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**FACULTY OF GRADUATE AND
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The Impact of Intrinsic and Extrinsic Goals on Information Selection and Appreciation

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The Impact of Intrinsic and Extrinsic Goals on Information Selection and Appreciation

Caroline L. Quesnel

Thesis Submitted to the Faculty of Graduate and Postdoctoral Studies in Partial Fulfillment
of the Requirements for the MA degree in Experimental Psychology

School of Psychology
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Abstract

Recent statistics indicate an alarmingly high proportion of obesity and eating disorder symptomatology in the Canadian population, despite the abundance of informative messages about healthy eating and weight management. This study explores information framing as a communication strategy. Twelve informative articles were created, each one framing one of two types of goals (intrinsic or extrinsic). Female participants ($N=59$) were asked to choose two to four of the 12 articles, read and evaluate them. It was hypothesized that women would choose articles that are concordant with their own goals, and that these articles would receive a more favourable evaluation than articles that were not goal-concordant. Results partially supported the hypotheses. Higher extrinsic goals lead to selecting more extrinsic-framed articles, rating intrinsic articles less favourably, and perceiving both types of articles as being useful towards reaching extrinsic goals. Intrinsic goals did not relate to any of these outcomes. Results suggest that individuals with high extrinsic goals might be seeking out information that confirms the importance of such goals. Theoretical implications for message framing and Self-Determination Theory are discussed.

Key words: intrinsic and extrinsic goals, message framing, Self-Determination Theory

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“If we knew what it was we were doing, it wouldn't be called research, would it?”

- Albert Einstein

“Anyone who has never made a mistake has never tried anything new.”

- Albert Einstein

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The Impact of Intrinsic and Extrinsic Goals on Information Selection and Appreciation

There is currently an abundance of information about healthy eating and weight management in the media. Indeed, this information is everywhere – books, magazines, the Internet, television shows, even entire television networks devoted to the subject. The topics of proper nutrition and weight management are very fashionable themes to be discussing at the moment.

Despite all the available information about nutrition and weight management, Canadians are still faced with significant problems: over 50% of the Canadian population is overweight (Bélanger-Ducharme & Tremblay, 2005). The situation is no better for our southern neighbours: in 2007, Colorado was the only state to have an obesity rate lower than 20%. In 30 of the 50 states, more than one out of four individuals is obese (Center for Disease Control and Prevention, 2008). Unfortunately, this phenomenon does not limit itself to North America: the World Health Organization (2008) has coined the term “globesity” to describe this worldwide epidemic. The health risks associated to an excessive weight have been thoroughly documented and include increased risk of heart disease, diabetes, high blood pressure, joint pain, asthma, sleep apnoea, liver problems, along with a higher risk for low self-esteem and depression (Melnik, Small, & Moore, 2008). Such negative impact on the health of individuals implies high costs, both at a personal and societal level.

Conversely, approximately four out of 10 women will diet sometimes or often, and one out of 10 displays symptoms of eating disorders (Keel, Baxter, Heatherton, & Joiner, 2007). Despite the fact that these symptoms are not clinically significant, they undoubtedly cause psychological distress to women who experience them. Unfortunately, the incidence of eating disorders is also on the rise: 3 to 10% of women aged 15 to 29 suffer from either anorexia nervosa or bulimia nervosa (Polivy & Herman, 2002).

These issues are particularly salient for women because sociocultural pressures for appearance and thinness are mostly directed towards them (Bearman, Presnell, Martinez, & Stice, 2006). A large body of literature has linked media consumption to poor body image and symptoms of eating disorders in young women (Dittmar & Howard, 2004; Harrison, 2000 & 2001; Harrison & Hefner, 2006; Tiggemann, 2005; Tiggemann, Verri, & Scaravaggi, 2005). It has been established that the media's focus on thinness and attractiveness leads young women (and girls) to be dissatisfied with their bodies (Stice & Shaw, 1994), which puts them at risk for eating disorders or eating disorder symptoms, and even depression (Stice, 2002; Thompson & Stice, 2001). As Polivy and Herman (2002, p.192) aptly summarized it, "as a result of the societal disparagement of overweight and glorification of underweight, many – perhaps most – young women express dissatisfaction with their weight and shape".

In sum, despite the ominous presence in the media of messages about dieting and weight management, we find an alarmingly large proportion of women (and men) who are overweight, engaging in dangerous dieting, or suffering from eating disorders symptoms. Fortunately, the health issue discussed herein is not one that is out of our control: in most cases, it is a question of lifestyle that can be modified. However, as the abovementioned statistics suggest, getting women to manage their body weight healthfully is no easy task. Informative messages could be particularly useful: they can have the power to initiate change, and encourage maintenance across time. It is therefore vital that we learn how to create and use them in the most effective way possible.

Message Framing

Rothman and Salovey (2007) propose two ways by which we can improve informative messages: message tailoring and framing. Message tailoring is the selection and

dissemination of specific information based on the targeted recipients. By tailoring informative messages, one attempts to personalize and adapt the information for the specific group it is destined to reach, in the hopes that it will make the message more appealing to that particular group. When tailoring an informative message, one omits the aspects of information that are less pertinent to the target group, leaving the primary focus on elements of information that are thought to be more pertinent. Such messages should be more effective in reaching, and maybe even persuading, the target recipients because they are more likely to be perceived as answering to their specific needs and speak directly to their concerns (Rothman & Salovey, 2007).

Message framing consists in presenting the selected information under a certain perspective and delivering the message using a particular angle. Rothman and Salovey (1997; 2007) focus essentially on message framing using a gain versus loss frame. For instance, in the context of health behaviours, gain-framed messages would highlight the benefits of performing a given behaviour, while loss-framed messages would focus on the costs of not performing that behaviour (Rothman & Salovey, 2007). Their research has shown important implications for this type of framing with regards to health behaviours. They have shown loss-framed messages to be more efficient when *detecting* a potentially dangerous health issue such as breast cancer screening (Schneider et al., 2001), and gain-framed messages to be more efficient for *preventing* a health issue such as applying sunscreen (Detweiler, Bedell, Salovey, Pronin, & Rothman, 1999). For a full review of their findings on gain- and loss-framed messages, see Rothman, Bartels, Wlaschin, and Salovey, 2006.

Informative messages can also be framed to emphasize approach or avoidance goals (Otis & Pelletier, 2008), or even intrinsic versus extrinsic goals as distinguished by Kasser and Ryan (1996) and later by Vansteenkiste and colleagues (Vansteenkiste, Simons, Soenens,

& Lens, 2004; Vansteenkiste, Duriez, Simons, & Soenens, 2006; Vansteenkiste, Lens, & Deci, 2006). This is the type of framing that is of interest for this particular project. This study looks at the relationship between women's goals and the goals framed by informative messages, and the consequences of this relationship on women's appreciation of the informative messages. Before exploring intrinsic and extrinsic goals, it is important to briefly explain the overarching theory on which that distinction is based: Self-Determination Theory.

Self-Determination Theory. Self-Determination Theory (SDT; Deci & Ryan, 2000; Ryan & Deci, 2002) proposes that individuals undertake the different activities in their lives for various reasons or motives. Specifically, SDT has brought forth the existence of two broad types of motivation: self-determined and non self-determined (Ryan & Deci, 2002). When individuals act out of self-determined motivation, they do so because they perceive pleasure and enjoyment out of the activity itself, because they see it as important and valuable, or because they see the activity as being part of who they are. On the other hand, when individuals act out of non self-determined motivation, they do so by direct external pressure, to avoid punishment or guilt, or worse yet: they don't know why they're engaged in that activity (Ryan & Deci, 2002).

Self-determination has been linked to very positive outcomes within the specific domain of eating and weight management. In fact, it has been shown that being generally self-determined has a protecting effect against the sociocultural pressures of thinness (Pelletier & Dion, 2007; Pelletier, Dion, & Lévesque, 2004). Furthermore, research has demonstrated that regulating eating behaviours for self-determined reasons leads to healthy eating behaviours, while regulating eating behaviours for non self-determined reasons leads to dysfunctional eating (Pelletier & Dion, 2007). It appears crucial to foster self-

determination with eating behaviours in order to ensure healthful habits and increase the likelihood of maintenance.

The distinction between the reasons that motivate people to act (self-determined vs. non self-determined) concerns the *why* of behaviour. SDT has also explored the *what* of behaviour, that is, what people do, what goals they pursue (Deci & Ryan, 2000). Kasser and Ryan (1993; 1996) have categorized goals and values in two broad types: intrinsic and extrinsic. It is important to note that the terms “values” and “goals” in this context are closely related. Extrinsic values will necessarily lead to the formation of extrinsic goals, and intrinsic values will lead to the formation and pursuit of intrinsic goals (Kasser, 2002). For this research specifically, only the goals that were relevant to the topic of weight management were retained. Thus the intrinsic goals examined were those of self-acceptance and health, and excluded community contribution. Similarly, the extrinsic goals of physical appearance and image were included and financial wealth was not examined. In the context of this project, goals were measured for the specific domain of weight management. Acknowledging that broader values lead to the formation of specific goals, the authors will use the term “goals” exclusively from this point on to refer to what has been measured in this research (for a review of these terms, see Kasser, 2002).

Intrinsic goals, as identified by Kasser and Ryan (1996), express the desire that humans have for self-actualization, improvement, and growth (Kasser, 2002). Intrinsic goals should therefore have a tendency to satisfy one’s basic psychological needs of autonomy, competence, and relatedness (Ryan & Deci, 2002). Examples of such goals are: self-acceptance (growth, autonomy, self-respect), community feeling, health, and genuine relationships with friends and family (Kasser, 2002). Intrinsic goals emanate from the self, of its natural tendency towards self-actualization, and are satisfying in and of themselves.

Extrinsic goals, however, are not satisfying in and of themselves. They are often contingent on the approval of others and serve as a means to an end (e.g., feeling of power, admiration from others; Kasser, 2002). Popularity, financial success, and physical appearance are all extrinsic goals (Kasser & Ryan, 1996). These goals do not emanate from the self, but rather from a desire to be recognized and admired by others. In theory, these goals would not fulfill individuals' basic psychological needs, which are essential to well-being and optimal functioning (Ryan & Deci, 2002).

That being said, it is possible to pursue extrinsic goals for self-determined reasons, or intrinsic goals for non self-determined reasons. For instance, one might wish to improve their health because their family physician told him or her to do so (intrinsic goal of health with non self-determined motive). Someone might also want to be rich and popular because he believes such things are important in life (extrinsic goals with self-determined motive).

Consequences of Intrinsic and Extrinsic Goals and Values. Generally speaking, it has been demonstrated that intrinsic goals and values as opposed to extrinsic goals and values lead to positive outcomes in terms of well-being. Kasser and Ryan (1993) found that intrinsic goals were positively related to variables such as vitality and self-actualization, whereas prioritizing extrinsic goals negatively correlated to these same variables. Similarly, giving high importance to intrinsic goals leads to less depressive and physical symptoms (such as headaches and nausea; Kasser & Ryan, 1996). Such results can be explained by the fact that intrinsic goals satisfy more readily individuals' basic psychological needs, and thus lead to optimal functioning (Kasser, 2002).

The consequences of intrinsic goals as opposed to extrinsic goals have been studied in a variety of specific domains such as education (Vansteenkiste, Lens, & Deci, 2006; Vansteenkiste, Simons, Lens, Soenens, & Matos, 2005) and work (Vansteenkiste, Neyrinck,

et al., 2007), where results have consistently shown better outcomes for intrinsic goals as opposed to extrinsic goals.

Goals have also been examined in the realm of physical activity. It has been shown that providing an intrinsic goal (in this case, health) to participants had a positive effect: they were more self-determined to be physically active, performed better, spent more energy, and persisted longer. However, providing participants with an extrinsic goal for physical activity (in this case, physical appearance) had the opposite effect on the abovementioned variables. Furthermore, this negative impact was more pronounced in the condition with the extrinsic goal than in the no-goal (or neutral) condition (Vansteenkiste, Simons, Soenens, & Lens, 2004).

These results suggest important implications for the role of goals with respect to nutrition and weight management. Indeed, these results imply that there are undeniable advantages to target intrinsic goals as opposed to extrinsic goals to help individuals persevere with their healthy eating habits. Currently, the media currently broadcast a multitude of messages about both types of goals, sometimes juxtaposing one type next to the other. Indeed, there has been an increase in public health messages in the mass media with new campaigns launched every year (Randolph & Viswanath, 2004). However, the thin, beauty ideal is still strongly broadcasted (Dittmar, Halliwell, & Stirling, 2009).

The Concordance Perspective. Not all authors agree that some goals are better than others. Indeed, research on message tailoring and message framing suggests that messages are more effective when they match a person's personality or motivational concerns (Rothman & Salovey, 2007). Essentially, the reasoning behind such techniques stems from the assumption that a message will be more persuasive if it fits or is compatible with the recipient (Higgins, 2000; Rothman & Salovey, 2007; Sagiv & Schwartz, 2000). Specifically,

Higgins (2000) proposes that there are two types of regulatory styles: promotion and prevention, and two types of goal-pursuit strategies that are a better fit to the regulatory styles: eagerness and vigilance, respectively (Higgins, 2000; Cesario, Higgins, & Scholer, 2008). A promotion focus is characterized by seeing goals as hopes or aspirations (and will result in nurturing and accomplishment), whereas a prevention focus perceives goals as duties or obligations (and concerns safety and security).

