CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

NOURISHING THE ADOLESCENT MIND AND BODY: AN EATING DISORDER PREVENTION PROGRAM

A graduate project submitted in partial fulfillment of the requirements

for the degree of Master of Science in

Family and Consumer Sciences

By

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This graduate project is dedicated to:

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ABSTRACT

NOURISHING THE ADOLESCENT MIND AND BODY: AN EATING DISORDER PREVENTION PROGRAM

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The purpose of this graduate project was to design and evaluate an eating disorder prevention program for adolescents. The "Nourishing the Adolescent Mind and Body" curriculum encompasses a variety of topics aimed at enhancing body image and self-esteem while encouraging behaviors important to achieving overall wellness. Areas of focus include media literacy, intuitive eating, characteristics and dangers of eating disorders, and nutrition myths. The goal is to empower and provide students with the tools necessary to make healthy choices, ultimately reducing the risks for developing eating disorders. "Nourishing the Adolescent Mind and Body" is comprised of eight lessons created to be taught on a monthly basis to middle school students during General Heath Education class for the duration of the school year. This program is intended for adolescents ages 11-14 in the San Fernando Valley region. A formative evaluation was completed by a panel of experts in eating disorders, education, and adolescents for accuracy and efficacy.

CHAPTER I

INTRODUCTION

The World Health Organization (WHO) has placed eating disorders at a global priority among adolescent mental health, stating there is an increasing prevalence in developed and developing countries (WHO, 2003). Though often associated with females, males are also at risk. While more research is needed in this area, established risk factors include environmental exposures, such as from the media, promoting the message that thinness is beautiful in women while men are taught to value masculinity. Other external influences may emerge from family, friends, and peers. Adolescents may be particularly vulnerable to these influences as they endure life challenges of transitioning into a young adult. This may increase their risk of developing low self-esteem, low body satisfaction, depression, disordered eating behaviors and, in some, a clinical eating disorder (Liechty & Lee, 2013). Due to their heightened risk, adolescents can benefit from a prevention intervention with an education component in effort to decrease eating disorder prevalence. A range of prevention and education programs have been successful in achieving decreased current and future eating pathology as well as reduced risk factors of eating disorders (Stice, Shaw & Becker, 2009).

Statement of the problem

Anorexia nervosa is present in 0.5-1% of the population while bulimia nervosa is seen in about 0.5-3% of individuals in the U.S. (Swanson, Crow, Le Grange, Swendsen & Merikangas, 2011). Though the number affected may seem low, these clinical eating disorders significantly affect the lives of adolescents and the family of those diagnosed. Furthermore, while eating disorder behaviors center around food, these clinical diagnoses

extend beyond the avoidance of eating. Eating disorders are also often accompanied with psychological illness such as depression, anxiety, or compulsive disorder. Serious consequences are associated including impairment in ability to complete normal activities, comorbidities, medical complications such as abnormally slow heart-rate, low blood pressure, reduced bone density, electrolyte imbalances, tooth decay, and potential gastric and esophageal rupture, suicide, and mortality (National Eating Disorder Association). The age of onset of anorexia nervosa, bulimia nervosa, and binge eating disorder eating disorders are 12.3, 12.4, and 12.6 years old respectively (Swanson et al., 2011).

The media often plays a large role in how people perceive themselves. According to Bullen (2009), the average person is exposed to 16,000 advertisements including television commercials, billboards, magazines, and online advertisements, each day. In many of these advertisements a specific standard of beauty is portrayed for both and men and women. Women are valued for their thinness, men are valued for masculinity and the image of perfection is emphasized. This presents an issue when individuals, particularly adolescents, perceive these messages and images as truth, developing a one-dimensional ideal of beauty. It has been found that the higher the media literacy of an individual, the lower the body dissatisfaction, internalization of the thin ideal, and comparison of appearance (McLean, Paxton & Wertheim, 2013). Thus, building adolescent media literacy skills is vital in prevention.

