Lisa caught me at 30K, and I knew I was running well, it's not as if she caught me because I was running a bad run, I was having a great run. And as she passed me, she said to me, "France, you are having a phenomenal race, do not slow down now that I've caught you, keep running the way you're running because in any other Ironman you would be first." And I did, and it was unreal. It was in that section where I normally don't run so well, 16K to go. And it's probably the best thing she could've said, and that's the reason I ended up running my fastest marathon time. And because of what she said, it kept me focused. She made seven minutes up on me, but that's the closest I've ever finished to Lisa, so I was really happy.

Energy can also come from something as simple as the thought of the pleasure of eating and drinking one's favourite foods—a treat or goodie:

[During the run I think about] you know many things, spectators, and food, that's the main thing. For example, my cousin was there at the Lende, the main point, and we said that he would give me some Red Bull. So I knew beforehand, "Hey! when I will be there I will get my Red Bull." And from there on, it makes it a bit easier for me you know because then it's like you get a goodie.

Thinking positively is one of the most powerful things triathletes can do to get additional activation. Ironman triathletes who are capable of using positive self-talk effectively can push their bodies amazingly far. Steve comments on his view that the mind has the ability to command the body as it pleases:

And like I said, your body is just, is dumb, it will do it. I don't know other words to use, your body is not the smartest thing. It will do anything your mind will tell it to do. You've seen these athletes start wobbling during their race, and they're physically shutting down but their mind keeps telling them, "Everything is good, everything is good. Keep moving forward, keep going forward."

Use imagery.

The third source of additional energy is imagery. Some athletes find that imagining themselves in settings other than the actual race course can be of great help to give tired bodies more energy. By picturing themselves running in a familiar environment, triathletes can draw extra drive because knowing they can complete the imaginary run, they trick their mind into believing they can finish the actual race. Michelle likes to think of the remaining race course in terms of places she knows well: "“Oh, that's a little 5K loop I run.' [...] And I think in my mind, ok that's just like running that little path back home, or something I'm very familiar with so that I can equate the distances with each other.”"

Similarly, Steve often finishes his training runs in a place he calls the *Springs*. He therefore uses that scenery when things get tough:

You picture things in training, sessions you've done training. Like you might be 30 minutes from home and for me I always say, I always picture my favourite running, where I always do my long runs in Sydney. I always say to myself: "You're at the Springs, which is 30 minutes from home. How many times have you run from the Springs home? Now you try to visualize that run of the Springs,

I'm at the Springs, I've done this a million times. Today it sucks, I don't feel good, but just run home from the Springs. Put one foot in front of another and Bang! Bang! Bang!" And you just... honestly, it's like a trance. I always tend to suffer the last 30 minutes, because I'm so aggressive early in the race. I picture the Springs, you know, I just see the Springs, where we run, a little waterfall. I always picture, it's a little climb that we come up and you picture that. It's like the first thing you see whenever you'll hit the Springs. It's like ok I'm at the Springs, you picture that. And then I try to think ok it's flat down, I picture the run from the Springs. I'm no longer running in the race. I'm like ok, I'll probably be going up that hill, going up that hill, let's try up, downhill... you project yourself back there, the whole time, on the path and you know you'll come back and forth in between. You'll be like, all this sucks! [And] a lot of the times you're so tired physically and mentally and emotionally tired at this point of the race that everything sort of becomes a blow. You sort of see things, see people, but you're thinking about, "OK you're at the Springs, you're at the Springs, come on, we'll probably get up that hill, 2 km, 15 minutes, and THIS—IS—IN THE BAG! Done, we're done."

This strategy may be even more effective when the race environment has particularities also found in the familiar place the triathlete imagines to give him/her an additional boost. For instance, John always tries to find characteristics of the race course that will remind him of past training experiences:

[For this race] I have heard descriptions of what it was kind of like, I know we run on a canal. So I was fortunate because one of the long runs that I would do was very similar. It was on an aqueduc, it was real flat, dirt road that was right by a canal which was just like this. It was very similar, and so I just tried to imagine what it would look like here, but I would often imagine the surroundings [...]. So for me it was really easy I thought “Wow! How fortunate! I just have to pretend that I’m at home on the path, on the Boulder Creek path, running along, this is me” and it was a nice little transfer.

One characteristic of imagery is that we can conceive anything we want in our minds. Triathletes are not restricted by the usual functions of imagery. John gives an ample of a creative use of imagery to help him feel more energized:

If I’m alone [on the bike] I often will think about, I have a couple of friends that I ride with that I’ve done a lot of bike training with them over the last several years, and I usually imagine that one of them is with me. And depending on what I need, either I’ll imagine that they’re dropping me and I need to catch up, or I’m dropping them or something or we’re together, side-by-side. I just imagine that sometimes, that one of these guys is with me. And you know, it serves a couple of functions, it keeps me going if I can do it effectively, and both of these guys I like them a good bit so it’s like, I’ve got a little company, I’m not here alone, I’ve kind of got their energy with me.

Finally, imagery is a source of supplementary energy because it helps triathletes go through difficult times in the race. Steve prepares himself to race by training on the course beforehand:

You might be going for a rough patch in the race, and go, “I’ve run home from here, remember the training camp we did here, you sprinted home from here that day!” Just picture [yourself.] Remember I was talking about the Springs? It’s all about visualization and convincing yourself that everything is good. In the race you do [visualization] subconsciously. You don’t realize you’re doing it. I tend to use that a lot. Just put myself in a positive environment, where I’ve had a positive result. [...] I always try to think of my best, best times at the springs, best run. Put yourself there, how were you feeling, how did you hold yourself, how did you feel...

By picturing himself where he has had positive results, Steve enhances his level of positive energy and confidence. Besides imagery, triathletes use other means to increase their confidence during the race.

Remember to have fun.

Ironman triathletes expressed how they love competing in their chosen sport. Many held a view similar to Mathew’s and France’s:

I guess I love the racing, I just like to compete, I like the endorphin and the adrenalin and competing with other people, I’m a really competitive person I guess. [...] In the end you’re doing it because you like it, because there’s not a lot of money to be made in triathlon! (Mathew)

I love it! Not just the racing itself, I like the people that are involved in Ironman.

It's unreal [and it's] all around the world. You just get to any country in the world, there's something with Ironman athletes and we just click. (France)

It is easy to see how much additional strength and drive triathletes can gain in their races when they are so enthusiastic. As Steve puts it, there's nothing like looking forward to doing something we like: "I tend to be very, anyone who's seen me racing, I'm in the swim, I'm always laughing, 'Yeah!', whereas a lot of the guys are very reserved and quiet. And I don't know if it annoys people, but I'm excited." When things get tough John reminds himself that he chose to be there:

You just tell yourself basically, you don't feel like you like it [at that precise moment] but you do, or you wouldn't have chosen to be here. Because when it comes down to it [...] fundamentally I got into the sport because I love it, because it's fun, and it's something that I thoroughly enjoy doing. And you have to keep falling back on that and remembering this is what I like to do and I'm doing what I love.