A strong body of literature supports Higgins's regulatory fit model in many domains, such as physical activity promotion (Latimer et al., 2008), goal attainment and maintenance (Brodscholl, Kober, & Higgins, 2007; Freitas, Liberman, & Higgins, 2002; Spiegel, Grant-Pillow, & Higgins, 2004), job satisfaction (Kruglanski, Pierro, & Higgins, 2007), and many more. Specifically addressing the question of persuasive messages, Cesario, Grant, and Higgins (2004) as well as Lee and Aaker (2004) have found that the regulatory fit model can increase the perceived persuasiveness of messages. When arguments were framed in such a way to fit individuals' regulatory focus (i.e., eager messages for promotion focus, and vigilant messages for prevention focus), messages were more persuasive.

Sagiv and Schwartz (2000) explored a similar idea in the specific context of intrinsic and extrinsic goals. According to the match perspective, what is truly important is the idea of a fit between the individual's goals and the predominant ones in his or her environment, regardless of the type of goal (extrinsic or intrinsic) being promoted.

Sagiv and Schwartz (2000) proposed three mechanisms through which the match perspective can be explained. First, they argue that when one evolves in an environment that shares his or her goals, it is easier for that person to transpose her goals into action plans, and consequently, reach his or her goals. Second, they suggest that if one openly rejects the goals of his or her environment, that person will most likely be rejected, ignored, and ostracized.

However, if she endorses the goals promoted by the environment, she will be accepted by her peers and will therefore benefit from the social support necessary for well-being. Finally, they argue that a lack of fit between an individual's goals and the goals of his environment would result in an internal conflict that would have negative repercussions on that person's well-being.

In order to test this approach, Sagiv and Schwartz (2000) looked at business and psychology students in different universities. They found business students (who evolve in a more extrinsic-focused environment) reported higher levels of well-being when they had higher extrinsic values. The opposite was true, to a lesser extent, for psychology students (who evolve in a mostly intrinsic-focused environment): those with higher intrinsic values reported higher levels of well-being.

In response to Sagiv and Schwartz's findings, Kasser and Ahuvia (2002) conducted a similar study with a larger population of business students only. Their results strongly supported SDT: they observed a clear link between extrinsic values and anxiety, physical symptoms, and unhappiness. Extrinsic values were negatively related to self-actualization, vitality and happiness, despite the fact that their immediate environment supported those extrinsic values and goals.

Another study by Vansteenkiste, Timmermans, and colleagues (2008) directly opposed the fit perspective and SDT in an educational setting. They also found results supporting SDT, where providing an intrinsic learning goal systematically lead to more positive consequences (better conceptual learning, self-determined motivation to learn, and persistence) than providing an extrinsic learning goal, regardless of the initial goal identified by the student (i.e., regardless of whether or not there was fit). These results support the SDT

perspective according to which intrinsic goals truly contribute to humans' optimal functioning.

These studies support the idea that in a controlled environment, intrinsic goals when compared to extrinsic goals may lead to positive outcomes, but they do not consider the possibility that people may have a preference for goals that fit with their regulatory characteristics when they can choose freely. What would be the consequences of framing informative messages about eating and weight management in a way that emphasizes intrinsic as opposed to extrinsic goals? Would the effect be moderated by the recipient's own goals? This question is particularly important given: (1) the media's enduring emphasis on extrinsic goals, (2) the fact that women can choose to read information about eating and weight management that is framed according to either extrinsic or intrinsic goals, and (3) the negative impact we know extrinsic messages have on women.

The Present Study

This study aimed to combine SDT's (Deci & Ryan, 2000; Ryan & Deci, 2002) distinction between intrinsic and extrinsic goals and the match perspective (Sagiv & Schwartz, 2000) in order to explore women's *preferences* for informative articles pertaining to eating and weight management. This relationship was explored using two different types of articles created for this purpose: extrinsic-framed articles and intrinsic-framed articles. It was predicted that participants' own goals would influence the choice and subsequent evaluation of the informative articles. Although this relationship is assumed, it has not been explicitly tested.

In line with the match perspective (Sagiv & Schwartz, 2000), we hypothesized that: (1) women would choose articles that are concordant with their own personal goals (intrinsic or extrinsic), (2) the articles that were goal-concordant would receive a more favourable

evaluation than non-concordant articles, and (3) intrinsic articles would be rated as being more useful towards reaching intrinsic goals than extrinsic articles, and extrinsic articles would be rated as being more useful towards reaching extrinsic goals than intrinsic articles. We also hypothesized that individuals' goals would amplify that relationship (i.e., participants' intrinsic goals would lead to a higher rating of intrinsic articles' usefulness towards intrinsic goals, and participants' extrinsic goals would lead to a higher rating of extrinsic articles' usefulness towards extrinsic goals).

Method

Participants

Fifty-nine women were recruited from introductory psychology classes through the research participation program in place at a Canadian university. Participants' age ranged from 17 to 46 ($M = 22.34$, $SD = 6.42$). Twenty-seven participants reported French being their first language, 21 reported English as being their first language, and 11 reported another language as their mother tongue. All women who were registered in the introductory classes were automatically enrolled in the research participation program and were therefore eligible to participate in this study. The participants received one point in their Introductory Psychology class for their participation in this study.

Material

Twelve short informative articles were created for the purpose of this study. The information was taken from sources such as Dietitians Canada, Health Canada, and other health-oriented websites. The informative context was taken out of its original presentation format and reproduced in a one- to two-page article to unify the appearance of all 12 articles. The articles were printed on standard 21,6 cm x 27,9 cm white paper. The informative content was left unchanged for the most part. It is important to note that the articles focused

on weight management through weight maintenance or weight loss. None of the articles pertained to weight gain because the population targeted in this study was not underweight. All 12 articles were printed in French and in English, and the participants chose to read the articles in the language they preferred. The articles were written using simple and familiar wording for easy comprehension. They ranged between 450 and 1,100 words.

The articles targeted either intrinsic or extrinsic weight-management goals. Six articles framed intrinsic (health and well-being) goals while the other six articles focused on extrinsic goals (attractive image). This information framing was done by modifying the titles, subtitles and text to include key words such as energy, vitality, health (for intrinsic goals) or thin, sexy, slender, popular (for extrinsic goals). Pictures were also used to emphasize one type of goal versus the other. Intrinsic articles featured pictures of women eating healthy foods, doing activities requiring energy, and pictures of food itself. Articles that frame the information in an extrinsic manner contained pictures of very thin women in bathing suits or light athletic attire, and pictures of body parts only (flat stomachs, slender thighs). The title of the articles and the type of goals they emphasized can be found in Table 1. The articles are presented in Appendixes A-L.

Procedure

All participants were recruited from the online system of the research participation program. Eligible participants (i.e., women only) selected the current study by first reading a short description of this study, among other available ones. Interested participants then signed up and were asked to come to the laboratory for a 45-minute session. Upon their arrival, they were greeted by one of three female experimenters who explained the procedure and assured them of the confidentiality with which the data would be treated. After signing a consent form, participants were asked to fill out the first questionnaire, which assessed their

self-reported height and weight, as well as their goals with weight management. Then, paper copies of the 12 informative articles were randomly spread out in front of the participants so that they could see all of them at a glance. The experimenter instructed the participants to choose and read two to four articles. Emphasis was put on the *choice*: the participants were told that the researchers were interested in what they would naturally choose to read if they had selected a magazine or website themselves. They were instructed to avoid choosing the articles randomly. After reading the chosen articles, the participants received one evaluation sheet (Appendix N) for each article read. The experimenter then debriefed and thanked the participants.

Measures

Weight and height. Participants were asked to self-report their weight and height (Appendix M). These values were subsequently used to calculate their Body Mass Index (BMI; kg/m²).

Importance of managing one's weight. (See Appendix M.) A single item assessed the extent to which participants think it is important to actively manage their weight (i.e., engage in activities to either maintain their current weight or lose weight). The participants responded using a Likert-type scale ranging from 1 (*not important at all*) to 7 (*extremely important*).

Goals with weight management. (See Appendix M.) A 14-item scale adapted from the Aspirations Index (Kasser & Ryan, 1996) measured the goals held by the participants with regards to weight management (i.e., trying to lose weight or engaging in efforts to maintain current weight). The items assess both types of goals: intrinsic (6 items; goals of health, personal growth and affiliation) and extrinsic (8 items; goals of fame and attractive image). The items pertaining to community feeling and wealth were removed from the original scale

as they are not pertinent goals in the specific case of weight management. Participants were asked to rate the importance of each goal on a Likert-type scale ranging from 1 (*not important at all*) to 7 (*extremely important*). Examples of intrinsic goal items are “be physically healthy” and “feel good about my body”. Examples of extrinsic goal items are “be beautiful” and “have an image that others find appealing”. Intrinsic items were averaged to create an intrinsic goal score, and extrinsic items were averaged to create an extrinsic goal score. The Cronbach’s alphas for the intrinsic and extrinsic subscales were .90 and .89, respectively.

Evaluation of the article. (adapted from Rothman, Martino, Bedell, Detweiler, & Salovey, 1999). The articles were evaluated with three items measuring the extent to which they were interesting, involving and informative (see items 1-3 in Appendix N). Each of these three items was rated on a scale from 1 (*not at all*) to 7 (*extremely*). The average of the three items was used as a single score for article evaluation, with a higher score indicating a more favourable evaluation. The Cronbach’s alpha for this scale was .86.

Perceived content of the article. Two questions were included in the questionnaire as a manipulation check. Participants were asked to rate on a scale from 1 (*not at all*) to 7 (*extremely*) to what extent the chosen article emphasized 1) beauty and 2) health (see items 4 and 6 in Appendix N).

Perceived usefulness of the article. Two questions assessed the extent to which the participant thought the article was helpful in reaching her 1) health and 2) beauty/attractiveness goals. Both questions were answered on a scale from 0 (*not at all*) to 4 (*extremely*). Participants were asked to answer both questions for each article they read, regardless of the frame (intrinsic or extrinsic) of the particular article (see items 8 and 9 in Appendix N).

Results

Preliminary Analyses

Before proceeding with the analyses, data screening was conducted according to steps outlined by Tabachnick and Fidell (2007). Data were screened for data entry errors using frequencies, range, as well as minimum and maximum values. Data were then screened for univariate outliers using frequencies and z-scores (± 3.29 ; Tabachnick & Fidell, 2007). No univariate outliers were identified. Multivariate outliers were examined using the Mahalanobis distance; none were identified.

A manipulation check was included in the evaluation of the articles to assess whether the articles were truly perceived as intrinsic or extrinsic. Mean comparison showed that the articles were perceived as being different. Intrinsic articles were thought to emphasize health more than extrinsic articles (M health for intrinsic articles: 6.07; M health for extrinsic articles: 5.01; $F(1,196) = 33.16, p < .001$) and extrinsic articles were thought to emphasize beauty more than intrinsic articles (M beauty for extrinsic articles: 4.53; M beauty for intrinsic articles: 2.11; $F(1,196) = 124.18, p < .001$).

Descriptive Statistics

A summary of descriptive statistics and correlations between main variables can be found in Table 2. In total, the participants read 198 articles ($M = 3.36$ articles per participant). Figure 1 displays the frequency of choice for each article. The average evaluation score for the articles was 5.25 ($SD = 1.19$). Intrinsic articles were chosen 121 times while extrinsic articles were chosen 77 times. The most popular articles were numbers 3 (appendix C), 4 (appendix D), 6 (appendix F) and 8 (appendix H), chosen 26, 26, 22 and 25 times respectively. Interestingly, all but article number 6 were intrinsic-framed articles. Overall,

intrinsic and extrinsic articles received equivalent evaluations (M intrinsic = 5.37, M extrinsic = 5.07; $F(1,196) = 3.00, p = .09$).

The main analyses were conducted in three steps to answer the three main research questions: 1) do participants' goals predict *which articles they choose* to read, 2) do participants' goals predict *how much they like the articles* they have read, and 3) do participants' goals predict *how they felt the articles were useful* in helping them reach their weight management goals?

Article Selection

A linear regression was performed in order to assess whether participants' goals (intrinsic and extrinsic) influenced the type of article (intrinsic vs. extrinsic) they chose. For this specific analysis, a score was computed to represent a participant's global choice of articles. In order to account for the total number of articles chosen by each participant, a ratio of intrinsic articles was computed. The number of intrinsic articles chosen was divided by the total number of articles chosen. The resulting ratio ranges between zero and one. A score of zero indicates that a participant chose only extrinsic articles, while a score of one indicates that a participant chose only intrinsic articles. A higher value indicates a higher proportion of intrinsic articles selected by that participant.¹

Our initial hypothesis was partly supported. Results indicate that extrinsic goals significantly predicted article selection, such that higher extrinsic goals lead to a selection of more extrinsic articles ($\beta = -.37, p < .000$). However, having high intrinsic goals did not lead to a selection of more intrinsic articles ($\beta = .06, p = .35$). Together, these variables accounted for 13% of the variance in article selection.

Article Evaluation

In order to assess whether articles that are concordant with one's goals received better evaluations, two separate linear regressions were performed. Intrinsic goals and extrinsic goals were entered as predictors of the evaluation of intrinsic articles, and again in a separate regression as predictors of the evaluation of extrinsic articles. The results of these two regressions are presented in Table 3. Only extrinsic goals were significant predictors of the evaluation of intrinsic articles, such that higher extrinsic goals resulted in less favourable evaluations of intrinsic-framed articles. Neither extrinsic nor intrinsic goals were significant predictors of the evaluation of extrinsic articles.