Although middle school students are most susceptible to developing an eating disorder, the implementation of curriculum discussing nutrition and specifically focusing on education and prevention of eating disorders, is rare among this age group. This adds

to youth susceptibility of such harmful behaviors. Bringing awareness of eating disorders and disordered eating to this population will aid in prevention efforts. Prevention interventions have been shown to decrease risk factors of eating disorders as well as reduce current or future development of eating pathologies (Shaw, Stice & Becker, 2009). Additionally, it is important that the program be implemented consistently. Research conducted on the benefits of an eating and body image disturbance prevention program showed that benefits declined between the 7- and 30- month follow-ups, demonstrating the need for continued education (Espinoza, Penelo & Raich, 2013)

Purpose

The purpose of this project was to develop a curriculum, including information on nutrition, self- esteem, body image and overall health to promote the awareness and prevention of eating disorders in adolescents. The curriculum was designed to target co-ed students in an 8th grade class. This population was targeted since adolescents of this age are at highest risk of developing disordered eating patterns and clinical eating disorders (Garfinkel et al.,1995). It was designed to educate students on factors involved in the development of eating disorders, including topics of self-esteem, body image, and media literacy. In addition, this curriculum takes a multifaceted approach. It was created on the basis that incorporating multiple areas of health will lead to greater outcomes of promoting healthy behaviors.

Definitions

- Early adolescence: Individuals aged 13-15 years old (Mahan, Escott-Stump & Raymond, 2012)

- Body image: An individual's mental self-concept and perception of their body shape and size (Mahan et al., 2012)
- Self-esteem: How much an individual feels he or she is worth and the perception of how much others value them
- Body dissatisfaction: The negative subjective evaluation of an individual's physical body such as their figure or particular body parts (Stice & Shaw, 2002)
- Media literacy: "a perspective that we actively use when exposing ourselves to the media in order to interpret the meaning of the messages we encounter" (Potter, 2001, p.4)
- Health: ''a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'' (WHO, 2003)
- Eating disorder: "debilitating psychiatric illness characterized by a persistent disturbance of eating habits or weight control behaviors that result in significantly impaired physical health and psychological functioning" (Mahan et al., 2012, p.489)
- Disordered eating: Eating behaviors including but not limited to binge-purging behavior, compensatory exercise, laxative and diuretic abuse and binge eating. These behaviors may not be practiced frequently enough to be classified as an eating disorder, however are still harmful to one's health (Mahan et al., 2012)
- Anorexia nervosa (AN) (American Psychiatric Association, 2013)
    - Restricting of energy intake relative to requirements, leading to a significantly low body weight in context of age, sex, development trajectory, and physical health. Significantly low weight is defined as

weight that is less minimally normal or, for children and adolescents, less than that minimally expected

- Intense fear of weight gaining weight or becoming fat, or persistent behavior that interferes with weight gain, even though at a significantly low weight
- Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight.
- Anorexia has two subtypes: Restricting type and binge-eating/purging type
  - Restricting type: During the last 3 months, the individual has not engaged in recurrent episodes of binge eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas) This subtype describes presentations in which weight loss is accomplished primarily through dieting, fasting, and/or excessive exercise
  - Binge-eating/purging type: During the last 3 months, the individual has engaged in recurrent episodes of binge eating or purging behavior (i.e, self-induced vomiting or the misuse of laxatives, diuretics, or enemas)

- Bulimia nervosa (BN) (American Psychiatric Association,2013)
  - Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:

        - Eating, in a discrete period of time (e.g., within any 2-hour), an amount of food that's is definitely larger than what most individuals would eat in a similar period of time under similar circumstances
        - A sense of lack of control over eating during the episodes (e.g., a feeling that one cannot stop eating or control what or how much one is eating).
        - Recurrent inappropriate compensatory behaviors in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, or other medications; fasting; or excessive exercise.
    - The binge eating and inappropriate compensatory behaviors both occur, on average, at least once a week for 3 months
    - Self-evaluation is unduly influenced by body shape and weight
    - The disturbance does not occur exclusively during episodes of anorexia nervosa
- Binge eating disorder (BED) (American Psychiatric Association,2013)
    - Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
        - Eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than what most people would eat in a similar period of time under similar circumstances.