Vince recalls how happy he was one year when he led the World championships race in Hawaii for a moment:

Like in Hawaii last year when the group caught me then I enjoyed being able to ride with those guys, I mean Peter Reid, Tim DeBoom, Thomas Hellriegel, Rutger Beke, then I thought "Yes, I'm with them, great race!" And when I overtook Yan Siebersen after 15K of cycling in Hawaii and I started leading the race I thought,

“If I’m gonna die right now, it’s worth it. I’ve done it! I’ve led in Hawaii, it’s worth it!” [Laughs]

Unfortunately, years of harsh work in a pressured environment can sometimes cause the joy of doing something to fade. Elite triathletes must try to guard against this. John and France trust that enjoyment produces the best performances and advise triathletes to remember why they started triathlon:

[...] I really enjoy racing. And I know a lot of people still do, but some people I’ve heard talking about how it’s not fun anymore at that [elite] level. Like it was fun for a while and then they get at this level, it’s not as fun. But for me I always try and remember when I’m out there [in the race], that what I’m doing is very cool, is very fun and I enjoy it. I spend everyday doing it but in the race, it’s a different, it’s a whole different experience. And I think if I remember when I’m out there, yes to have fun and be competitive and try to win the race, [it helps] if I remember that I’m having fun. (John)

I think most people have to remember why they got into the sport to start with. A lot of people lose focus, and all they think about is competition and racing and how hard it is, and they forget the reason why they first got into the sport of Ironman, of triathlon, of long course racing. That it’s a challenge and it’s about pushing your body to the limit, to the furthest limits that you can. And that even though you might not always succeed, and you might fail, to learn from that and to use it positively in your next race. And not to be scared of racing, racing is the

fun part. Training is the hard part, racing is the fun part, the part where you get to celebrate all that hard work that you've done, all those early mornings where you got out of bed, and you know in the hot, the heat and the cold, to enjoy the racing. (France)

Having fun not only enhances the performance but it also diminishes discomfort. It is such an important source of added energy that triathletes are less vulnerable to pain and suffering when they are enjoying themselves. France recalls her best feelings in a race and how they made for a different experience:

My best race mentally and actually getting to the end and saying "That didn't hurt that much" was Forster this year. Because I had a solid swim, I had a fantastic bike ride, for me there was not one stage of that 180K where I can say, "I don't want to be here, this is just crappy, I hate it", not one section. I actually can legitimately say I enjoyed the whole 180K, and I felt good, I didn't go through any bad patches, it just felt good. And then on the run, really there was only one little bad patch that I had out at a turnaround. But once I turned around, I had 8K to go, and it was just gone. And don't get me wrong I was still hurting, if you see pictures of my face I'm like [grimace], but it was a controlled hurt, and it was a hurt that didn't wear me. Like I didn't mind hurting.

Having fun has such a potential to invigorate triathletes that Michelle takes it into account when setting up her competition schedule:

My objectives [this year] were that I wanted to race where it was fun for me. So my race schedule this year was based on races that were high caliber but also fun

to me. And fun to me means the spectators are very crazy there, and it's a very enjoyable experience. Because that was gonna help me stay in a very positive state of mind, so that was very important to me as far as what races I chose this year.

Have a Racing Attitude

The third mental skill triathletes use to get extra energy during competitions is to develop a racing attitude. By sticking to their own established system of beliefs every single time they race, triathletes can access an unlimited pool of energy. Having a racing attitude helps them deal with the obstacles they meet in their quest of performing as best they can. It seems that the more automatic thought processes are, the easier they are to be replicated in circumstances of physical, mental and emotional exhaustion. Going back to personal patterns seems to work well for the best triathletes.

What follows are the bare quotes, in no particular order, which allow the participant's voices to reveal their real—although widely different—experiences of having a racing attitude.

It's still a race

The swim for me is not the start of the race, the start of the race for me is on the bike. The swim is like the warm-up. Because even if you're a good swimmer, it depends on whose feet you get on, it depends on how you feel, this swim is not, it's not a given thing that you're gonna have a good swim. And so I like to get on the bike and I like to know where I am, second girl, third girl, and how far down,

and then all I concentrate on is trying to catch first place. So I'm a bit different than other Ironman athletes, because I'm sure when you've interviewed other Ironman athletes, they say "With Ironman you have to race your own race, you don't worry about what the others are doing." And you do, and I know that because it is, even though it's a race, it's a long day, and if you start racing someone else's race and it doesn't suit you, you could blow up. So I do know that I have to race my own race, and race within myself. But it is still a race and you are racing other girls, and you're racing to win. So if I get out of the water five minutes down from the leader, and I say "Ok, I'm not gonna ride hard because I want to ride my own pace" and the leader gets away, I might never catch her. So I still go into the race, into the bike saying, I want to get off the bike in first, I'm five minutes down the first girl so I need to try and catch her. So some people don't agree with that, because if they say, you're racing her race now and not your own, but I think it's trying to find a balance between the two. Because you're not just racing yourself, you're there to win. (France)

Just get through it

You know as soon as the canon goes off in the morning, it's just, get through it. If something bad happens, then it happens and I don't [care]... I mean, of course, you care in a way because it is an important race, but it is not something that is confusing me too much, and it doesn't prevent me from pushing myself to the

limit. For other athletes, that may be a problem, but not for me. This is an ability, a natural ability I have. (Vince)

Give it all

Yes, I had a really bad time [at 30K. Then I started thinking] “This is 30K, so there’s only 12 more to go. It’s only like one hour more to go, less than an hour. And you trained so much! Now don’t think about your pain, it’s only an hour and you trained half a year for this race, now you have the chance to catch her. [...] So just give it all.” (Mary)

Go out of your comfort zone

The important is, how can you get around your weaknesses, and how can you use your strengths? And some people don’t know how to use their strengths. They might have a strength, but they just say “Ah, I just want to do a constant pace”. But sometimes it’s important to drop other people and pick it up. For example, if you are good cyclist, and you are in your comfort zone but you have three or four other guys behind you, and they might be better runners but you feel comfortable. If you’re not strong enough, mentally, you say “Ah, I’m just going to go with this, I feel good, it’s a long day.” But if you want to win the race you have to think about how can you drop these people and then you have to make a decision and make a move. And some people are able to make moves, but they don’t know how. Mentally they are maybe not willing to suffer at that moment to make this

strategic move. Triathletes don't have a temper, like sprinters, for example, if you look at the track and field [athletes] or the sprinters they are full of energy and show. Triathletes are more lethargic, lethargic because they train so much. Some of them are brain-dead, they are always lazy a little bit. And the same in the race, most of them just go with a steady pace, and sometimes it's not enough.

Sometimes you still have to have this sharpness to be able to pick it up for a few moments to get ahead of the pack. It's a risk, it might be a risk, you might lose, you might walk, but you might also prefer this later. (Paul)

Bang from the start

A lot of people think different, but when I feel good, what I do is I capitalize, when I feel bad I get on defense mode. I'll deal with the problem and I'm prepared to lose time when I feel bad. When I feel good, I'm on the attack, you know. On the attack means I'm racing my race you know, because I'm an aggressive racer, I think that's why I'm successful here in Europe, because a lot of the American competitors are very reserved. They pace themselves, very paced out, they plan the day accordingly. I'm BANG from the start! Aggressive, go! Catch me if you can! [I'm] usually leading all the time, always like to be in the front of the race, always in control, an aggressive racer and put the pressure on everyone else. And when you race with that mindset, there's only two ways of thinking: You're on the attack or you're on defense, and the only time you're on defense is when you're feeling bad. And you're GONNA feel bad because you're

pushing a lot harder than the guys who start out slowly. They're not gonna have a bad patch until very, very late in the race, maybe 10 km from home on the run. Whereas I could have a bad patch very, very early. I might have to deal with it early because I'm very aggressive. (Steve)

Welcome the pain

I like to think of the pain, and I heard this from a good running coach, the exact phrase is that, if you're feeling the pain that's associated with running hard, that's a good kind of pain and basically you think of that as "I'm not hurting, this pain is just a byproduct of a machine that's well prepared to do its job, doing its job". So in other words, this is how my body is supposed to feel when I'm doing this effort. And when I'm doing this, it's supposed to feel this way, it's normal, this is a byproduct. This is what happens when this machine is doing what it's supposed to do, like steam coming out of a train. So it's the same idea, so that's something that flashes into my head now, ever since I've heard that, that [pain is] good. Because it's true, I really believe it. (John)

The common thread in these quotes is that having a personal racing attitude gives triathletes an extra dose of energy when they start feeling bad. This additional spark of energy can allow them to put forth their best effort in competitions even though their body is exhausted. Skeptics could argue that once a triathlete reaches his/her physical limits, there is nothing more he/she can do and thoughts play no role in his/her performance. But participants in this study seem to think otherwise and it is based on

their real experiences. In fact, Vince supports the opinion of most of these elite triathletes who said *limits* are often mental. Earlier, he was quoted saying he might have lost the race at the very moment he thought Steve was going to pass him. But in hindsight, he believes he could have won:

Q: Now [after the race], you think...