To further examine whether articles that matched individual's goal orientation received a more favourable evaluation, the mean evaluation score for matched and unmatched articles were compared. In order to determine whether an article matched or mismatched the participant's goals, a relative intrinsic goal (RIG) score was created. The mean for extrinsic goals towards weight management was subtracted from the mean for intrinsic goals, resulting in a difference score for intrinsic goals. Therefore, a positive RIG score indicates stronger intrinsic goals, a negative RIG score indicates stronger extrinsic goals, and a score of 0 indicates a balance between both types of goals. We were able to label all articles since no participant had a RIG score of 0.

Articles were identified as "matched" ($n = 118$) or "non-matched" ($n = 80$) with participants' RIG score. The average evaluation scores for matched ($M = 5.38$) and non-matched articles ($M = 5.06$) were compared. There appears to be a trend for matched articles to receive a more favourable evaluation, but that trend did not reach statistical significance ($F(1,196) = 3.600, p = .059$).

Perceived Usefulness of the Articles

Two ANOVAs were conducted in order to assess whether 1) intrinsic articles were rated as being more useful towards reaching intrinsic goals (i.e., health) than extrinsic articles, and 2) whether extrinsic articles were rated as being more useful towards reaching extrinsic goals (i.e., beauty/attractiveness) than intrinsic articles. Results of the ANOVAs show that intrinsic articles were indeed more useful towards intrinsic goals (M intrinsic articles = 3.20, M extrinsic articles = 2.85, $F(1,189) = 8.87$, $p = .003$) and extrinsic articles were rated as more useful towards extrinsic goals (M intrinsic articles = 1.61, M extrinsic articles = 2.32, $F(1,189) = 17.51$, $p < .000$).

Finally, two separate linear regressions were conducted to examine the links between participants' goals (intrinsic and extrinsic) and their perception of the usefulness of the articles towards reaching intrinsic and extrinsic goals. The results of these regressions are presented in Table 4.

Perceived usefulness of the article towards reaching *extrinsic* goals was entered as a dependant variable for the first set of regressions. Results revealed that participants' extrinsic goals significantly and positively predicted perceived usefulness of the articles towards reaching extrinsic goals. This relationship was observed for both intrinsic- and extrinsic-framed articles, even though intrinsic-framed articles do not promote extrinsic goals. Participants' intrinsic goals score did not predict the article's perceived usefulness towards extrinsic goals.

Perceived usefulness of the article towards reaching *intrinsic* goals was the dependant variable for the second set of regressions. Results demonstrated that neither intrinsic nor extrinsic goals scores were good predictors of perceived usefulness of the articles towards intrinsic goals, for both types of articles.

Discussion

The purpose of this study was to explore women's preference to select one type of goal-framed information over another (intrinsic vs. extrinsic) when information was not imposed upon them, and when they could simply choose that information freely. The goal of the present study was also to examine the participants' perception of the articles selected as well as their usefulness. This section reviews the findings of the present study, explores its limitations, and suggests avenues for future research on the topic of message framing.

Article Selection

The hypothesis according to which women would select informative messages concordant with their goals was partly supported. Specifically, stronger extrinsic goals lead to the selection of more extrinsic articles. These results lend partial support to the match perspective (Higgins, 2000; Rothman & Salovey, 2007; Sagiv & Schwartz, 2000), since only extrinsic goals predicted choice of extrinsic articles.

These findings are important given the potentially negative effect extrinsic-framed messages can have on women's body satisfaction and well-being (Dittmar & Howard, 2004; Stice, 2002). This study thus suggests that some women might be reinforcing cognitions about extrinsic goals by seeking out information that confirms the importance of such goals. In line with conclusions drawn by Dittmar and Howard (2004), these results further emphasize the need for the media to question their emphasis on thinness and attractiveness. Indeed, the present findings suggest that women who might be most at risk of developing unhealthy eating and weight management habits appear to be the primary consumers of that type of message.

In contrast, high intrinsic goals did not predict the selection of one type of article over the other. Previous studies demonstrated that autonomous regulation has a protecting effect

against the sociocultural pressures to be thin (Pelletier et al., 2004). Although intrinsic goals and autonomous regulation do not necessarily come hand-in-hand, one might hypothesize that having high intrinsic goals can act as a “buffer” as well. All women, regardless of their goal priorities, are faced with the media’s thin-ideal messages on a regular basis. Women who hold mainly intrinsic goals might still be curious about extrinsic-type messages because they are surrounded by them. However, because they hold high intrinsic goals, they are also interested in intrinsic messages. A protective effect might exist with high intrinsic goals that render women who hold them less vulnerable to the sociocultural pressures to be thin and attractive.

Article Evaluation

The hypothesis according to which goal-matched articles would receive a better evaluation was supported only by extrinsic goals: higher extrinsic goals lead participants to evaluate intrinsic articles less favourably. These results are in line with the previous results regarding article selection. Taken together, women with high extrinsic goals will less likely select intrinsic-framed messages, but will also evaluate intrinsic-framed message less favourably if they do select that type of message.

Comparing means for “matched” and “nonmatched” articles did not yield statistically significant results, although the data seem to indicate a trend supporting the match hypothesis. This might be due to the fact that in order to determine if an article is a match or not, one must categorize a participant as “intrinsic” or “extrinsic”. Using the relative score created for this purpose, this results in grouping individuals with slightly higher extrinsic goals (e.g., someone with a score of -.04) with individuals who have substantially higher extrinsic goals (e.g., someone with a score of -5.00). Creating this artificial dichotomy eliminates the variability associated with the continuous, relative intrinsic goals score. The

lack of statistically significant results for this hypothesis might also be due to the fact that very few participants actually had higher extrinsic than intrinsic goals (only 8 out of 59 participants, or 13.6%).

Perceived Usefulness of the Articles

As hypothesized, intrinsic articles were perceived as being more useful than extrinsic articles towards reaching intrinsic goals, and extrinsic articles were perceived as being more useful than intrinsic articles towards reaching extrinsic goals. Interesting results were obtained when predicting article usefulness towards *extrinsic* goals (i.e., beauty and attractiveness) with participants' own goals. Specifically, higher extrinsic goals lead participants to perceive both types of articles (intrinsic and extrinsic) as being useful towards reaching extrinsic goals. This trend was observed despite the fact that the intrinsic-framed articles used in this study did not promote extrinsic goals. These results warrant some concern: even when focusing on health, it seems that messages might be perceived as serving extrinsic objectives by those who hold high extrinsic goals.

Overall, the results of this study are almost exclusively obtained with participants' extrinsic goals: Higher extrinsic goals predict 1) extrinsic article selection, 2) disliking intrinsic articles, and 3) finding both types of articles helpful towards extrinsic objectives. A recent meta-analysis by Hart and colleagues (2009) found that individuals prefer congenial information (i.e., information that confirms their attitudes or beliefs). Our overall findings with extrinsic goals support this conclusion. However, Hart and colleagues also identified moderators which diminish this congeniality bias (i.e., a preference for congenial information). For instance, they concluded that the congeniality bias is weaker if the individual's attitudes are supported by the environment or if she has a high degree of confidence in her attitudes/beliefs. Despite efforts by the experimenters to offer a neutral

environment, it might have been perceived as a health-oriented environment by some participants with high intrinsic aspirations (perhaps because the study is set in a serious university setting). In concordance with Hart and colleagues' findings, if the environment was perceived as being more health-focused, this might have decreased the congeniality (match) bias for individuals with high intrinsic aspirations. This could be a possible explanation for the absence of significant results with regards to intrinsic goals when predicting article selection and evaluation.

Hart and colleagues (2009) also noted a diminished congeniality bias when an individual has a high degree of confidence in her beliefs. Perhaps participants who held high intrinsic aspirations did so with more confidence than extrinsic aspirations (which can appear to be "shallow"). According to SDT, intrinsic aspirations are conducive to basic need satisfaction. Therefore, if they support individuals' needs of competence and autonomy, they might be held with more confidence than "unsatisfying" extrinsic goals. Individuals with high intrinsic aspirations might not have felt the need to reinforce their intrinsic-type beliefs by reading solely intrinsic-framed messages. This could be another potential reason why the congeniality bias, or match hypothesis, was not found to be significant for intrinsic aspirations.

These results have implications for SDT, which distinguishes between intrinsic and extrinsic goals. Even though SDT distinguishes different goal orientations one may have, the theory does not discuss the influence of these goals on information seeking. Therefore, this study is a first to attempt to make this association. The findings hint towards a different approach for information seeking which is dependent on individual's goal orientation. In essence, high extrinsic goals lead to a match bias in information seeking whereas high intrinsic goals do not. This implies different information seeking strategies depending on the

types of goals women hold to be important. Therefore, it may not only be important to understand people's goal orientation but how they seek information based on their orientation.

The findings of this study also have implications for message framing. Although Rothman and Salovey (2007) argue that message framing is an effective communication strategy, the results of this project suggest that an extrinsic frame is efficient only with individuals who already hold extrinsic goals. Therefore, framing messages according to specific goals might not be an effective strategy with everyone, but rather with a specific population (in this case, one with extrinsic goals). It seems that certain individuals might respond better to the message framing strategies when *seeking* information. Further studies are necessary to determine the extent of this conclusion on message *effectiveness*.

Limitations and Future Studies

Although the present study provides interesting results, it is not without limitations. The population tested (exclusively undergraduate women) is very specific, which hinders the generalization of the findings. Different results could be obtained with older women or younger adolescents, who are also important consumers of media. For instance, there might be a stronger focus on intrinsic goals in older women (potentially because as women grow older, they experience more health problems). One could hypothesize that with an older population, intrinsic goals would be a significant predictor of the selection and evaluation of intrinsic information.

Most of our participants had stronger intrinsic goals than extrinsic goals. This is not entirely surprising. Kasser (2002) proposed that individuals tend to orient themselves more towards intrinsic goals because it is natural for human beings to strive for growth and self-actualization. Aside from this natural tendency, the preponderance of intrinsic goals in this

case may be due to the fact that the study was more appealing to individuals preoccupied with their health. It could also have happened out of social desirability – they may not have wanted to appear “shallow” to the experimenter. Finally, the predominance of intrinsic goals in this study could also be an effect of the population itself: Sagiv and Schwartz (2000) found that university psychology students held primarily intrinsic-type goals. Having a more heterogeneous sample in terms of prevalence of goals might yield even more interesting results with regards to goals and their relation to the type of preferred information. In order to do so, environments other than university would be important to target, such as gyms, weight-loss clinics, dance studios, women’s sports teams, high schools, etc.

Interesting as it may be, the idea of letting women freely choose the information that was most appealing to them also proves to be a limitation. The participants were asked to choose between two and four articles out of a possible twelve. After choosing their first article, their second choice is now more limited: they must choose one out of eleven. If they initially picked an intrinsic article, they have reduced the “pool” of available intrinsic articles from six to five. This point might be best illustrated by imagining that the participants had to choose seven articles: inevitably, they would have been forced to choose an article that was not concordant with their own goals. Future studies using a similar design would benefit from finding a way to statistically control for the decreasing probability of selecting a given type of article.

Another way to address this problem would be to have all participants read all the articles. A fewer number of articles would allow this modification. Although the idea of free choice is worthy, having all participants rate every available article could result in a greater understanding of the match/fit hypothesis. It would allow for thorough comparisons of information preference rating for both types of framed information.

It would be pertinent to directly oppose the match perspective to the SDT perspective by giving participants goal-matched and unmatched articles, and measuring well-being, eating, body satisfaction, and actual weight outcomes. Although it seems that women select information that matches their goals (when extrinsic), positive outcomes do not necessarily occur as a result. Such outcomes should be measured in future studies to gain a better understanding of the consequences of different types of information on individuals with different goals. If intrinsic information leads to the most positive outcomes, regardless of participants' goals, it would offer strong theoretical support for SDT and have strong practical implications. Such results could have an impact not only for the media, but also for weight-loss programs, personal trainers, physical education teachers, and health behaviour change interventions. If these communicators knew that an intrinsic focus is systematically more beneficial, it would be easier for them to implement such messages in their interactions with the public.

In line with Hart and colleagues' (2009) findings, future studies would benefit from including cognitive dissonance to study the concept of match/fit. Festinger's theory of cognitive dissonance (1957; 1964) proposes that once individuals have decided on an attitude, a position or a belief, they will seek out information that confirms their point of view and ignore information that challenges it. By doing so, they avoid the discomfort and internal conflict that is cognitive dissonance. Hart and colleagues (2009) have concluded that the congeniality (fit) bias tends to be weaker when attitudes, beliefs or behaviours were supported (and people did not feel their beliefs were threatened). Explicitly supporting intrinsic or extrinsic goals prior to having participants select information could yield interesting results. Perhaps supporting the type of goal that is contrary to the goal a participant prioritizes might result in stronger match/fit outcomes (if the available

information supporting her goals is of good quality; Hart et al., 2009). Exploring this avenue could inform us on women's reactions to different environments which promote different types of goals.

Other studies could focus on integrating Rothman and Salovey's (2007) proposed stages of change to tailor informative messages. The "match" vs. "nonmatch" question might be a function of the stage of change participants find themselves into (i.e., detection, decision, or implementation). It could be that giving goal-concordant information is best at the earliest stage, when one needs to get the public's attention, make them aware of an issue, and heighten their interest and concern with that particular issue. Once that is achieved with goal-concordant messages, it might be best to steer individuals towards mainly intrinsic goals to foster a more autonomous regulation style and facilitate maintenance of newly acquired behaviours. Getting people to maintain healthy habits is a very complex question that needs to be studied using different theoretical frameworks. Only in doing so might we obtain a complete, global picture of the current health issues currently plaguing society.