- A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).

- The binge-eating episodes are associated with three (or more) of the following:
    - Eating much more rapidly than normal.
    - Eating until feeling uncomfortably full.
    - Eating large amounts of food when not feeling physically hungry.
    - Eating alone because of feeling embarrassed by how much one is eating.
    - Feeling disgusted with oneself, depressed, or very guilty afterward.
- Marked distress regarding binge eating is present.
- The binge eating occurs, on average, at least once a week for 3 months.
- The binge eating is not associated with the recurrent use of inappropriate compensatory behavior as in bulimia nervosa and does not occur exclusively

- Pathologic weight control behaviors: A method of controlling weight including laxative and diuretic use, excessive exercise, vomiting, and calorie restriction that may manifest as an eating disorder (Hoglund & Normen, 2002)

Assumptions

The curriculum is based on the following assumptions:

- Participants will be male and female students ages 11-14
- Participants are able to read, write, and understand the delivery of the curriculum in English
- The questionnaire administered to the panel of experts to evaluate the curriculum is valid and able to adequately obtain the necessary information.
- The panel of experts participating in the formative evaluation are qualified to review and assess the curriculum.
- The panel of experts participating in the formative evaluation will evaluate the curriculum completely and honestly
- The panel of experts participating in the formative evaluation will evaluate the curriculum with no pressure from others.

Limitations

The curriculum developed is an eating disorder prevention program designed for male and female students ages 11-14. However, certain limitations do exist.

- The curriculum is only designed for male and female students, ages 11-14, enrolled in a General Health Education class, located in Southern California,
- The curriculum is designed for male and female students who are able to read and understand the delivery of the material.
- The curriculum was evaluated by only three experts.
- The panel of experts is made up of three experts belonging to the same educational institution, California State University, Northridge.

CHAPTER II

REVIEW OF LITERATURE

Prevalence of Eating Disorders

Adolescents, in the midst of transitioning into adulthood, face challenges in many areas of their lives. These challenges may include navigating various, often conflicting, food- related messages and nutrition and weight related issues as they grow into and learn to appreciate their bodies. Youth are at highest risk for developing an eating disorder as onset typically occurs in adolescence (Garfinkel, et al.,1995). According to the 2001-2004 NHANES survey, approximately 0.1% of the adolescent population ages 8y-15y are diagnosed with eating disorders (Merikangas, et al., 2010a). Furthermore, results from the National Comorbidity Survey-Adolescent-Supplement indicated a 2.7% lifetime prevalence of an eating disorder diagnosis among adolescents age 13y to 18y (Merikangas, 2010b). Although the overall prevalence is low, eating disorders are serious life threatening illnesses with adverse outcomes. Eating disordered individuals have a mortality rate of 5-8% (Herzog et al., 2000). Furthermore, anorexia nervosa claims the greatest amount of premature deaths of all mental illnesses (Zipfel, Lowe, Reas, Deter, Herzog, 2000).

It is difficult, however, to precisely determine the prevalence of eating disorders. These estimates are typically based on the amount of individuals seeking professional treatment; therefore, individuals not seeking treatment are not accounted for. Additionally, those with an eating disorder often suffer in silence and do not share their illness with others due to feelings of shame or embarrassment (Polivy & Herman, 2002). Prevalence of bulimia nervosa is more than twice as high as anorexia nervosa. Bulimia

nervosa patients are also more likely to seek treatment when compared to patients with anorexia nervosa. Those with bulimia nervosa tend to view their behavior and relationship to food as abnormal while those with anorexia nervosa are often unable to identify their behavior as pathologic. For this reason, anorexia nervosa patients often require family or other support to initiate seeking treatment, rather than seeking treatment on their own (Polivy & Herman, 2002).