Yes maybe I should have thought, “I still have some time to go and I can make it” and maybe I would've won there. [...] If I were a real great athlete, I would have fought. But... maybe I was mentally not tough enough.

This quote provides strong evidence of their belief in the importance of the mind. Since Ironman triathlon is all about energy and moving forward, athletes must find ways to get extra energy for their body to use. This *the-mind-commands-and-the-body-obey*s perspective is one of four factors that enable triathletes to have sustainable success.

Mindset Conducive to Long-Lasting Success

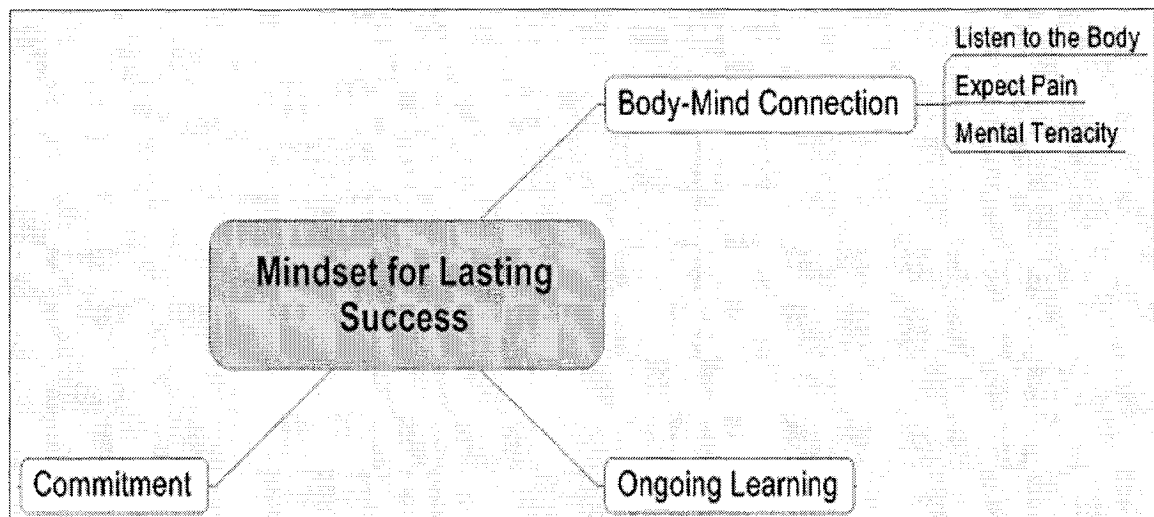
Thus far, Elite Ironman triathletes have explained the need to be thoroughly mentally prepared before races and having individual ways of tapping into their inner energy resources if they want to perform their best during competitions. There is a third ingredient in the recipe for success in Ironman triathlon: an inclination to act in ways that will consistently yield good results. This is like the icing on the cake for the triathlete's career.

Through conversations with the participants, it became evident that having the right mindset was essential for triathletes' success and helped them stay at the top of their

sport over several years. More specifically, four mental factors (as presented in Figure 3) stand out as elements of the winning mindset: being committed, being willing to engage in ongoing learning, developing a strong body-mind connection, and respecting individual preferences.

Figure 3

Mind-set Conducive to Long-Lasting Success



Commitment

The first success mental factor is Ironman triathletes' commitment. Ironman triathletes are extremely committed individuals by nature. To excel in their sport, they need to be committed to "train a lot and put a lot of time and energy" into their pursuit (Robert). A highly committed attitude is thus necessary for triathletes to reach their goals, especially when the goal is to win. Participants revealed a high level of day-to-day

commitment and dedication to their goals. Steve talks about the relentless pursuit of his personal goals:

When I first started triathlon I had the list of all the things I wanted to do. I'd write down I wanted to be a World champion, I wanted to win the World Cup Series, I wanted to win the National Championships, I wanted to win the French Iron Tour, I wanted to win Chicago, I wanted to win Wildflower, I wanted to win Alcatraz, and I wanted to win the Hawaiian Ironman, and I wanted to break eight hours. That was it. [...] And I tick them off [and] I still have the list, it's on a piece of paper in an old training diary.

Yeah. I think if I finish my career without achieving [everything on the list]... Because I've still got the ticks next to the done, done, done, and there's two things left. And I think if I could tick them off I will be able to retire from my sport and not feel like I didn't achieve everything I wanted to achieve. [...] Because if I finish my career in five years' time without ticking off the Hawaiian Ironman, or without ticking off the sub-eight hour race, I think I'd be disappointed, everything I've won and I'd be disappointed, yeah. [...]

It's just I think, setting a goal and wanting to achieve it, and that's my goal. And until I achieve that, I won't relax, I will continue to be hard on myself. I will continue to assess races, I will continue to fly to training camps and get to stupid places and go and meet up with sport scientists and do tests in labs and get assessed and spend time away from my family until I achieve that because I think when I'm done that it will be not relief off my shoulders, but it will be an

accomplishment, something I can be really proud of, like, “Wow! That was cool!

That was cool!”

Besides having clear goals and relentlessly pursuing them, participants’ commitment is also demonstrated when they do everything they can to excel at the elite level. A certain amount of training and sacrifice is required for triathletes to be successful. Assuredly, the amount of training is one of the toughest challenges in Ironman triathlon, as France affirms:

when you’re two months into training for an Ironman, when you’re really tired, and you’re sick of it, being able to say: “Get yourself out of bed, this is what you have to do, this is what you need to do to win an Ironman or to do well.” That’s the hardest part of Ironman.

Another difficulty that comes with being at an elite level is the special lifestyle athletes have to adhere to; Paul points out that to reach a higher level he needs mental strength to maintain the commitment, that is,

Just to be able to make sacrifices: less time to play, physical [hardship], I mean it’s very physically hard to do this job or sport. [And] private life, you don’t have time maybe to invest energy in a relationship, maybe your job, education, you can’t just party, you can’t smoke, you can’t drink, hang out in the clubs until six in the morning, like the other people do especially when you’re young. It’s difficult, teenagers and young people in their twenties have friends that do other things, the athlete has to be very committed, has to have this healthy lifestyle and

it's a commitment. And then especially when you say you do triathlon, you say you do Ironman, people think you're crazy. [Laughs]

Certain things, like training and eating healthy, are required of every triathlete; other things are part of the daily routine of only the most committed ones. For instance, France forces herself to visualize the race course: "Before I go to bed every night—even if I don't want to, like last night I just wanted to go to sleep, but my mind wouldn't let me—I go over every section of the run." This kind of additional commitment is something Mathew says may determine the outcome of a race, like the World championships for example.

To win you need to do all the extra things, the little things. Everyone who goes there has trained hard plus it's the little things that might change. My diet, the mental prep, the knowing yourself, the little extra things. The little vitamins to keep your body at a little higher level maybe, a little more recovered, it's the little things. Everyone's getting the training so everyone does that. But maybe you can have a little better diet than everybody. I'm just trying to get the little physical edge, the little things I can do to better myself over the next person. And then the little extra sleep and not go out to have chicken wings and drinking beer and the little things that you have to do to stay focused and have an edge on someone else.

A hallmark of committed triathletes is that they feel they are accountable to themselves to do everything that is required. They fully commit to achieve what they set out to do. John gives a striking example of how committed he can be when he explains that he never does his workouts half-heartedly:

I take it to an extreme sometimes [...] Let's say I'm supposed to do a run, let's say I start here and I wanna run to here and back, and I've got a time in mind, and I shouldn't be running much more than that time. But let's say, I don't quite make it back, if I stop here and walk the rest of the way back I feel like I've cheated. I feel like I didn't do it fully, like I've stopped shorter than what I was supposed to do and that to me [is cheating]. I've tried to not do that, I've tried before, like even just yesterday I was supposed to do only 15 minutes worth of running and I was trying to do a certain loop in that time. I was trying to learn some of the course and I came up short of the distance and I stopped, and I said "OK, I don't want to run anymore", but I can't, I can't! I feel like I've cheated, I feel like I've not finished the course and for me I have to do it.