In this era of growing communication ease, it is clear that the media will take a consistently larger place in everyone's lives. Why not try to use the media to our advantage? If effective informative and persuasive messages about healthy eating and weight management exist, the media would cease being the "enemy" and would readily become the ally. By promoting intrinsic-framed messages and thus fostering self-determination, individuals would have the power not only to initiate healthier habits, but ultimately, to maintain them as well.

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Footnotes

¹The same analysis was also performed with a different score. A -1 value was awarded for each extrinsic-framed article selected, while a +1 value was attributed for each intrinsic-framed article. The resulting score indicates the predominance of one type of article: a negative score indicates that more extrinsic articles were chosen, a positive score indicates that more intrinsic articles were selected, and a score of 0 indicates that an equal amount of extrinsic and intrinsic articles were chosen by a given participant. Similar results were obtained, where extrinsic goals were a significant predictor of extrinsic article selection ($\beta = -.42, p = .003$). Intrinsic goals were not a significant predictor of article selection ($\beta = .07, p = .63$). Together, these variables accounted for 16% of the variance in article selection.

Table 1

Description of the Articles

| Article number | Title of the article | Goal |
|----------------|--|-----------|
| 1. | Do I need to lose weight to look better? | Extrinsic |
| 2. | How do I know if I have a healthy weight? | Intrinsic |
| 3. | How do I know if I am eating healthfully enough? | Intrinsic |
| 4. | What can I do to manage a healthy weight? | Intrinsic |
| 5. | How can I achieve a healthy weight? | Intrinsic |
| 6. | Look your best: Top 12 eating tips | Extrinsic |
| 7. | A nicer body on a budget | Extrinsic |
| 8. | Eight healthy eating saboteurs | Intrinsic |
| 9. | Is Evening Eating destroying your efforts for a nicer, sleeker body? | Extrinsic |
| 10. | How can I stick to my resolutions to lose weight and be more active? | Intrinsic |
| 11. | Don't let the weekends keep you from having a gorgeous body! | Extrinsic |
| 12. | Overcoming overeating for a more attractive body | Extrinsic |

Table 2

Descriptive Statistics and Correlations

| Variable | 1. | 2. | 3. | 4. | 5. | 6. | Mean | SD | Minimum | Maximum |
|---|-------|------|-------|--------|------|----|-------|------|---------|---------|
| 1. Age | - | | | | | | 22.34 | 6.42 | 17 | 46 |
| 2. BMI | .59** | - | | | | | 22.12 | 2.98 | 16.37 | 30.90 |
| 3. Intrinsic goals with weight management | -.10 | -.11 | - | | | | 5.48 | 1.44 | .83 | 7.00 |
| 4. Extrinsic goals with weight management | -.28* | -.13 | .38** | - | | | 3.58 | 1.44 | .50 | 6.88 |
| 5. Importance of weight management | -.07 | .06 | .07 | .36** | - | | 5.53 | 1.32 | 2.00 | 7.00 |
| 6. Ratio of intrinsic articles selected | -.080 | .07 | -.08 | -.35** | -.22 | - | .62 | .30 | 0 | 1.00 |

** $p < .01$, * $p < .05$

Table 3

Linear Regressions: Predictors of Article Evaluation

| Dependant variable: Intrinsic article evaluation | | | |
|--|---------|-------------|-------|
| | β | p | R^2 |
| intrinsic goals | -.153 | .296 | .149 |
| extrinsic goals | -.299 | .044 | |
| Dependant variable: Extrinsic article evaluation | | | |
| | β | p | R^2 |
| intrinsic goals | -.188 | .260 | .033 |
| extrinsic goals | .037 | .823 | |

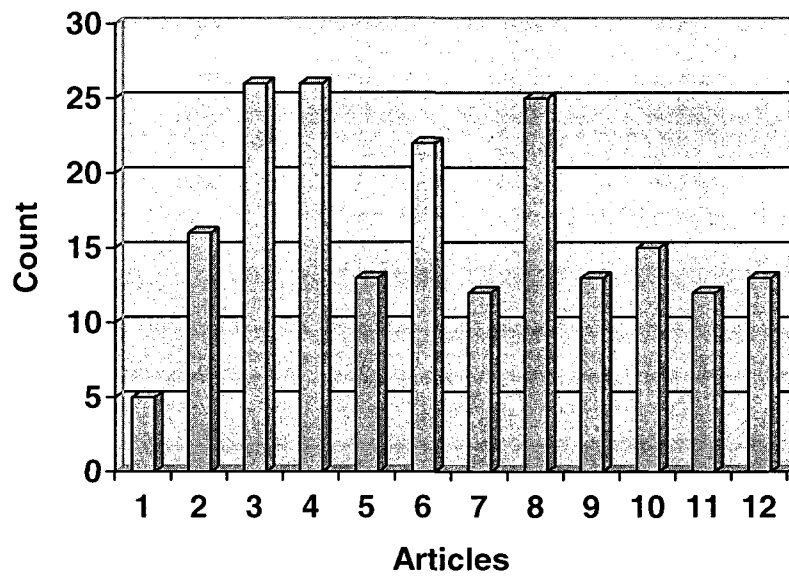
Table 4

Linear Regressions: Predictors of Perceived Usefulness of the Articles

| Dependant variable: usefulness of the articles towards extrinsic goals | | | |
|---|---------|-------------|----------------|
| | β | <i>p</i> | R ² |
| Intrinsic-framed articles | | | |
| intrinsic goals score | -.182 | .067 | .082 |
| extrinsic goals score | .304 | .003 | |
| Extrinsic-framed articles | | | |
| intrinsic goals score | -.160 | .181 | .140 |
| extrinsic goals score | .396 | .001 | |
| Dependant variable: usefulness of the article towards intrinsic goals | | | |
| | β | <i>p</i> | R ² |
| Intrinsic-framed articles | | | |
| intrinsic goals score | -.069 | .505 | .006 |
| extrinsic goals score | -.013 | .899 | |
| Extrinsic-framed articles | | | |
| intrinsic goals score | -.190 | .135 | .039 |
| extrinsic goals score | .022 | .863 | |

Figure Captions

Figure 1. Frequency of choice for each article

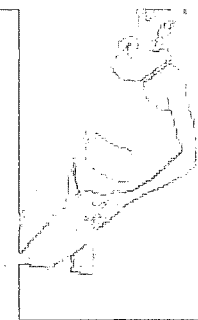


About.com

Do I need to lose weight to look better?

BY JENNIFER R. SCOTT

ABOUT.COM



Q: I weigh 145 pounds. Do I need to lose weight to look more attractive?

A: That's not a question I can answer. But I can tell you some ways to find out.

If you're carrying around a little extra weight—but your doctor says you're healthy—you probably don't need to lose weight unless it's affecting your activity level or if you're unsatisfied with the appearance of your body.

Being overweight means your weight is just a little higher than what is considered normal weight for your height. If you've put on more than a few pounds, you will need to assess how your weight is impacting the way your body looks.

There are three main ways that weight is measured. They are: percent body fat, waist-to-hip ratio, and BMI.

If you discover that your results are in the "danger zone" of health risks via any of these assessment tools, you'll know you might benefit from losing weight to better the appearance of your body.

Percent Body Fat (PBF)

PBF is measured with a painless test called "caliper measurement". This test measures subcutaneous (under the skin) fat using a skinfold caliper. The caliper is used to grasp a fold of



Calipers measuring body fat.

skin and pull it away from your muscle.

The folds are usually measured at the waist, hips, and thighs, and several other locations on the body. The findings are then calculated into a formula that allows your body fat to be estimated.

It wasn't until the year 2000 that standards for body fat ranges were identified. According to those findings, a woman between the age of 20 and

39 should be below 33% body fat to have the best looking body.

Waist-to-Hip Ratio

Waist-to-Hip ratio is calculated by taking your waist circumference and dividing it by your hip circumference. To calculate your waist-to-hip ratio, you will need a tape measure. You should measure your waist at its narrowest point and your hips at their widest points. Then, divide the results from your waist by the results of your hips. The resulting number is your waist-to-hip ratio.

High cardiovascular risk for women is found with ratios higher than .85. As the ratio increases, so does the risk.

Also, a ratio that is less than .85 is ideal for an attractive body shape.



Where to measure
Waist-to-Hip ratio

A few words on BMI

Body Mass Index

BMI can be determined by dividing your weight in pounds by your height in inches squared and then multiplying by 705.

Easier yet, you can glance at a BMI chart. We have included one on page 2 of this article. The following applies for adults 20 years of age and older:

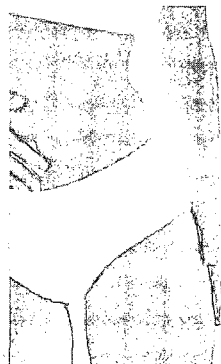
Underweight = less than 18.5

Normal weight = 18.5 to 24.9

Overweight = 25 to 29.9

A BMI of 30 or more qualifies an individual as obese. A BMI over 40 indicates that a person is morbidly obese.

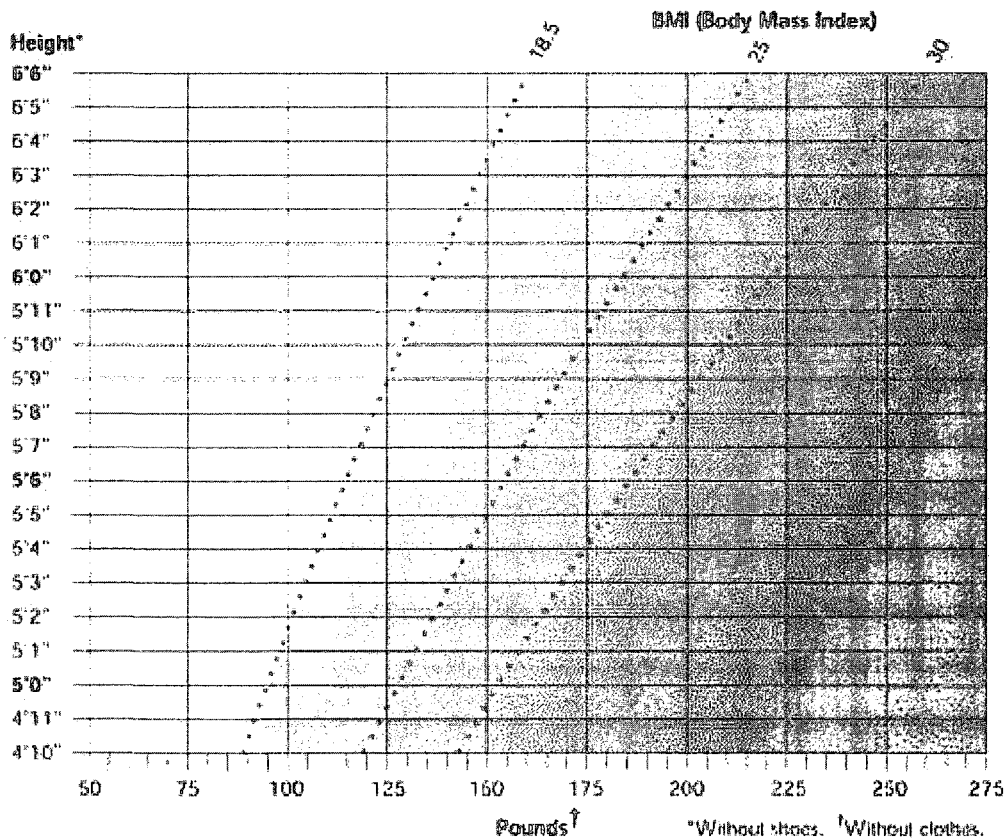
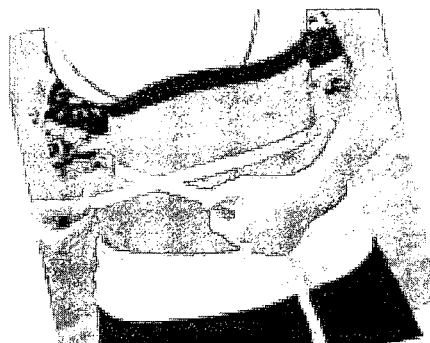
A BMI between 18.5 and 24.9 is indicative of an ideal, attractive body shape.



BMI

Use this table to find your ideal body weight and your current BMI. Find your weight and your height in the table, and follow each line until they cross in the table. The corresponding number is your BMI.

In order to have the best looking body, you'll want to aim for a BMI that is between 18.5 and 24.9.



DO I NEED TO LOSE WEIGHT TO LOOK BETTER?



How do I know if I have a healthy weight?



Useful tools to find out if you need to lose weight:

- Body mass index
- Waist circumference

Turn to page 2 to calculate your Body Mass Index!

Tools to help you find out

If you think you need to lose some weight, talk to your Registered Dietitian about what a healthy weight would be for you. There are generally two measures to consider when looking at your body weight and body shape: Body Mass Index (BMI) and waist circumference.

BMI

The Body Mass Index is a guideline used to see if you have a healthy weight. It is a ratio of your weight and height and assesses your health risks associated with being under or overweight.

For adults over the age of 18, there is a range of healthy weights for your height. That's because healthy bodies come in many shapes and sizes.

The BMI will not apply to pregnant and lactating women. BMI does not take into consideration your body composition. The amount of fat and muscle you have will greatly influence your body weight.



Very muscular individuals, such as trained athletes, are likely to have a higher BMI because muscle weighs more than fat.

Waist circumference

Waist circumference is another indicator of health risk associated with excess abdominal fat (fat around your belly). It may be used by your health care professional if your BMI is in the 18.5 to 34.9 range.