Etiology of Eating Disorders

Although there is much research yet to be done in this area, there are many factors that lead to the development of an eating disorder. The onset of an eating disorder is often likened to a "perfect storm" where a combination of factors work together to trigger the onset of the disorder. A single risk factor may not lead to the development of an eating disorder, however studies have shown that multiple risk factors exponentially increase risk. Factors contributing to eating disorders include societal expectations, the media, social influences, and genetics (Polivy & Herman, 2002)

According to the Youth Risk and Behavioral Surveillance System of the Centers for Disease Control (CDC), nearly two in every three adolescent girls report attempted to lose weight in the past 30 days (CDC, 2000). Reported weight loss strategies included fasting (18.8%), use of diet pills (10.9%), and vomiting or laxative use (7.5%) (CDC, 2000). In a nationally representative sample of adolescents ages 5-12, Neumark-Sztainer, Hannan and Mstat (2002), found 45% of girls reported current or previous dieting compared to 20% of boys. Of those reporting participation in dieting, 88.5% of girls and 62.2% of boys expressed their reason for dieting was "to look better". Furthermore, 13% of girls and 7% of boys were identified as having disordered eating such as binge-purge

behaviors (Neumark-Sztainer et al., 2002). It is also worth noting that in this study, the greatest increase in dieting and disordered eating occurred between the eighth and ninth grade, from 39.5% to 52.7%. This suggests that an intervention would be particularly relevant among youth during this critical time.

Societal beliefs and values are one potential factor associated with an eating disorder diagnosis. For example, Western cultures place value on thinness and thus people living within Westernized countries view thinness as something to aspire to. As a result, women take measures, including caloric restrictions, to ensure they fit into the beauty ideals and expectations society has placed on them. Likewise, Western culture places value on masculinity in men, thus men aspire to develop a muscular frame. Although seemingly harmless, the pressure to adhere to these physical archetypes in order to be valued can be detrimental to one's health. Viewing slimness and masculinity as a standard of beauty can lead to body dissatisfaction when unable to attain (McCabe & Ricciardelli, 2005). The media further operates as a vehicle to carry out this message.

Slater and Tiggemann (2010), proposed the objectification theory for adolescents. This theory suggests that the internalization of standards of attractiveness lead to body surveillance, which, results in body shame, low self-esteem, and depression. These feelings may, in some, ultimately contribute to disordered eating. The results of a study by Slater and colleague's showed that girls had higher accounts of body surveillance, body shame, appearance anxiety, and disordered eating than boys, however despite this gender difference, these variables contributed to disordered eating in both boys and girls (Slater et al., 2010)

A one-year study conducted by Keel et al. (1997) investigated the precursors of eating disorders among adolescent boys and girls. The study analyzed the effect of depression, self-esteem, body image, and puberty on the later development of an eating disorder. The sample included boys and girls in grades 5 and 6, who were followed for one year. At the beginning of the study and one year follow up, girls showed higher depression, negative body image, and eating patterns and behaviors related to eating disorders compared to boys. In addition, girls showed lower self-esteem than boys in the second year of the study. Girls also reported greater pressure to be thin, guilt after eating sweets and greater pressure to eat than boys. Findings from the study also demonstrated the relationship between BMI and pubertal stage in young girls. Girls who weighed more and were in earlier stages of puberty were more likely to exhibit disordered eating behaviors one year later. However, pubertal stage and BMI were not significantly associated with body image and self-esteem in girls. Results also showed body image influenced eating disorder behaviors in boys.