Ongoing Learning

Ongoing learning is essential in achieving long-term success. Triathletes who are willing analyze how their workouts and races went and how they can be better will improve their mental, physical, and tactical skills. Looking at and evaluating which patterns work best or which don't work is critical in achieving consistent high level of performance because it helps triathletes "avoid the mistakes I made last year. I will make other ones, but [I] try to avoid the old ones. [Laughs]" (Vince). Assessing races (and workouts) allows athletes to replace the patterns that hurt their performance by ones that will enhance it. In the words of France, "I think once you stop [taking out lessons from evaluations], once you think you're good enough not to do that anymore, I don't think you improve. I don't think [anyone] has a perfect race."

Post-competition analyses are crucial to long-term success in Ironman triathlon. John emphasizes their importance in his answer to the question of whether he evaluates how his competitions went:

Oh yeah! Absolutely. Always. Oh! It's huge, yeah. Every single [race], I mean, even more so the bad races than the good races, but it's huge, it's a huge part of [it]. If you think of it, you only have a limited number of races during a year, and you're trying to improve each year, and each race throughout the year. I'll make pretty thorough notes, and chat with my coach, or I'll just do it on my own or both, and I make sure to know why things went well or went poorly. Yeah, it's a big part of it I mean, it's a really big part of it.

Self-evaluations are especially important in Ironman triathlon, where the physically harsh nature of the sport limits the number of races—or learning opportunities—an athlete can do in a season. Vince adds to what John was saying:

The most difficult challenge [of Ironman racing] is, it might sound a bit strange, but the problem with Ironman is that you don't have many races you can do. The good [triathletes] do two maybe three Ironmans per year and that's it. So if you have a bad race at one of them, then your whole season is wrecked. So this is one of the challenges. You know in cycling, you have 80 days of racing, so if you have a bad day, forget about it, next day there's another race. In Ironman it's different, and that's why there's a lot of fear, because if you're a pro and you're dependent on your results, then you just have [a few] races where you can prove [yourself].

Some participants like to write things down to be able to refer to their notes later.

For instance, Robert formally evaluates his training and tapering patterns:

Oh, since I started in 1989 I write all my training down and how I feel and what was the temperature, and everything. So I have two books already and I write everything down and I can see, I tried this way and that way, and this was good, and this was not good and I felt good or I didn't feel good in the race or I felt really strong in the race.

Others prefer to do it informally, at their convenience. France says that she evaluates

Every race. Maybe not in a really formal, I certainly don't do it in a very formal way, writing things down, but I definitely do evaluate it mentally. And sometimes it can be months afterwards, I can be on a long bike ride, I get a bit bored, so I might start thinking about things then, that's when you have time to do it or you feel like doing it. It's not like if I say ok, today I'm gonna sit down and mentally evaluate Forster. I might do little bits for the next few weeks. So it's not an official thing that I actually sit down and do, but it always end up happening.

The eight participants who mentioned they engaged in some kind of self-assessment brought up different purposes for doing so. The most obvious use of evaluations is, as Vince said earlier, to prevent one from doing the same mistake twice.

His experience has shown him that it was important after a competition to

analyze the race. [...] You look at yourself: what did I do here, what did I do there? Where do I have to improve? What has to be better? What was good? For

example [...] I had a race once where I had no carbon brake pads and if you have a carbon wheel and no carbon brake pads, then the brakes don't work that good. You have to have proper equipment, otherwise the brakes don't work well and I had not a real crash, but I lost the road.

Besides the gear and the equipment, physical reactions and nutrition are valuable areas to assess. Mathew explains that he engages in a personalized form of race evaluation:

I have a training diary and I assess the race, what went well, what didn't, what I ate, how my stomach felt, what worked, what didn't, and I think it's important to learn from all your races. It's kind of an individual thing, what you've been eating, your heart rate and stuff like that, it's individual. So I try to write as much as I can down, and remember what I did wrong so I don't do the same mistake twice.

Taking time to reflect on a race also constitutes a good opportunity to learn lessons from mistakes or arising from situations. France explains that she evaluates her races with the intent of taking the lessons into the next ones:

And that's one thing I do definitely, that I think a lot of people don't do, at the end of an Ironman, maybe a week or two weeks later, I sit down and analyze that race and take the good and bad. So I take in the good and bad points, mainly the good points. [I sit down] by myself and sometimes I talk about it with Justin as well, because he can see different aspects of the race that I can't see. Things like ok, before [that] race, I would've never thought that once a girl catches me and passes

me, normally that means I don't see her again. [...] But after Kate caught me on that one, and then I caught her back that taught me ok, the race is not over until it's over, and that if you keep doing what you're doing and you keep focused, you can catch them again. So that's something I learned from that race and now I take into my next race.

Triathletes also use race evaluations to assess how they did mentally, to detect strengths and weaknesses and know what to improve in the future. Michelle explains she can extract lessons from her races:

Every race, something mentally goes on with every race that I learn from. So I try, now as I've progressed in the sport longer, I realized that I need to look back at every experience and see what worked and what didn't mentally. [...] I try to look back and see maybe where I started to become negative or I started to feel bad and I kind of try to assess what went on there and what I can change. If I realize that at this point in the bike what I started to do was just complaining because of the hills that were coming, well I need to think about that for the future and be stronger and be more positive when I come to that same situation. So I try to look back and see where things nose-dived a bit, and use that for the future.

Similarly, some triathletes think back on the training they did before races to try new patterns until they find the ones that bring out the best results. Dany outlines his innovative approach:

15 years in the sport, it's a long time. And maybe you're afraid to do the wrong [training]. I think you have to try to do new things; if you trained for 15 years, it's

very easy to always do the same laps on the bike, the same laps on the run, the same swim programs. So you always have to think, what can I do to improve myself? Because when I'm training, I never have sore legs or muscle ache, I'm too fit for that. So you have to find things that your body doesn't know and that's what I did, to climb up mountains, run mountains down hill, mountain bike three or four times, [things] I would never do normally.

Steve is also always on the hunt for the perfect training pattern, and this requires careful assessment of what resulted from a certain training. He adds that once the winning model is found, the athlete has to replicate it again and again:

[I do evaluations] every time, whether I win or lose. For me, Ironman is new so for me it's a learning curve. I like to write everything down, all my training, what works, what doesn't. For the successful race I can look back; if I have a bad race, what went wrong, why, when did I feel bad, and it's just so you can replicate, you form the model for your training. [...] So after the race on the weekend I'll go ok, I was successful or I wasn't successful and if I was successful, and I go on to be successful in Hawaii, that will be the model I'll replicate next year as opposed to the model I did last year. So you're always trying to find what works, what doesn't.

And your body is an amazing instrument: it has its bio-rhythms and sometimes you're gonna feel good, and sometimes you're gonna feel bad. It's also a very simple, simple machine. If mentally you know something worked in the past, replicate it again. I have done that in my short course career. My whole

career, people were like, How are you so successful? I was like well, I won a race doing that; I did it again I won again, I just did it again, did it again, did it again. It's simple, you know, and people try, and coaches, to complicate things, and do this and that and try to do this... It's such a simple thing: swim, bike, run, be good at them, find something that works for you and just replicate it.

In the end, what stands out is that assessing a race is a very personal exercise whose goal is to find out what works for a particular triathlete. Making a commitment to continually engage in post-competition evaluations is part of a mental attitude which leads to long-term success. Steve sees the challenge of doing-evaluating-adjusting as a puzzle: "It's just like a game you're playing and playing and playing until you find the perfect race. I think everyone is searching for the perfect race."