For women, a waist circumference greater than 88 cm is associated with an increased risk of developing health problems such as diabetes, heart disease, and high blood pressure.

Remember that dieting does not work. The best and safest way to lose weight is to make a long-term commitment to eating better, enjoying regular physical activity and feeling good about yourself! You'll feel much more energetic and confident.

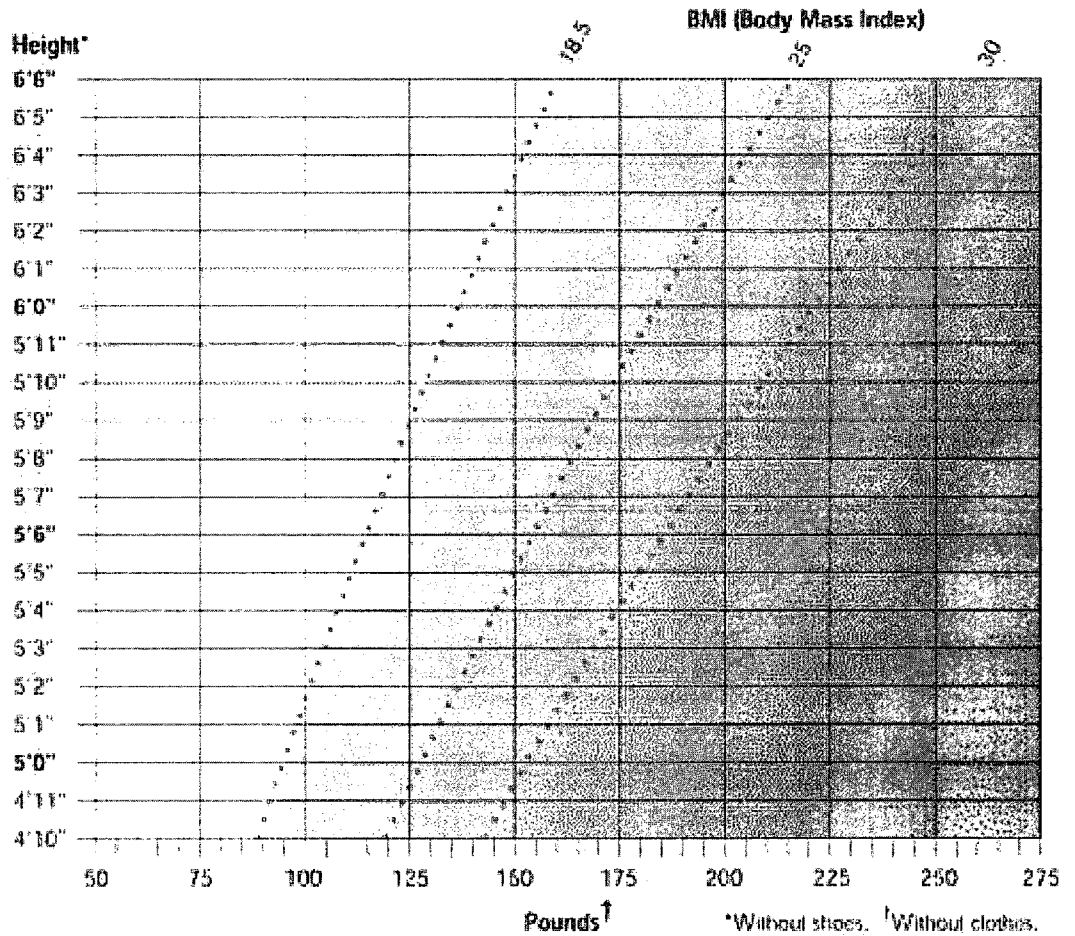
What your BMI score means

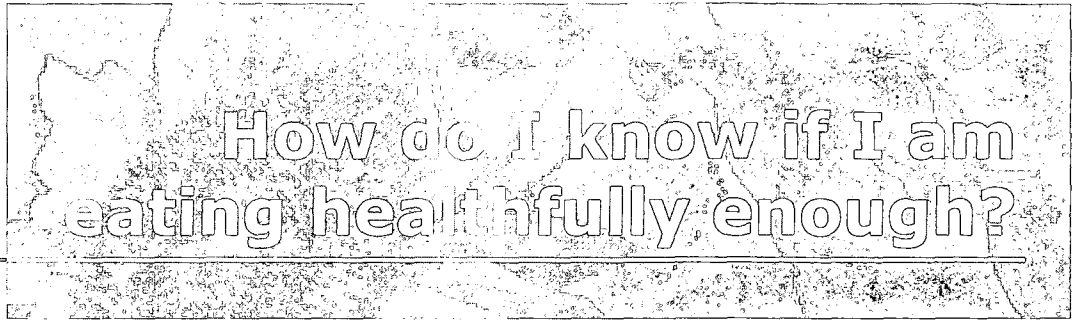
| Your BMI Score | What it means |
|----------------|--|
| Under 18.5 | You may be more likely to develop certain health problems such as: undernutrition, osteoporosis, infertility, immunity problems |
| 18.5 to 24.9 | You have a healthy weight and have a lower chance of developing health problems |
| 25.0 to 29.9 | You may be more likely to develop certain weight-related health problems such as heart disease, high blood pressure and diabetes |
| Over 30 | You are at risk to develop health problems related to weight such as: heart disease, high blood pressure, certain cancers, type 2 diabetes |



To calculate your BMI, find your height and weight in the table below and identify in which range you fall. The ideal range to feel energetic and healthy is between 18,5 and 24,9.

Remember that the BMI score is only an *indication* of healthy weight— it is affected by body composition.





Dietitians of Canada
Les diététistes du Canada

You know you're eating well if you can answer "yes" to each of the following statements, which are based on Canada's Food Guide.

Eating healthfully will give you the energy you need to do the activities that are important to you!

1. You enjoy a variety of foods.

Eating a variety of foods from each food group of *Eating Well with Canada's Food Guide* gives you the chance to get all of the nutrients you need to be healthy. The four food groups are: vegetables and fruit, grain products, milk and alternatives, and meat and alternatives.

2. Your food choices for all of the four food groups fall within the ranges recommended by the Food Guide.

Eating Well with Canada's Food Guide has set ranges for food intake that are based on age, sex and life stage. Aim to choose the recommended number of Food Guide serving for your age and sex each day.

3. You eat at least one dark green and one orange vegetable each day, and you choose vegetables and fruit prepared

with little or no added fat, sugar or salt.

You can substitute orange-coloured fruits like mangoes,

cantaloupe, peaches, nectarines or apricots for orange-coloured vegetables. Eating whole vegetables and fruits instead of juices will fill you up and give you more fibre.

4. At least half of the grain products you choose each day are whole grain and you choose grain products that are lower in fat, sugar and salt.

Choose whole grain breads, cereals, pasta, rice and couscous most of the time.

Whole grain products made with wheat bran, oat bran, whole wheat, oats, rye or flax will give you more fibre than white grain products. *Continued on page 2.*



On page 2, you will find a Table from Canada's Food Guide indicating how many portions of each food group you should eat every day to be healthy and full of vitality!

Quick tips to keep in mind:

Here are 5 key words to identify a nutritious diet:

Adequate: must supply enough of each essential nutrient

Balanced: must include

foods from all food groups

Calorie control

Diversity: don't get "stuck in a rut" where you eat the very same

foods day after day; you will inevitably suffer from certain vitamin and mineral deficiency

Easy: a little bit of everything!

So remember: ABCDE!



Statements, continued...

5. You drink skim, 1% or 2% milk each day and you choose lower-fat milk alternatives.

Lower-fat milk and alternatives are rich in nutrients and do not provide unnecessary fat and calories.

6. You often have meat alternatives such as beans, lentils and tofu. You eat at least two Food Guide servings of fish each week and you select lean meat and alternatives prepared with little or no

added fat or salt.

Beans, lentils and tofu are low-fat sources of essential nutrients like folic acid, protein and fibre. Eating fish can help to reduce your risk of heart disease. Choosing lean meat and alternatives can help to reduce your fat intake and trim unnecessary calories.

7. You limit foods and beverages that are high in calories, fat, salt or sugar.

Limiting foods that do not fit

into any of the four food groups will help you achieve and maintain a healthy body weight and help you keep your energy levels higher and more stable.

Examples of foods to limit include: cakes, cookies, doughnuts, pastries, and muffins; potato chips, nacho chips, and other high-fat or highly salted snack foods; french fries; sweetened soft drinks and alcoholic beverages; ice cream and other frozen treats.

Canada's Food Guide is an excellent resource that can help you eat better and be healthier.

Refer to the following table to find out how much of each food group you should be eating every day, according to your age and gender.

Recommended Number of Food Guide Servings per Day

| Age in Years Sex | Children | | Teens | | Adults | | | | |
|-----------------------|----------------|-----|---------|-------|---------|-------|---------|-------|---|
| | 2-3 | 4-8 | 9-13 | 14-18 | 19-50 | 51+ | | | |
| | Girls and Boys | | Females | Males | Females | Males | Females | Males | |
| Vegetables and fruit | 4 | 5 | 6 | 7 | 8 | 7-8 | 8-10 | 7 | 7 |
| Grain Products | 3 | 4 | 6 | 6 | 7 | 6-7 | 8 | 6 | 7 |
| Milk and Alternatives | 2 | 2 | 3-4 | 3-4 | 3-4 | 2 | 2 | 3 | 3 |
| Meat and Alternatives | 1 | 1 | 1-2 | 2 | 3 | 2 | 3 | 2 | 3 |

What Is One Food Guide Serving?
Look at the examples below.

| | | | | | |
|---|--|---|---|--|--|
| <p>Fresh, frozen or canned vegetables 125 mL (½ cup)</p> | <p>Leafy vegetables Cooked: 125 mL (½ cup) Raw: 250 mL (1 cup)</p> | <p>Fresh, frozen or canned fruits 1 fruit or 125 mL (½ cup)</p> | <p>100% Juice 125 mL (½ cup)</p> | | |
| <p>Bread 1 slice (35 g)</p> | <p>Bagel ½ bagel (45 g)</p> | <p>Flat breads ½ pita or ½ tortilla (35 g)</p> | <p>Cooked rice, bulgur or quinoa 125 mL (½ cup)</p> | <p>Cereal Cold: 30 g Hot: 175 mL (¾ cup)</p> | <p>Cooked pasta or couscous 125 mL (½ cup)</p> |
| <p>Milk or powdered milk (reconstituted) 250 mL (1 cup)</p> | <p>Canned milk (evaporated) 125 mL (½ cup)</p> | <p>Fortified soy beverage 250 mL (1 cup)</p> | <p>Yogurt 175 g (¾ cup)</p> | <p>Kefir 175 g (¾ cup)</p> | <p>Cheese 50 g (1 ½ oz.)</p> |
| <p>Cooked fish, shellfish, poultry, lean meat 75 g (2 ½ oz.) / 125 mL (½ cup)</p> | <p>Cooked legumes 175 mL (¾ cup)</p> | <p>Tofu 130 g or 175 mL (¾ cup)</p> | <p>Eggs 2 eggs</p> | <p>Peanut or nut butters 30 mL (2 Tbsp)</p> | <p>Shelled nuts and seeds 60 mL (¼ cup)</p> |

The chart above shows how many Food Guide Servings you need from each of the four food groups every day.

What can I do to manage a healthy weight?

Tips for healthy weight management



Weight management is basically a matter of balancing energy in (Calories consumed with food) with energy out (Calories burned with activity and basic body functions).

However, weight management can sometimes be far from simple. Why, when, and what you eat, as well as other lifestyle and behavioural factors will all have an effect on your success with weight management. Having a healthy weight can have a very positive impact on your level of energy and well-being.

Here are key strategies to try:

1. Rev up your metabolism.

Always eat within two hours of waking. Skipping breakfast is strongly related to being overweight.

Get moving every day. It is recommended to build 30 to 60 minutes of moderate physical activity into daily life for all adults. You don't have to do it all at once; add it up in periods of at least 10 minutes at a time.

2. Feel full.

Eat fruit rather than drinking fruit juice—it's lower in calories and contains fiber to help you feel full.

Focus on vegetables. At sup-

per, fill half your plate with raw or cooked vegetables and try choosing only vegetables if you want second helpings. Vegetable soups and salads can be very filling.

When choosing breads, cereals, crackers, pasta and rice, look for whole grains and those with the most fiber per serving.

Include lean protein foods such as fish, poultry, lean meat, eggs, legumes or low-fat dairy products in your meals and snacks.

Have a drink of water before giving into a snack or craving; feeling hungry can be caused by dehydration.



Awareness

3. Be more aware of your eating habits.

Keep a record of what, when and where you eat.

Think about why you're eating—do you feel physically hungry or could you be eating simply because the food looks

or smells good? Do you eat when you're bored, feeling lonely, tired or angry? Do certain situations such as watching TV or driving home from work trigger you to eat?

Are you skipping meals and then craving high-fat or high-sugar snacks?

Being aware of such situations can help you identify certain weaknesses and better manage them. You'll be able to eat healthfully and feel energized!

What can I do to manage a healthy weight?

Final words

Rapid weight loss as the result of extreme changes to your usual eating pattern produces short-term results. Focus on the tips on the previous page and eat a variety of foods according to Canada's Food Guide, choosing the lower number of servings suggested for each food group except Vegetables and Fruit.

With a healthy approach to weight management, you shouldn't feel deprived. Listen to your body and choose sensible portions of the healthiest foods most often, while still

planning on occasional treats.