Body-Mind Connection

Body-mind connection is a somewhat paradoxal thought: to sustain long-term success, triathletes' mental attitude in fact goes back to connecting with their body. Consistent winners are aware that their body is their most important working instrument and that by closely connecting to it they will more likely reach their true potential. For the participants, this connection has three components: to listen actively to their body, expect pain, and develop mental tenacity.

Listen to the Body

Triathletes possibly develop an inclination to be in perfect harmony with their body because they spend anywhere from five to ten hours a day training, pushing and

monitoring it. All ten participants spoke, in one way or another, of how attuned they are with their body. Some athletes even personalize it and give it a life separate from their own. For instance, when asked how he was feeling the days before an important event, Robert answered: “Most of the time, I don’t feel very strong because the body knows that something very tough will come so it tries to relax and have some rest.”

More importantly, all recognized the necessity of listening to their body. The first step in this direction is to learn how one’s body reacts and then to trust what it can do.

France comments on how well she knows her body:

I don’t race with a computer on my bike, and I don’t race with my heart rate monitor, which people think that’s crazy [...] And I’ve always raced like that, and some people think that for professional athletes that’s pathetic because I don’t really know, but I think I’ve been doing triathlon now, and I’ve been doing sport for so long, I know my body. And I don’t feel like I need a heart rate monitor to tell me how I’m feeling. I don’t want a watch to tell me how I’m feeling. I think I have enough internal sense to know how I’m feeling.

Once the athlete deeply knows his/her body, the second step is to trust it enough to base race decisions, like pace, nutrition and even tactics, on one’s physical sensations.

John and Michelle give examples of their decision-making process during the competition:

And you always have to be able to modify, I guess even your pace strategy. If you go out there and you say “Well, I’m gonna run, I’m gonna go at this speed” and your body will not allow you, it’s too uncomfortable then you have to slow down,

wait until it's comfortable and then go back up or wait until you can do something in your plan. (John)

When I first started in the sport I thought, "No I gotta keep eating" now I read the signals my body gives me more so. I know if I'm bloated a bit, then I know I need to back off the liquids for just a bit longer and let it go down before I can start drinking again. So reading the signals of your body. (Michelle)

Even though it seems intuitive to listen to one's body, it is not always easy to do in the heat of the competition. Competitive instincts come into play to persuade the triathlete to speed up, keep steady or slow down instead of respecting how she feels. John spoke of a race in which he reluctantly decided to let his rivals go away on the bike: "So at one point, they had an eight-minute lead on me. Which is kind of a lot, as you think 'I don't really want to waste eight minutes.'"

But a strong body-mind connection needs the athlete to trust his/her sensations. Mary calls having this logical trust being *cool in the head* and says to make decisions during the race,

you have to listen [to your body]. You have to know your body really well.

Sometimes you just have to know your body and to be cool in the head, like Mark Allen when he raced Thomas Hellriegel: he let him breakaway, and he knew he was a better runner.

Mark Allen is renowned for being able to trust his body knowledge enough to go at his own pace on the bike and eventually claim the victory at the Hawaii World

Championships in 1995. Controlling oneself in that sense may be such a hard thing to do for Ironman triathletes that he remains a classical illustration of someone who knows and respects his body. Vince further elaborates on this example:

I have to admit that last year when I came up to the uphill on Hawi, I knew, because I know my body very well, I knew if I went on with the same speed that I had had for the first 70K I would not make it in 15 hours, because I was pushing myself too hard. And then, I [let] Normann Stadler [...] overtake me but this was on purpose because I said, “Hey, if you go on like this, no way, you will not make it”. So this was the point where I haven’t pushed myself to the limit, but you have to consider the whole distance, of course. It doesn’t make any sense if you push yourself to the limit for 70K, but then you’re dead.

Q: And you base your decision to refrain a bit on what?

On your feeling. On your feeling and on the interaction between mind and body. If your body says, “Hum hum, no way”, you have to say OK. [You have to listen to your body], absolutely, you have to. And this is one of the abilities you have to have as an elite triathlete. You have to know yourself, and to know what you’re able to [do].

And I think this was one of the biggest advantages of Mark Allen. He knew “Well, Thomas Hellriegel can get off the bike 15 minutes before me, 10 minutes before, I don’t care. If I push myself to the limits and I run as hard as I can, I’ll catch him”. And you know, I believe very much that he knew beforehand that he would be able to catch him. And so he was able to run that fast, and that

consistently, and that strong. He caught him in 1995 at kilometer 38 or 39, something like this.

Besides knowing their body, triathletes anticipate what is coming and mentally prepare for it.

Expect Pain

The foundation of a strong body-mind connection may rest on the expectations triathletes have. By anticipating pain, they are better equipped to react constructively to their body screaming and wanting to stop. Triathletes have learned from experience that they can push themselves even though their body is sending them signals to the contrary.

Michelle explains that an Ironman

gets really hard. It's really easy for all these evil thoughts in your mind to come in. And again I think after experience you just kind of acknowledge that's normal, that's gonna happen, let's just push them aside and try and take each little baby step, each moment.

Ironman triathletes know exactly what kind of pain they will feel. France describes what she physically experiences every time she races:

And it's not a severe hurt, it's not like when you do a sprint-distance triathlon, where the pain is severe, but you know it's gonna end. It's more of, it slowly, slowly, slowly creeps up. You start out in the race and you feel all right, and you get into a good rhythm, and of course as you start to deplete your system, mentally you start to think, "Oh God, I'm really starting to hurt now." It's

something that creeps up slowly but surely. So normally you don't start, well for me I don't start really hurting until the run. But yes, every race hurts.

But is hurting really a *sine qua non* for triathletes doing an Ironman? Yes, to race at their best. Robert knows in advance the effort he will have to put forth on the day of the competition: "I *know* it will be very tough and I will have to go 100%, and it will be a very tough day. It doesn't matter what happens, it will be a very, very tough day. Yeah, it's a real challenge." By giving their maximum effort, triathletes are bound to get into the *pain zone*. For Paul, that can even explain the difference between winning and losing:

First is the ability, how deep can you dig it into the pain threshold? Or how much are you willing to suffer in a race? That's important. It's the desire to reach 100%. You want to reach 100%. In order to go through this you have to go to the pain zone.

Knowing what is coming helps triathletes build a strong body-mind connection and deal with the pain in the most efficient way possible because they have strategies they can apply at the onset of suffering. Steve for instance expects the pain to surface in the second half of the race and can then tell himself that he can deal with the remainder of the race:

Pain... It's another thing I expect, you know, yeah... I think anyone doing an Ironman knows it's gonna be uncomfortable. I always think of it as, you know you're gonna get sore, it's gonna be painful but you're gonna be close to the finish, that's how I always think. When the pain is coming, it's nearly done, the day is nearly done. Honestly in the Ironman 70% of it is comfortable. The swim is

easy, the first half of the bike is controlled, you can talk, you feel good, and then it starts to come and you're halfway through the race.

Ironically, the most efficient way to deal with the suffering, for some athletes, is to do nothing at all. As John explains, this is possible because experience has shown him that his body will keep cooperating through pain:

But there's times you expect it to be bad. Like you expect, it's an Ironman, and you expect you're gonna be on the bike and there's gonna be a bad patch. I always, I usually have at least one spot on the whole bike ride, where I feel pretty bad. And in that part if you expect it and you know it's coming, sometimes you don't have to deal with it anyway.

Mental Tenacity

Once a triathlete listens to his/her body and expects pain as an integral part of the experience, he/she can develop the kind of mental tenacity required to excel in Ironman triathlon. Participants are well aware that their mind and body interact together; by building a strong connection between the two, they can aspire to long-lasting success. John states how mental tenacity allows triathletes to win:

[...] just your mental tenacity, because it comes down to everyone is going to go through a lot of pain, a lot of difficulty and if you can continue to trick yourself in your mind, or whatever it is that you use to get yourself through that, to make yourself go beyond where everybody else's faltering, I think that's where you succeed.

Mental tenacity is an elusive concept, which can mean different things to different people. Here, Vince tries to explain how he sees the connection between mind and body:

Ah! your mind is important because it has a great influence. You have to be confident during the race [that you can do it], but on the other hand, you know you can't avoid the pain because this is impossible. Everybody's suffering. So you will [suffer], or you will not reach your limits. So you feel the pain, you accept it, but somehow you have to like it. And of course, how should I put it, your mind and your body work together somehow, so your body has an influence on your mind and your mind on your body, and somehow you have to manage, to handle this relationship.

Triathletes who manage the relationship well also work out ways to make it grow. Dany and Mathew illustrate how they use training to improve more than just their physical preparation:

Yeah, for example, if it's raining and you have to, you're trying to do a long run. It would be easier to stay at home. But if you do it, you feel much better afterwards than if it would be a sunny day because you beat the long run, and you beat the weather. I guess that's, the more you do that, the more mental preparation you get. (Dany)

I did a couple of running races that I think are big character-builder. So I mean that's the important thing, to do other tough events that kind of test your mental

toughness so to speak, so you have to really focus and work hard to succeed.

(Mathew)

In summary, the mental attitude of successful Ironman triathletes includes a strong body-mind connection partly made of mental tenacity, which is a triathlete's desire to get through anticipated pain and suffering, knowing the body will cooperate.

Epilogue

The Ironman is undoubtedly one of the most demanding single-day events. To race at their best, elite Ironman triathletes have learned to endure severe discomfort and pain over several hours. France emphasized earlier how much the Ironman is about facing an extremely intense challenge:

A lot of people lose focus and all they think about is competition and racing and how hard it is, and they forget the reason why they first got into the sport of Ironman, of triathlon, of long course racing: that it's a challenge, and it's about pushing your body to the limit, to the furthest limits that you can.

Thus, the real battle—giving a 100% in this excruciating journey of 226 kilometers—often takes place within oneself. But sometimes, that is not enough. Sometimes, the Ironman triathlete needs to go deeper than the pain threshold and dig into emotional reserves to compete with a rival. Lisa Bentley, currently one of the best professional Ironman triathlete in the world talks about her emotional *powers*:

I knew that I would have to have the perfect race to challenge Lori Bowden and that is a “zone” that is not necessary for every event. In fact, it is nice to only have to call up those “powers” for the Hawaii Ironman.

Steve had to resort to those powers in one of the greatest finishes in Ironman history. He was quoted earlier on his competitive instinct surfacing when he was running head-to-head with Lothar Leder, the five-time winner of that race. Here’s his account of the end of the race:

In 99% of the Ironman people have never had to race at that point of the race. Usually you have five minutes in front or you’re five minutes behind and it’s just boom you know, you just control what you can control and you get to the finish line. Last year here, I [was having a bad patch] and also I had a competitor right beside me. [...]

Q: What were you thinking about?

I don’t know! That’s the funny thing, I don’t know. I remember, it’s like in flashes I remember coming down the hill and we’re together side-by-side and the hill went to the left and Lothar had the inside. And I remember immediately thinking to myself, because it turned left and I was in the right hand side, and I guess it’s because he raced there so many times, the only memory I think I remember is saying to myself: “He’s got the inside. He’s gotta come out of this corner in front, bad move bad move. You’re so stupid, you’re stupid, you should’ve got the inside.”

We came out of the corner and he had one step in front, and it stayed like that the whole last 500 m, one step in front. The whole way into the finish. I could not catch him. At that point, I remember I was looking, pumping my arms thinking, “Just run past him, run past him” because you want to, you just can’t! “Come on, run past him, just go, run past him!” And he’s just one step the whole way and all the people were going nuts. You see the photos, it’s quite funny and speaking to Lothar he said the same, we don’t remember so many people until I see the photos. I just remember looking at his shirt with Deutsche Post, a yellow shirt, and I was going, Run past him, just go past him, and it stayed like that the whole way.

Much has been said on why Steve lost the race by only three seconds. Assuming that seconds or even minutes do not matter in a 9-hour race, where did he lose those three precious seconds? Could he have done anything differently? John comments:

Now last year, the race was determined by three seconds, and you could say, well, [seconds] matter. But you look at all the things that add up you know, did he lose the race because he felt bad for three seconds? No! Or because he slipped? Or he did a long transition? It all adds up, it was all because he did this or that, he lost the race for whatever number of reasons. He didn’t really lose the race, Lothar won the race, right? He just happened to have a little extra push at the end when it came down to it.

Definitely, the Ironman is all about energy. It is about wisely spending one’s energy, not wasting an ounce of precious energy, and then finding extra energy. Are there

consequences of pushing oneself to that limit? Why do Ironman triathletes refrain from digging extremely deep every single time they race? Steve explains what happened to him after the famous race:

And I think when I look back now physically that race blew me for the season.

Because I think you dig so deep and I think your body can do that only so many times where you can really, really, really, dig as deep as that. And I think it takes something from you, you know. And for the rest of the year I was really tired emotionally and mentally very exhausted. I found in training I just didn't want to go back there again. You get to a point where your body is just like, "You know what? I don't want to hurt like that anymore."

If racing Ironman triathlon is so physically, mentally, and emotionally excruciating then, one might wonder, Why do elite triathletes do it again and again?

Vince ventures an answer:

I think the human mind has the ability to forget about pain, because otherwise I don't think we would simply be able to race again. Because we just forget it. So next time we are on the starting line, [we tell ourselves] "Yeah! This is wonderful!" [Laughs]. We forget it.

And in the end, what would Ironman triathlon be without pain anyway? Steve's words summarize superbly how he deals, mentally, with the challenge of the Ironman:

Q: But you got to be tough mentally to push your body to do things it doesn't want to do?

I think, but I think I've always been able to do that, so I don't know the other option, you know. I guess because I've done running in sports since I was little, I don't see this as pushing, I see this as a physical challenge. I've always enjoyed, I enjoy putting myself on that and pushing myself, and pushing myself. You get immense satisfaction out of it, personal satisfaction. I don't know why, you just, you get a buzz I think. If [we were] gonna do these Ironman and it didn't hurt, I don't think you would do it, would you?

DISCUSSION

Elite Ironman triathletes in this study reported several strategies to get themselves mentally ready for competitions. It seems clear that triathletes have both their body and mind totally prepared to perform their best in races. The results of this study are discussed and linked with the existing literature in this chapter in three sections: the mental skills used before competing, the focusing and distraction control skills used during competitions, and the ways elite Ironman triathletes use to get energized.

Pre-Competition Mental Skills

All ten elite Ironman triathletes in this study mentioned the importance of being mentally well prepared before races. Participants insisted that success was in large part due to their mental skills, or what they call the “mental side” of their sport, thus supporting Orlick and Partington’s (1988) finding that mental readiness is the only statistically significant factor in an athlete’s performance. They brought up all the elements comprising mental readiness, that is having a total commitment to pursue success in Ironman triathlon, engaging in quality training (including daily goal setting, competition simulation and imagery), developing competition plans and making post competition evaluations.

More specifically, before important races elite Ironman triathletes make effective plans, rehearse several possible scenarios and follow their own personal routines to rest and get their equipment ready. These elements have been reported by elite mountain bike racers by Kabush and Orlick (2001). Like Ironman triathlon, mountain bike racing shows environmental challenges and complex logistical demands. Similar to the participants in

this study, Kabush and Orlick's athletes engaged in thorough and detailed planning of their race strategy to feel better prepared mentally. Also, prior to the race they dealt with equipment concerns, ensured to get enough rest and eat well, and checked the course as much as possible. Since Ironman triathletes participate in only two or three races a year, their precompetition preparation might take another meaning. Elite Mount Everest climbers, who discussed the importance of the necessity to be and feel mentally prepared, are in a similar situation as Ironman triathletes as they also prepare for months before having one chance to summit (Burke & Orlick, 2003). More research is needed to know what impact the low annual number of competitions has, if any, on triathletes' mental preparation in dealing with logistical details and racing strategies.