Consider your overall lifestyle. Constant tension, anxiety or anger and inadequate rest can increase some hormones and chemicals in your body that make weight control difficult. Finding ways to manage stress and getting a good night's sleep may be helpful.

Try not to focus on the scale. With a healthier lifestyle, you'll notice positive physical and mental benefits before you see a significant drop in your weight. You'll experience suc-

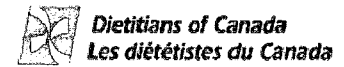
cessful long-term weight management by setting small goals and by making gradual, realistic changes to your lifestyle and usual way of eating. You'll be on your way to feeling great with a healthy weight!



“You’ll experience successful long-term weight management with small, manageable goals and gradual changes”



HOW CAN I ACHIEVE A HEALTHY WEIGHT?



Being truly ready to commit to achieving a healthy weight means making a commitment to healthy living—that is, to healthy eating, regular enjoyable activity, and doing things that make you feel good about yourself. Remember that a healthy body comes in many shapes and sizes, and many factors play a role in achieving a healthy weight.

Dieting is not the solution

You may think that dieting is the solution. However, before you decide to start on a popular diet, ask yourself these questions: Will you still be able to enjoy eating, one of life's greatest pleasures? Can you follow the diet you've

chosen for a lifetime? Will you keep your weight off? The answers to these questions are most likely "no". However, by choosing healthy living the answers become "yes".



Once you are ready to make a commitment to healthy living to achieve a healthy weight, consider the following:

How much weight would you like to lose? Or do you

simply want to maintain your current weight?

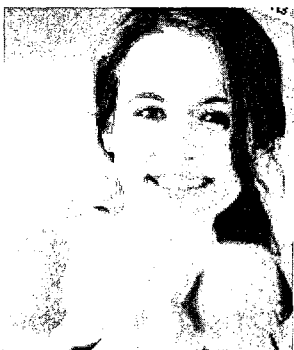
Have you set realistic weight goals?

Are you ready to make lifestyle changes?

Your doctor or a Registered Dietitian can help you determine a healthy weight for yourself and the strategies to attain your goal.

Having a healthy weight is a great way to feel energetic and confident!

Turn to page 2 for tips on healthy weight management.

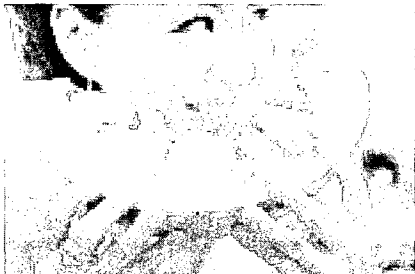


MANY FACTORS AFFECT YOUR BODY SIZE

Being active requires and consumes energy. Achieving a healthy weight requires a balance between the food we consume and the amount of energy we burn. People who choose to only eat less and less to maintain their weight could jeopardize their health from

undernourishment or vitamin deficiency, which may prevent them from doing the activities they love. So strike a balance between the food you like and the activities you enjoy. Fitness professionals can offer tips and advice on how you can be more active.

Healthy eating and active living are not the only factors that affect your body size. You also need to consider: your age, your sex, your genetics, your culture, where you live, what you do for a living, and childcare and household responsibilities.

TIPS FOR A HEALTHY WEIGHT

1. Follow Eating Well with Canada's Food Guide.

2. Accumulate 30-60 minutes of moderate physical activity daily. You can include a combination of activities to build muscle strength, endurance, and flexibility. For example, at school, home or work—take the stairs, walk to work or home, shovel snow, garden or consider joining a recreational sport you enjoy like baseball, yoga, or dancing. Don't

just watch your kids play—get involved. If finances are an issue, remember that walking counts as an activity and it doesn't cost anything. Choose a parking spot further away from the mall/grocery store or get off the bus a few stops early and walk the rest of the way.

3. Try listing what you would like to change (e.g. skipping meals, emotional or stressful overeating, or inactive lifestyle) and then

figure out ways, with or without help from family, friends, or a healthcare professional, to overcome these habits.

4. Decide what you do well and what you enjoy; then do these things often to help you to feel good about yourself. Then try other activities to do a little more.

5. Have a realistic body image.

“Follow Canada's Food Guide and have a realistic body image”



best: Top 12 eating tips

by Fran Berkoff

Feeling overwhelmed with eating tips and advice? Learn how to eat better the easy way with these top 12 tips from a dietitian and you'll soon have a lean, attractive body!

1. Keep a food journal. I've learned, both from research studies and experience, that the most important tool for weight loss or any dietary change is a food diary (in which you keep note of every single thing you eat throughout the day for at least a week). It helps you track what you're eating, makes you accountable and makes it easier for you to identify areas for change.

2. Breakfast really is the most important meal of the day. Even though I've sometimes had to skip it, I always feel better when I have it. My best mornings start with a tall, non-fat latte that I drink in a café after my walk. Back home, I eat either oatmeal and fresh fruit, whole wheat bread with cheese or with peanut butter, or cot-

tage cheese with fresh fruit. These are healthful choices, and the protein fills me enough to keep me going all morning.

3. Small steps can add up to big permanent changes—whether you are trying to lose weight, lower cholesterol, or simply feel better. For instance, I measured the amount of oil I used in several of my recipes and cut it in half. I did this with stir-fry, one of my favourites; it still tastes delicious, and I save about 150 Calories each time I eat it—which is once a week. Over a year, that adds up to 7,800 Calories—or a weight loss of two pounds.



4. Eat slowly. It's a wonderful way to savour your food—and to

6. Enjoy festive meals. We all have our moments of weakness, and that's OK. Just return to your more healthful habits at the next meal.

7. Eat seasonally and you'll enjoy fruit and vegetables at their tastiest, most affordable and most available. In the summer I eat fresh fruit such as peaches, nectarines, cherries and melons. In the fall I make soups with squash, cabbage or tomatoes, and visit country markets, where I can buy directly from farmers. The health

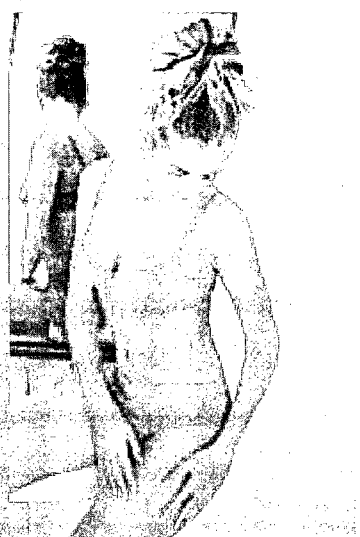
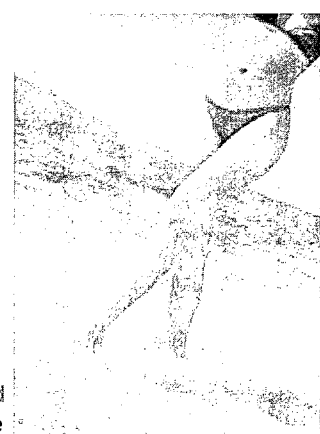
value of fruit and vegetables is undisputed. Nature's convenience foods are portable, full of nutrients, low in fat and high in fiber.

8. The path to a wholesome eating style is individual, and should fit your lifestyle and food tastes. There are many experts

eat less. Slow eating has become second nature for me, and many of my clients have found it helpful. Start by putting your fork down between bites, chewing a bit more or cutting food into smaller pieces.

5. Give in to your love of sweets, but do it with control. I love chocolate (and wish it were one of the food groups) so I still eat it. But now I buy only top-quality chocolate for its exceptional taste, and eat a small piece, really savouring it. If I need just a little chocolate fix, I sprinkle chocolate on my latte or make myself a sugar-free hot chocolate.

who can help, but pick someone who listens to you and works with you to make your diet realistic and enjoyable.



More tips

9. **Try not to get too hungry.** It's best to eat something every three to four hours, which usually translates to three meals and one or two snacks daily. Make a list of healthful snacks. Mine includes some plain, low-fat yogurt and fruit, popcorn, a cheese string with a few whole grain crackers or half of a whole wheat pita stuffed with vegetables and tuna.

10. **Eat healthful carbs,** such as whole grain, low glycemic-index foods, which will help you get a gorgeous body. My favourites include whole grain

breads, oatmeal, barley, buckwheat, bulgur and quinoa. Start by trying a new grain every few weeks in salads, side dishes, pilafs or casseroles.

11. **Practice portion control—**it's vital to weight management. Measure your cereal, pasta and dessert bowls and your drinking glasses, to see how much they actually hold. When I found out that my pasta bowls held nearly three cups, I changed to a smaller bowl. Psychologically you think you're eating more when you fill a small bowl

than when you partially fill a large one.

12. **Stay well hydrated.** The best hydration comes from non-caffeinated, nonalcoholic beverages, soups and watery foods such as fruit and vegetables. I drink water with every meal and keep a bottle on my desk when I am working. If I want a change from the plain water, I add some lemon or lime or a little cranberry juice. With these tips, you'll soon be on your way to that thin, attractive body!

"Practice portion control—it's vital to weight management"

Use this plate-building tip to ensure a slim and sexy figure!

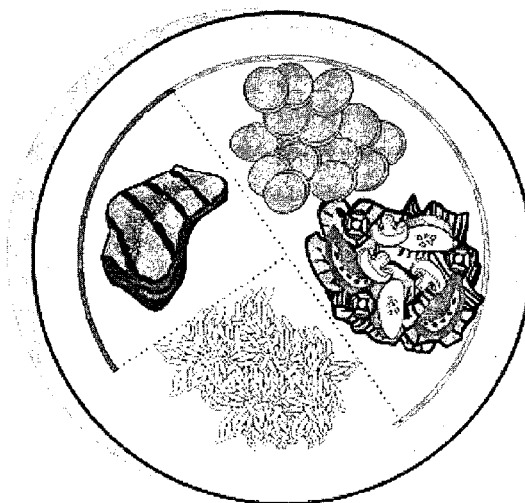
A simple way to ensure you're eating right is to learn how to divide your plate among carbohydrates, proteins and vegetables so that you're getting the right amount of food from each group. Learn how to effectively divide your plate to get the most out of your meals.

Half of your plate should be filled with colorful vegetables such as broccoli, carrots, toma-

atoes, asparagus, green beans, dark leaf lettuce, etc. Try to eat a variety of dark-colored veggies.

The other half of your plate

should be separated in two sections: one will contain a lean protein (such as an egg, tofu, fish, a small piece of chicken, or a lean cut of beef). The last quart of your plate contains the starches, preferably made of whole grains such as whole wheat pasta, brown rice, a piece of whole wheat bread, or a potato.



A NICER BODY ON A BUDGET

About.com

LOSING WEIGHT DOESN'T HAVE TO MEAN SPENDING MONEY. IN FACT, WITH THESE TIPS TO MAKE YOUR WAISTLINE SHRINK, YOU MAY MAKE YOUR WALLET FATTER!

1. Eat at home more often. The typical Canadian spends hundreds of dollars eating out each month. You will do your budget and waistline a big favor by eating at home more often. By the time you eat out once or twice a week, you will have spent enough money to buy the ingredients for multiple meals. What's that got to do with weight? When you prepare your own food, you are in complete control of

preparation method, added fats, caloric content, and portion size.

2. Walk more! If you're not already walking to lose weight, now is a great time to start. If you live close enough to walk to stores or errands, just think of how much money you'll save on gas!

3. Bulk up with beans. Beans are a cost-effective, low-fat, and nutritious way of adding additional protein and fiber to your meals, both of which will help you feel fuller longer. Look for dishes that use beans as a main ingredient or add them to foods you already enjoy.

4. Snack smarter. Fight the afternoon munchies by tak-

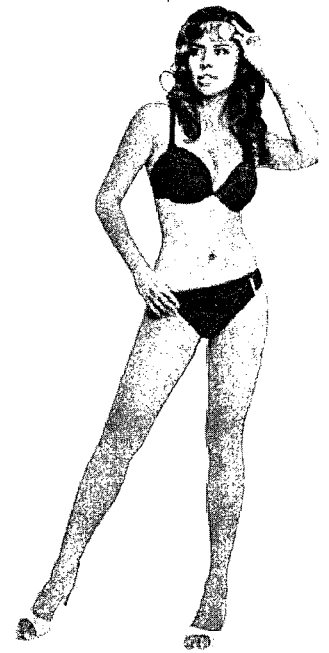
ing your own snacks from home rather than hitting the vending machines or cafeteria. The products they sell are much more expensive than they would be if you purchase the given food and bring your own serving each day. Same goes for vending machine sodas. You can buy a six-pack by the time you purchase two or three from the machine. Better yet—stick to good old tap water. You can easily refill a safe, reusable water container or bottle. You'll save money and calories, and won't contribute to pollution through plastic bottles! Smart snacks will help you on your path to attaining that sexy, slim body.

5. Prepare for portion control! Sure, those cute little 100-calorie snack packages are handy and provide instant portion control, but if you're concerned about the bottom line as much as, well, the size of your bottom, they just aren't worth it. Instead,

buy the regular size of your favourite smart snacks when they're on sale, read the food label to find out what a serving size is, and create your own instant-will-power packages by pre-portioning out individual servings into small, reusable containers.

You'll get lots more servings for the price!

It's clearly possible to get that beautiful, thin body on a budget!



Consider Canned

- Canned vegetables are often just as nutritious as frozen ones and can be much more budget-friendly. The flavor is a little different, but it's nothing a little skillful spice-adding won't fix.

Eight healthy eating saboteurs



Don't let these throw off your best efforts!