A possible consequence of the very limited racing opportunities might be an increase in precompetition anxiety. A few participants in this study mentioned feelings of anxiety or nervousness the days before the competition and on race morning. Feelings of nervousness were described as passive thoughts by Baker, Côté and Deakin (in press), who reported no passive thoughts in expert Ironman triathletes prior to a race. These discordant findings may be explained by either the fact that athletes in Baker et al.'s study refrain from telling the researchers certain answers or that they cannot remember how they felt before the race. On the specific aspect of having feelings of anxiety, this study is more in line with Hammermeister and Burton (1995) who found that athletes participating in the Ironman were more cognitively anxious and reported higher physical anxiety than their single sport or half-Ironman counterparts because the delicate balance between seeing the race as a challenge or a threatening experience changes at any time

throughout an Ironman. Moreover, the negative correlation between negative thoughts and performance leads to think that precompetitive anxiety might affect performance.

What surfaces from this study is that most elite Ironman triathletes do feel some nervousness before important competition but they have developed skills to deal with it, such as reminding themselves of their strengths to increase their confidence, using relaxation techniques, and having positive thoughts run through their minds. This confirms a study conducted by Mahoney, Gabriel and Perkins (1987) in which they found that elite athletes across 17 sports reported stronger skills in regards to anxiety management, self-confidence and mental preparation. Relaxation was also one of the elements included in the three studies conducted with triathletes and ultradistance runners in which the mental skills training intervention was shown to improve performance (Patrick & Hrycaiko, 1998; Thelwell & Greenlees, 2001; Bull, 1989). More research is needed to test the skills revealed by participants in this study as a means to control their nervousness, increase their self-confidence and be more prepared mentally.

The mental skills brought up by Elite Ironman triathletes' include all seven elements of Orlick's (2000) Wheel of Excellence, which supports Orlick's characterization of the mind-set and focus top performers bring to quality performance. Beside mental readiness, another component of the Wheel that came out from the interviews was commitment. Having a total commitment to their pursuit was a crucial aspect in participants' winning mindset because of the huge amount of training time required to compete in only a few races each year. Participants mentioned they did everything they could to reach the top of their sport, and this includes sacrificing other

things in their life. This is in line with Acevedo et al. (1992) who found that ultramarathoners were far more committed to their sport than athletes in other sports. This is not surprising because to be successful in a demanding sport like the Ironman, triathletes must be willing to put a lot of time and energy into their training and to make several sacrifices in order to reach their goals in competition. For example, one participant in this study disclosed the list of all the goals he really wanted to achieve in his sport and for which he is ready to do everything he can.

Several elite Ironman triathletes also talked about the feelings they experience in training and racing and how they contributed to their motivation to train everyday. A few triathletes emphasized how much they enjoyed being able to train outside in nature while others really thrived on the adrenaline rush of race day. Certain passages of participant's interviews sound like the *dream* feeling of the Resonance Performance Model (Newburg, Kimiecik, Durand-Bush & Doell, 2002). These authors have found that high-caliber performers have a *dream*, which represents who they want to feel in their daily pursuits. According to Newburg et al., being able to revisit their own personal dream feeling is a crucial component of the performance process for these athletes. The elite Ironman triathletes who talked about their feelings in this study were also driven by personal goals, supporting Newburg et al.'s findings that good preparation for performance can combine setting useful goals and also keeping one's dream in sight. These two complementary strategies can help triathletes have the required commitment to do all the hard work to be ready to compete.

Competition Mental Skills

For competition, elite Ironman triathletes seem to possess an extremely sharp focus. Inherent in the skill of focus is that of distraction control; they are interrelated because distractions take the athlete away from his/her best focus and using skills as a means of controlling them has is done with the intent to go back to the optimal focus. Focus and distraction control are two of the seven elements of success that make up the Wheel of Excellence (Orlick, 2000). Focus and distraction control are two of the most important mental skills used by participants during races. Triathletes mentioned they focused their attention on the various cues relevant to their performance: their physical movements, their nutrition, and the assessment of their body and their competitors. Moreover, most participants made every effort possible to control the distractions they face such as race conditions, technical problems, doubts, pain and bad patches.

The importance of concentrating on the right things was underscored many times by participants. The focus mentioned in the current study is similar to what Orlick and Partington (1988) reported, in that participants focused on the immediate task (swim, transition, bike and run cues) and many of them executed their race plan. According to Orlick (2000), “focusing is the most important mental skill associated with ongoing learning and consistent high-level performance” (p. 7). Mahoney, Gabriel & Perkins (1987) also found that elite athletes reported stronger skills in regards to concentration. Indeed, having a powerful focus emerged as a critical element in elite Ironman triathletes’ performance of this study.

The kind of focus elite Ironman triathletes bring to their races is akin to that of elite mountain bike racers. Alike the bike racers studied by Kabush and Orlick (2001), Ironman triathletes have to pay attention to many different cues so that their focus needs to switch many times during a race. One minute they are focusing on their swimming, biking and running form; the next, they are assessing their body signals and adjusting their pacing strategy, while keeping busy mentally by constantly thinking about nutritional plans, equipment concerns, and race tactics. Future studies could explore the most effective way of switching from one performance-enhancing cue to the next in a context where several things need to capture the athletes' attention.

Almost all participants' thoughts were associative. From 1977, Morgan and Pollock (as cited in Antonini-Philippe, Reynes, & Bruant, 2003) distinguished between associative and dissociative thoughts and found that elite long-distance runners utilized predominantly associative strategies in order to endure long distance runs. Elite Ironman triathletes' thoughts during races ranged mainly from physical movements to body sensations, to encouraging self-talk, imagery and confidence-enhancing ideas. This is in line with Masters and Ogles (1998), who report that after 20 years of research in the area of cognitive processes among endurance athletes, results still support the relationship between associative thinking and faster running times.

While most participants had associative thoughts, a minority chose to engage in dissociative thinking as a strategy to cope with pain and bad patches. The very nature of ultraendurance sports allows athletes to engage in thinking about what is going on around them and within them. Ironman triathletes have the opportunity—and at the same time

the challenge—to engage in helpful conscious thinking. Since they have *time to think* during a race, they have developed rational and analytical thought processes to avoid dwelling on pain and hurt. Having purposely dissociative thoughts in times of discomfort during a race is consistent with Acevedo et al. (1992), who found that 75% of ultramarathoners reported specific external thoughts. The authors suggested that as Morgan and Pollock (1977) had first hypothesized based on Tibetan monks running 300 miles at a time, an external focus may occur in elite marathoners as a cognitive strategy to dissociate from discomfort.

On the contrary, Baker, Côté and Deakin (in press) study found that expert ultraendurance triathletes reported only performance-related, or associative, thoughts. This discordance of Baker et al.'s findings in that area might come from an admitted limitation of their study, namely that the cognitions reported during the video simulation are not totally consistent with the cognitions experienced during the actual competition. It could be that athletes naturally refrain from telling the researchers answers they consider irrelevant to the situation, or they could simply have forgotten what external thoughts emerged in their minds during the race.

Even though there were individual differences among cognitive pain-control strategies, it is not surprising that all 10 participants discussed them since physical discomfort is one of the toughest challenges they have to face. The physical hurt, suffering or discomfort experienced when running a full marathon after a hard 3.8-km swim and a leg-killing 180-km bike ride is extreme, especially in the last stages of the race when their bodies have consumed all their energy reserves. There is no exit: pain,

hurt and suffering are a part of Ironman triathlon racing as a signal that the body naturally tries to protect itself. Some triathletes found it helpful to have distraction control strategies to deal with discomfort. In any event, it would be interesting to investigate whether associative or dissociative thoughts are the best cognitive skill to deal with discomfort, and whether this is only a matter of personal preference among endurance and ultraendurance athletes of various sports.

In the end however, most participants have learned to accept pain and discomfort, redefine it and sometimes embrace it as part of the whole experience. Most triathletes had their own conception of what pain means, but nothing emerged in the interviews to give support to Antonini-Philippe et al' (2003) who reported that women used dissociative strategies significantly more often than men in reaction to pain. The authors mention that women's tolerance might possibly be lower due in part to differences existing in the interpretations endurance athletes of both sexes have about pain. The varying definition of pain among athletes, men and women, is certainly a subject for future research, especially in ultraendurance sports where hurt and discomfort are always present.

In fact, elite Ironman triathletes possess a kind of mental tenacity that enables them to constantly push their physical limits. Ultraendurance athletes' mental tenacity has been reported in two other studies. Burke and Orlick (2003) found that elite Mount Everest climbers spoke of the necessity of developing mental strength by constantly pushing their physical limits and level of discomfort. During the ascent phase of their expedition, Mount Everest climbers mentioned that redefining discomfort was necessary to continue the climb despite physical strains to reach the summit. Similarly, Acevedo et

al. (1992) reported that ultramarathoners emphasized the necessity for mental toughness and strength, or a never-give-up attitude. Elite Ironman triathletes also expect pain and discomfort to be part of the racing experience, and they have mastered ways to acknowledge and even embrace harsh physical sensations in order to reach their goals.

Professional cyclists also need to dissociate from the pain and extreme conditions they must endure during a race, and Lewis (1999) suggested that cyclists, much like marathon runners, must enter a zone that differs from that experienced by non-endurance athletes. According to Lewis this “zone” is an autotelic experience and has the trait of hypnotic susceptibility. Similar to what Abt (1990) reported, a few participants could recall a great race where, without knowing exactly why, they just felt good and didn’t mind hurting. This study seems to give support to the hypothesis that endurance athletes enter a special to continue racing despite suffering and enduring pain and discomfort.

This study also supports Baker, Côté and Deakin’s (in press) findings that expert Ironman triathletes have more active and proactive thoughts than mid or back-of-the-pack triathletes. Indeed, elite Ironman triathletes in this study had were almost exclusively in an active or proactive cognitive mode. For instance, alike expert triathlete, participants in this study were very proactive at the end of each segment, before engaging in the transition, in order to prepare for the next one. But as mentioned earlier, a few participants in this study mentioned passive thoughts in the form of feelings of anxiety or nervousness before the race contrary to what Baker et al.’s reported. Overall, Baker et al.’s study found differences in the thought patterns of expert versus amateur Ironman triathletes; this study adds to the current knowledge by adding substance to what elite

Ironman triathletes think about before and during a race, especially during the four decision-making times not analyzed in Baker et al.'s research. Moreover, this study expands the knowledge on the psychological aspect of Ironman triathletes by exploring the mental skills they use to perform their best.

Energizing Mental Skills

To be their best in competitions Ironman triathletes appear to have learned how to deal with one decisive variable: energy. When the Ironman demands start to tear triathletes' bodies down, something else is needed: a spark of energy, a dose of motivation, something that inspires them to keep going. Therefore, the single most important mental skill in Ironman triathlon might well be the ability to find a way to stay motivated—to be *switched on*—for many consecutive hours in spite of obstacles, doubts and pain.

The Ironman is a microcosm of life: in one day, triathletes experience all kinds of intense positive and negative emotions that reflect what goes on in their body and mind. This is similar to “the mental roller coaster of extreme emotional high and low points that often occur during an ultramarathon” (Avecedo et al., 1992). Participants in this study gave numerous examples that illustrate the inspirational power of having positive thoughts when faced with external and internal distractions, and when trying to get extra energy. In an emotional low, they remained hopeful that things were going to be ok and that they were going to succeed. By connecting with positive emotions, triathletes get the

extra kick from the brain Robert was talking about, which allows them to push through pain barriers and perform their ultimate best.

The need to stay motivated despite difficulties and obstacles has also been found to exist for elite Mount Everest climbers (Burke & Orlick, 2003). The authors found that to continue their ascent or descent in the face of obstacles, elite Mount Everest climbers used focus, belief in their capacity, and connection with their body. Similar to the climbers, triathletes in this study gave many examples throughout their interviews to support the idea that they must always stay in the game no matter how difficult the situation becomes. A major difference lies in the fact that elite Ironman triathletes are in a racing environment and benefit from additional motivation: outside sources such as competitors and spectators. Confidence in the athlete's ability was, however, an essential aspect of the mental strategies for success in both studies to keep a high enough level of motivation to continue amidst difficulties.

A recent piece of research in exercise physiology gives weight to that assertion that confidence and positive thinking could likely be the key for elite Ironman triathletes, and other endurance athletes, to regulate their energy level. In a paper that is part of a symposium series, Noakes, St Clair Gibson & Lambert (2005) present a revolutionary theory. Contrary to popular teaching that fatigue (that is, exercise termination or substantial drop in pace) is regulated exclusively by changes that occur in the exercising muscles, Noakes et al. propose that the sensation of fatigue is not directly related to a physical end point, but is rather an interpretation of calculations performed at a subconscious level by the central nervous system. These calculations take into account

prior knowledge acquired during previous exercise bouts and the planned end point of the current exercise bout among other potential variables. The authors conclude that pacing strategies are probably the most important phenomenon in exercise physiology.

This is consistent with a study conducted by Burke and Jin (1996) who found that prediction of performance for experienced Ironman triathletes was more accurate when self-efficacy statements, or self-confidence, were taken into account as opposed to physiological variables only. Moreover, Acevedo et al. (1992) found that ultramarathoners were more confident than athletes in other sports.

In other words, according to Noakes, St Clair Gibson & Lambert (2005) the sensation of fatigue—what triathletes call bonking, central fatigue, or bad patches—is an emotion rather than a pure physical state. This supports the idea that being a feeling like others, elite Ironman triathletes can manage it with mental skills. For instance, positive thoughts, imagery, fun and confidence were tools used by participants in this study to put aside fatigue and keep going. In ultraendurance sports, where nutrition and physical energy is of the essence, Noakes et al.'s study could prove a great discovery. Noakes et al., Baker, Côté and Deakin (in press), Jin and Burke (1996) as well as this study all seem to suggest that a more holistic approach to training, including mental skills, would be beneficial for Ironman triathletes looking to increase their performances. Future studies need to explore the implications of that discovery, in sport psychology, to determine what impact thoughts have on physical parameters in sports where the energy demands are extreme.

Finally, the next step in research would be to design mental skills training programs to see how cognitive strategies can help triathletes avoid “bonking” and enhance their performance. This study as well as Baker, Côté and Deakin’s (in press) both provide specific examples of successful mental skills that could help design and implement such mental training programs. The exploration of triathletes’ strategies and real-life quotes gives material for applied sport psychology to experiment with the various mental skills in ultraendurance sports like the Ironman.

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Appendix A

Conversational Guide

1. Please tell me, what brought you into Ironman triathlon racing?
2. *Grand Tour Question*: Do you think your mind is important in doing an Ironman? If yes, in what way? How do you get yourself mentally ready for important competitions?

When the interviewee mentions key points that he or she feels are important, I probe for details. As an example, these are key points that came up during open-ended pilot interviews:

- **Commitment** level
- **Confidence / Belief**
- **Mental Imagery / Rehearsal**
- **Planning** (including nutrition and race strategies)
- **Positive Thinking**
- **Focusing in best-ever races, and in not very good races**
- **Race Distraction Control**
- **Post-Competition Evaluation / Race Assessment**

Other possible questions:

3. How do you prepare for and deal with different weather conditions?
4. **What is one of the biggest challenges you have met?**
5. What does Ironman training and racing bring you as a person? What do you like most about Ironman triathlon racing? What drives you?
6. **What do you think is necessary to win Hawaii** (the World Championships)? How is racing Hawaii the second time different from the first?

I am really impressed by what you have accomplished. Is there something that I did not ask you but should have? Or is there anything you would like to add?