Bagels

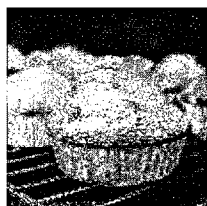
The appeal: A quick, simple breakfast meal—pop in the toaster, add your spread and go!

The damage: Most bagels are made with refined, white flour, again losing all of the fibrous and healthy ingredients. Although small in size, they're packed with calories—one bagel can be the equivalent of 6 slices of bread!

The fix: Select a whole-grain bagel, and replace the high-calorie spreads such as butter or cream cheese with a more nutritious option, like all-natural peanut butter.

Breakfast Bars

The appeal: often made with complex carbs, such as rolled oats and granola.



The damage: Although they include good carbs, most are made with refined flour, which means the grains have been stripped of their valuable nutrients, leaving hardly any nutritional value behind.

The fix: Avoid bars that are loaded with extra sugars. Anything chocolate-coated should be avoided, since it will spike your blood sugar, and leave you feeling drained.

Muffins

The appeal: Can be a great source of nutritious fiber and complex carbs.

The damage: Unfortunately, most muffins end up being empty calorie snacks, with up to 600 calories per muffin! A lot of butter is used in the creation of these delicious treats.

The fix: If you can't resist a muffin with your morning coffee, at least opt for a bran muffin—blueberry, raisin or raspberry—rather than a white, starchy one. They will at least provide you with fiber. Also look for lower-fat options, or only eat half of it.



By watching out for these tricky foods, you'll feel energized and ready to take on all your daily activities!

Be careful with what you drink...

Fruit juice

The appeal: Fruit is full of the daily vitamins and minerals you need

The damage: Many fruit juices are loaded with unnecessary sugars and added flavors, which ultimately can contribute to obesity and diabetes.

The fix: Read the labels carefully and look for juices which

contain 100% fruit juice. Alternatively, snacking on whole fruits will get you your daily dose of vitamins and minerals without the added preservatives.

Diet Pop

The appeal: A sugarless and calorie-free version of your favorite Cola.

The damage: Even though it

has no sugar or calories, it's loaded with artificial flavors, colours, and the controversial aspartame.

The fix: Although it may be tempting to sip on a calorie-free beverage, research indicates we should simply stick to good old tap water. Try adding a squeeze of citrus, like lemon or grapefruit, if a plain glass of water seems boring.



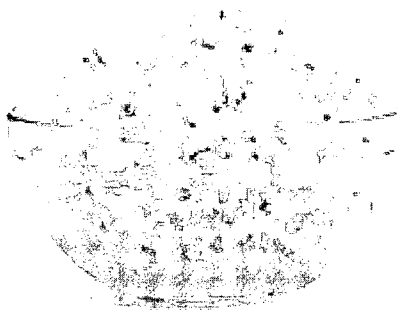
Popcorn

The appeal: A light snack that only contains as much salt as you choose to add.

The damage: The microwaveable kind, which is most commonly used, is full of hydrogenated oils and preservatives. What could have been a healthy snack is quickly turned into a fat-filled one.

The fix: If you love popcorn too much to give up, consider investing

in an air popper and buy natural popping corn. There are also a few microwaveable popcorn products that are made without hydrogenated oils—shop smart!



Your heart will thank you in the long run!

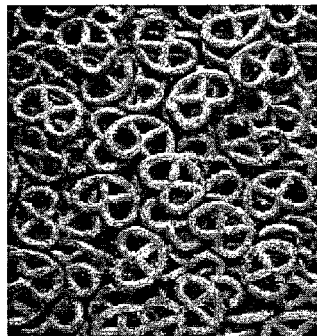
Pretzels

The appeal: Similar to popcorn, they feel like a healthier alternative to potato chips.

The damage: Like many of the previous snacks, pretzels are stripped of their nutritious content. Fiber helps our stomachs feel full, and since pretzels are lacking in this department, we tend to overeat.

The fix: Try a whole-grain tortilla chip instead. Not only is this option better for your heart and health, but you'll feel full

faster, while receiving the complex carbs your body requires.



Make wise choices for your snacks—you'll have more energy and you'll feel better!

Yogurt

The appeal: Contains protein, calcium, and bacteria that are excellent for your

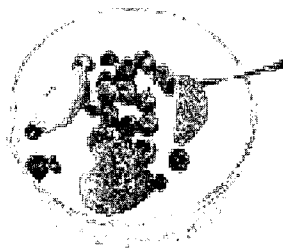
gastro-intestinal tract.

The damage: Many yogurts also con-

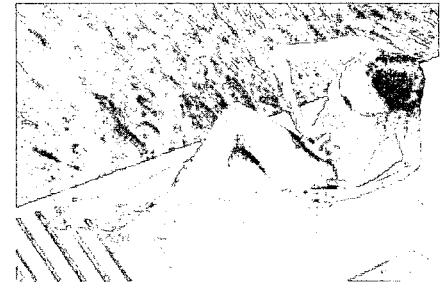
tain large amounts of added sugar or sweeteners as well as artificial colors or flavors.

The fix: Look for all-natural yogurts with no added sugars or preservatives when grocery shopping. There are several brands available to Canadians, which contain all-natural ingredients. Alternatively, buy plain yogurt and add fresh fruit and a

touch of honey. You can enjoy a variety of healthy yogurts that way!



Is Evening Eating Destroying Your Efforts for a Nicier, Sleeker Body?



Cues to Eating and How to Control Them

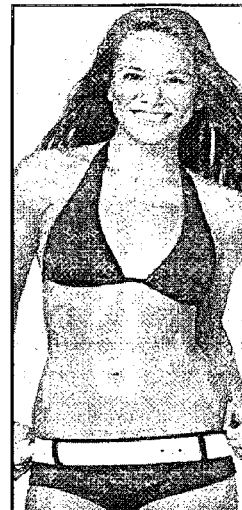
Balanced breakfast? Check. Mid-morning snack? Check. Healthy lunch? Check. Passing up your friend's homemade cookies? Check. Coming home in the evening and going on a feeding frenzy? CHECK!!!

Does this sound like the bulk of your days? You're in control, everything is going fine—until you come home starving at night and eat a large dinner, say yes to dessert (and seconds) and finish off a bag of chips before bed. What gives?

From a metabolic standpoint, there is really no reason not to eat food in the evening. A calorie is a calorie regardless of when it is consumed. A morning calorie is metabolized in basically the same way as

an evening calorie. However, eating in the evening is a problem for many, not because of the way food is metabolized, but because of the quantity and quality of food that is often eaten.

Skipping meals and becoming overly hungry by evening can lead to nighttime binge eating. Recent studies revealed that when people ate three meals a day only 13% binged. When people skipped breakfast, 24% binged and when people skipped breakfast and lunch, 60% binged. In general, people who spread their meals throughout the day seem to be better able to control their eating. They are less likely to feel hungry and less likely to overeat.



So by eating breakfast, lunch and dinner and planning snacks in between, you can help yourself lose weight as well as maintain better control of your eating throughout the day and night.

For most people, the evening is down-time, used to relax, watch television, and unwind from the stress of the day. Others view it as a time to multitask and catch up on household chores, bills, homework, and other

responsibilities. Whether you're winding down or checking off your to-do list, unconscious eating can accompany your routine and result in a massive calorie intake. Devouring a bag of chips, a sleeve of cookies, or a pint

of ice cream can easily happen when your mind is somewhere else. The detrimental effects of such a feast on your body shape are undeniable.



The Role of Sleep in Reaching and Maintaining a Thin Body

Consuming a large amount of food before bedtime can also result in indigestion and sleep problems, which can trigger you to eat more during the following days. A growing body of research suggests a connection between obesity and lack of adequate sleep.



Statistics show that overweight individuals sleep about 1.8 hours less a week than people of normal weight. Since the 1960's, sleep duration for American adults has dropped by as much as two hours a night, while obesity has drastically increased.

Sleep is a regulator of two hormones that effect appetite, leptin and ghrelin. Leptin helps suppress food intake and stimulate energy expenditure, while ghrelin stimulates appetite, fat production, and body growth. When one is sleep deprived, the level of leptin drops and the level of ghrelin increases. The result is a drastic increase in hunger. One study reported a 24% increase in hunger, with excessive, uncontrollable cravings for calorie and carbohydrate packed foods such as cookies, candy and cake. It can all add up to a vicious cycle of late night binges, lack of adequate sleep, uncontrolled snacking, late night binges, and so on.

Are you an evening eater? Try this exercise to find out.

Using an online tool or a food journal, track 3-5 typical days of eating.

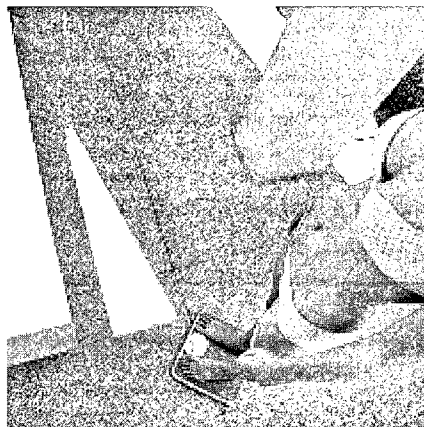
How many meals and snacks did you eat after 5:00 pm?

How many meals and snacks did you eat during the day?

What activities occurred while you ate after 5:00 pm?

You may have a problem with evening eating if more than one third (1/3) of

your meals and snacks are eaten after 5:00 pm. It might also be problematic if evening eating constantly occurs with another activity.



Put an end to the Evening Binge Cycle and Keep that Slim Body!

You CAN control evening eating disasters. Try these tips to normalize sleeping patterns and fend off hunger:

Plan activities to do throughout the evening, but don't make food a part of the activity:

take a bath, walk the dog, pay bills online, play board games, call a friend, keep your hands busy (knit or craft), play basketball, baseball, soccer,

read a book or magazine, try a relaxing fitness video such as yoga or tai chi...

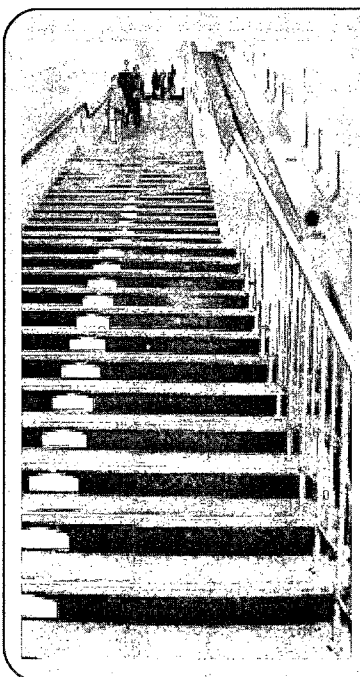
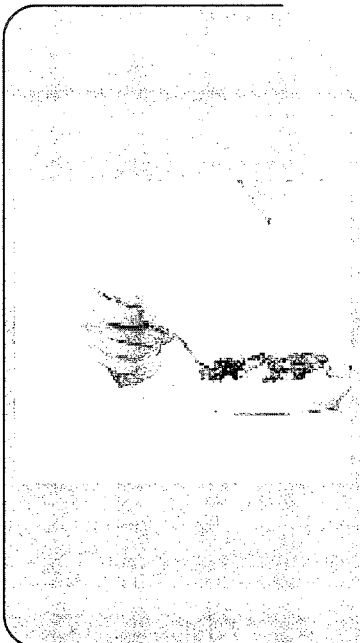
Eat three meals daily and 1-2 planned snacks, keeping in mind your total calorie range. Plan to eat about the same number of calories at each meal throughout the day. Drink a lot of water in the evening. Make a list of low-calorie snack options. Select one for the evening. Eat it, but no more. Don't eat

mindlessly! Eat all meals and snacks at the kitchen table, keeping all of your attention on the food you're enjoying. Take your time and really enjoy every bite. Get 7-8 hours of sleep nightly. Maintain a regular bed and wake time schedule, even on the weekend. Establish a regular, relaxing bedtime routine. By doing so, you'll be able to maintain your slim body!

How can I stick to my resolutions to lose weight and be more active?



Dietitians of Canada
Les diététistes du Canada



Keep it small and simple

We've all done it, year after year—make resolutions for ourselves, stick to it for a few months, days or sometimes just hours and become disappointed when we fail YET AGAIN! Why on earth do we do it to ourselves? The start of a new year or the arrival of spring or summer usually bring with them thoughts of rejuvenation, change and something better, and it seems like the perfect time to “fix” our life. So, this time, instead of failing again, what can you do so that you stick to your resolutions?

Start with a reality check. For example, if losing weight and becoming more physically fit is your personal goal, realize that you don't become overweight and out of shape in two weeks, so don't expect to be slim and fit in two weeks! Your excess pounds and poor muscle tone are the result of years of unhealthy eating

and inactive habits, so a quick fix with radical changes to your eating and activity habits likely won't work. Some simple yet effective rules to follow, to help you stick to your resolutions, include:

1. Keep it small and simple. Small and simple changes are easier to achieve but make a HUGE difference. For example, a change from two 8 ounce glasses of homogenized milk every day to 2% milk will save you 8 grams of fat a day and 26,280 calories in a year which can result in a 7.5 pound weight loss from this one small and simple change! Wow!

2. If you currently take the elevator to your 5th floor apartment 3 times a day, try taking the stairs instead. For the average adult, this extra 15 minutes of activity can burn up to 150 calories per day and can result in an ap-

proximate weight loss of 15 pounds in a year! These two small changes together can help you lose over 20 pounds in a year—not bad for a couple of small changes!



More tips to maintain your healthy habits

3. Unpair unhealthy behaviors. For example, if you know that you overeat calorie rich foods when you watch television change one of the behaviors—either watch television for less time, or remove some or all of the calorie rich food from your sight.

4. Proclaim your resolutions publicly and write them down. Writing down your

resolutions on paper shows that you are serious about following through with them. Telling a friend or family member can also be helpful as they can be cheerleaders, offering encouragement and putting you in circumstances that set you up for success instead of failure. For example, if your friend knows you're really serious about improving your eating habits

and becoming more physically fit, they may offer a night out playing sports followed by a light snack instead of suggesting a movie followed by a rich dessert and coffee.

Stick to your resolutions! Taking a reality check along with small, simple steps that you publicly proclaim can start you on the road to success!



Don't Let the Weekends Keep You From Having A Gorgeous Body!

By following these simple tips, you'll be on your way to a slim, gorgeous body in no time. Don't fear the weekends anymore!

How often do you keep your healthy habits during the weekdays, and spend your entire weekend falling off the wagon? Somehow it's easier to pass up chips, desserts, and beer after 6pm on Friday! Weekends often bring all-day indulging, and relaxing (a.k.a. sedentary) activities like watching TV—and that's true for most Americans. On average, we consume an extra 345 calories per day every weekend, which can add up to an extra 5 pounds per year!

Take heart—there are things you can do to ward off the weekend woes, even as you make Saturdays and Sundays a relaxing departure from your

workday world. Though your schedule may vary widely, dictated by social outings, household chores, and homework, you can master the shift with a bit of thought and creativity.

First of all, recognize that weekends are a common problem for most of us striving to maintain a slim figure. Next, diagnose the major pitfalls of your own weekends: Do you make bad food choices? Eat too much? Hibernate instead of hitting the gym? By examining what throws you off course, you can institute some strategies that will get you back on track. For starters, try these tips.



Weekend Tips for a Sleek and Sexy Body

Keep up with your diet and exercise journal on the weekends. Use it to pinpoint your difficulties, so that you can evaluate ways to attack your weaknesses.

Look for ways to combine family or friend time with exercise, both indoors and out.

Ride bikes, skate, play soccer or tag, go for a run or take a simple nature walk. Head out to the gym with a friend, or try indoors wall climbing. Your weekend exercise will be worthwhile even if it's not as

regimented.

If the weekend is your time to

cook, either for fun or to get a jump start on the week ahead, try some healthy new recipes, adding the successful ones to your repertoire. You can also adapt old favorites into healthier versions through such simple modifications as less sugar, applesauce instead of oil, canola or olive oil instead of vegetable oil, plain yogurt instead of sour cream, etc.

Try new foods that you don't usually have time for on a busy weekday. Make fruit smoothies, which are diet-friendly and can satisfy a sweet-tooth.

Give yourself a day off from exercising. Recharging your battery will help you remain faithful to fitness in the week ahead.

Limit dining out to just one meal

per weekend. If you know you're going to dine out or be in a social situation with special food, eat a light snack beforehand. Then, you can enjoy the treats without being so famished that you go overboard.

Don't save all your splurging for the weekends. Allowing yourself a few treats throughout the week will help you avoid the mindset that the weekend is an excuse to go bonkers. And by spacing your treats evenly, you're less likely to get sudden, irresistible cravings.

Easy on the alcohol! Not only does it contain 7 calories per gram (not including the calories in mixers), but drinking also lowers your inhibitions, causing you to eat more. Plus, when you're dehydrated and groggy the next day, the last thing you want to do is exercise!





Overcoming Overeating for a More Attractive Body



In this article:

- Skills for any setting 2
- Tips at home 2
- Tricks for dining out 2

Overeating Today

Why do we eat? We all know why we should be eating: to supply our bodies with plenty of energy to get through the day; to get nutrients like vitamins, minerals, antioxidants, and phytochemicals which help us to stay healthy and free of disease; and to get useful carbohydrates, proteins, and fats—all of which contribute to running our bodies properly and maintaining good health.

But sometimes we can all be guilty of eating for other reasons. We love food! And that's great! Eating should be pleasurable, not just nutritious. Food is everywhere:

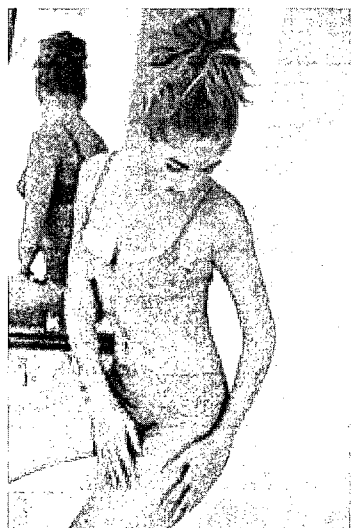
books are devoted to cooking and recipes, we find ourselves daydreaming and even talking about the newest restaurant or our favorite foods.

Many times we eat to celebrate—holidays, job promotions, graduations, weddings... We'll find just about any achievement ("I raked the yard!", "We sold our house!", "My favorite team won!") to be celebration-worthy, and we'll eat to commemorate it.

Other times, we let our emotions take over. When we're stressed out, sad, angry, or lonely, we oftentimes turn to

food to comfort us. Even starting (and staying on) a new diet can be stressful, especially when emotions creep in.

In our food-obsessed culture with our out-of-control portions always lurking within our grasps, how can we not overeat? It's hard to break habits and go against the lessons we have always been taught, like cleaning our plates, not being wasteful, or getting the best deal—which usually means ordering up and getting a lot more food for the money. But there are things we can do to stop the damages overeating causes to our physical appearance.



New strategies to stop overeating before you start

There are many ways to stop overeating. While some may seem silly... silly just may work for you! From the following list, find a few that work best for you, and try several. For example, if you find yourself eating out a lot, experiment with the dining out options more. After finding the strategies that work, stick with them. Over time, you'll break the habits of overeating and form new

habits. Pretty soon, you won't even need the strategies at all, and you'll be on your way to a slimmer, sleeker body!



Skills for Any Setting

Whether you're cooking your own meal, eating at work or school, or snacking at a football game, here are the strategies you can take anywhere:

Know your portion size. Keep the following common items in mind when preparing and eating meals:

a **golf ball** is the size of a serving of nuts (including peanut butter) or cheese

a **deck of playing cards** is equivalent to 3 ounces of any meat

Use a **die** to estimate a proper serving of oils and fats

For fruit and veggie servings, use a **tennis ball**

One serving of cooked grains or potatoes is about the size of a **computer mouse**

Divide your plate. When cooking at home, looking at pictures on menus, or shopping a la carte at the cafeteria, your plate should look like this: half (or more) of the plate should be filled with fruit and veggies.

Protein-rich foods (meat or legumes) and starches (grains, potatoes, bread) should take up one quarter of the plate each.

Fill your divided plate only once. If you're still hungry, have another half-plate of vege-

tables. It's that simple.

Quench your hunger with water. Instead of high-calorie, low-nutrient drinks like soda, alcohol, or other sugary drinks, choose water. It's free wherever you go, and most people don't meet their 8-10 cups-a-day requirement. Drink water before, during, and after a meal to slow yourself down while eating and curb hunger.

Fill up on fiber. The healthiest and most filling foods are high in fiber—think fruits and veggies, and whole, unprocessed grains. Adding fiber to your diet will aid in weight loss, and keep you feeling fuller longer.



Feeling hungry? Try this first. Try drinking a glass or two of water. Many people mistake what is actually dehydration for hunger.

Tips at Home for a Thin, Svelte Body

Cooking at home may be the easiest way to control your portions during a meal, but it also presents us with fully-stocked cupboards and refrigerators that can be tempting:

Make fruit your dessert. It's a great way to get more produce in your diet, and it satisfies the sweet craving many people have after a meal. Experiment with new and exotic fruit.

Bring home healthy fast food. Try pre-cut, frozen, canned or

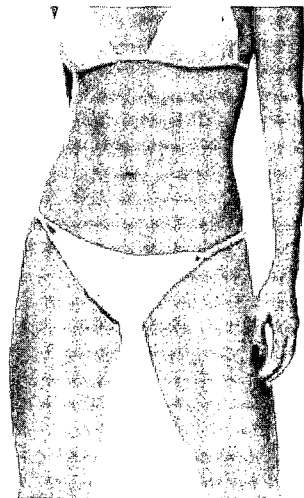
microwave-in-the-bag veggies.

Stop the Taste-Testing habit. If you're the cook, you may be eating a lot of calories when you taste your foods as you cook. To stop this natural habit, try chewing gum while you prepare your meals. Each time you are tempted to sneak a bite, you'll have to take the gum out of your mouth. This will make you more conscious of what you're doing.

Make a rule that works for you.

Not eating in front of the TV, in the car, or at your desk. This will help you avoid mindless eating when you're not hungry.

When you feel the urge to snack or keep eating, take an exercise break. Walk around the block for 15 minutes, run up and down the stairs, or distract yourself with anything for about 10 minutes. You'll probably find that you weren't really hungry, but bored instead.



Strategies for Dining Out

It's difficult to control your portions—not to mention ingredients and cooking method—when you are at a restaurant. Despite this, there are several things you can control:

Inquire about portion sizes. If it sounds huge, and it probably is, ask the server to split your meal in half. Tell them to box up half ahead of time, or split the dish with a friend.

Decide ahead of time what you'll order. That way, you won't be

tempted by the less-healthy fare when you look at the menu. If you're familiar with the menu, don't even look at it—simply order what you already had in mind. Trying out a new restaurant? Many post their menus online. Check it out before heading out.

Substitute. Get the plain baked potato instead of the mammoth french fries; Ask for grilled chicken on your salad instead of breaded.

Tell your server you don't want

the free bread, chips, etc. when you first arrive. Or, if you do eat it, let them know you don't need another round.

Don't pick at the food left on your plate. Put your utensils on your plate so the handles get dirty. You won't want to pick them up again, and you won't mindlessly eat more while chatting over dinner. Or, try laying your napkin on top. Out of sight, out of mind! These tips will help you get the attractive body you're aiming for.

Appendix M
Questionnaire used prior to article selection

Importance of weight management questionnaire

How important is it for you to control your body weight? (i.e., to lose weight or to engage in efforts to maintain your current weight)

| Not important at all 1 | Unimportant 2 | Of little importance 3 | Moderately important 4 | Important 5 | Very important 6 | Extremely important 7 |
|---------------------------------|------------------|------------------------------|------------------------------|----------------|------------------------|-----------------------------|
|---------------------------------|------------------|------------------------------|------------------------------|----------------|------------------------|-----------------------------|

The following statements enumerate various GOALS you might have with weight management. Please indicate the extent to which you find each one important with regards to weight.

When thinking of controlling your weight, how important are these goals to you:

| Not important at all 1 | 2 | 3 | Moderately important 4 | 5 | 6 | Extremely important 7 |
|--|---|---|------------------------------|---|---|-----------------------------|
| 1. be beautiful | 1 | 2 | 3 | 4 | 5 | 6 7 |
| 2. grow and learn new things | 1 | 2 | 3 | 4 | 5 | 6 7 |
| 3. have my name known by many people | 1 | 2 | 3 | 4 | 5 | 6 7 |
| 4. successfully hide the signs of aging | 1 | 2 | 3 | 4 | 5 | 6 7 |
| 5. be physically healthy | 1 | 2 | 3 | 4 | 5 | 6 7 |
| 6. be admired by many people | 1 | 2 | 3 | 4 | 5 | 6 7 |
| 7. have people comment often about how attractive I look | 1 | 2 | 3 | 4 | 5 | 6 7 |
| 8. feel good about my body | 1 | 2 | 3 | 4 | 5 | 6 7 |
| 9. keep up with clothing fashions | 1 | 2 | 3 | 4 | 5 | 6 7 |
| 10. keep myself healthy and well | 1 | 2 | 3 | 4 | 5 | 6 7 |
| 11. achieve the look I've been after | 1 | 2 | 3 | 4 | 5 | 6 7 |
| 12. be free from sickness | 1 | 2 | 3 | 4 | 5 | 6 7 |
| 13. have an image that other find appealing | 1 | 2 | 3 | 4 | 5 | 6 7 |
| 14. have a healthy lifestyle | 1 | 2 | 3 | 4 | 5 | 6 7 |

Age: _____

Weight: _____

Height: _____

What was the first language you learned? English Français Other

Appendix N
Questionnaire used for article evaluation

Participant ID code: _____

EVALUATION OF THE ARTICLE

Title of the article: _____

In what order did you read this article?

- It was the first article
 It was the second article
 It was the third article
 It was the fourth article

Please answer the following questions referring to **this particular article**.

| | Not at all | | | Somewhat | | | Extremely |
|---|---------------|---|---|----------|---|---|-----------|
| 1. To what extent did you find the article interesting ? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. To what extent did you find the article involving ? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. To what extent did you find the article informative ? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. To what extent did you find the article focused on health? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. To what extent did you find the article focused on tips for weight management? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. To what extent did you find the article emphasized beauty? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. To what extent did you find the article focused on the Canadian food guide? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Please circle the appropriate answer:

| | not at all | | some- what | | extremely | |
|---|---------------|---|---------------|---|-----------|-----------------------------|
| 8. If one of your goals is to be pretty / attractive, to what extent does this article help you attain this goal? | 0 | 1 | 2 | 3 | 4 | that is not one of my goals |
| 9. If one of your goals is to be healthy, to what extent does this article help you attain this goal? | 0 | 1 | 2 | 3 | 4 | that is not one of my goals |