Attitudes towards eating and weight are also attributed to peer influences. Girls who are serious dieters report higher levels of peer and parental influences compared to non-serious dieters. In addition, higher levels of peer influence are seen in younger girls (Huon, Lim, Gunewardene, 2000). The body of research emphasizing the significance of peer influence suggests attitudes and behaviors concerning weight among groups of friends may predict body image, onset of dieting, unhealthy behaviors of weight control, and symptoms of eating disorders in individuals (Gibbs,1986; Huon et al, 2000, Huon & Walton, 2000; Paxton, Schutz, Wertheim, & Muir, 1999; Pike, 1995). There are several suggested explanations for these similarities among friends including the sharing of

weight control information, conversations of “fat talk”, demonstration of disordered eating strategies, and comparison of body types within the friend group (Desmond, Prince, Gray, & O’Connell, 1986; Nichter, 2000; Stice, 1994; Wertheim, Paxton, Schutz, & Muir, 1997). Also, the adoption of unhealthy behaviors to control weight may occur as a result of teasing among peers, especially in overweight adolescents (Neumark-Sztainer, Falkner, Story, Perry, Hannan, & Mulert, 2001). Or perhaps, such behaviors may develop due to internalized feelings that one must thin to be considered pretty and popular. (Wertheim, et al., 1997). In a study examining influence of peers on dieting, results showed while 28.7% of average weight girls whose friends were not involved in dieting reported unhealthy weight control behaviors, 59.5% of those whose friends were very involved in dieting reported unhealthy weight control behaviors (Eisenberg, Neumark-Sztainer, Story & Perry, 2005). In addition, overweight girls were more likely to practice unhealthy weight control behaviors than girls who were moderately overweight, average weight, or underweight.

Hutchinson and Rapee (2006) found that girls within the same friend group were similar in their use of extreme weight loss behavior, binge eating, and dieting. Girls who identified their friends as significant influences showed higher rates of these behaviors. Likewise, girls who perceived thinness and dieting to be important among their friends were more likely to diet. There were, however, no shared similarities in concerns of body image within social groups. Additionally, results showed girls who did not belong to a social group had lower self-esteem and greater BMI, instances of extreme weight loss behavior, and body image concerns (Hutchinson et al., 2006).

Additionally, adolescents are affected by parents and the media. A longitudinal study conducted by McCabe & Ricciardelli (2005) examined the influential effect of peers, parents, and the media on body image, attitudes towards weight loss, increasing muscle, and strategies of extreme changes in body over time. Results showed that over a period of 16 months, boys and girls increased in participation of extreme strategies to change their bodies to more closely match a perceived ideal. The study also evaluated differences between girls and boys in the perception of the ideal and use of extreme weight-control behaviors. While girls showed an increase in body importance as they progressed through adolescence, boys showed a reduction over time. Additionally, boys had less of an increase in adopting extreme body change strategies than girls. Girls were more likely to receive messages to lose weight from peers and the media while boys received messages to gain muscle by mothers, fathers, and female friends. Interestingly, the primary sources of messages regarding weight or shame appeared to change over time. Girls were increasingly influenced to lose weight by female friends and the media, however, the media's influence on boys decreased over time. In relation to increasing muscles, boys had a decreased perception of messages from mothers, fathers, female friends and media while girls increased in perceived messages from mothers and female friends and decreased from media over time.

A study examined the influences of peers, parents and media particularly on adolescent boys ages 12-13. Of the boys studied, 17.5% were dissatisfied with their body size, 20% with their body shape, and 17.5% with their muscle tone. Boys were just as likely to lose weight as they were to gain weight and muscle to fit into the ideal. The primary messages indicating the need to eat less to lose weight and change body shape or

size were from mothers, sisters, brothers, and male friends. However, the highest number of messages about exercise to increase muscle size were from fathers and brothers. Some boys reported making social comparisons to male friends, brothers, fathers, and media personalities. Nineteen percent of boys making these comparisons felt negatively towards their own bodies (Ricciardelli, McCabe & Banfield, 2000).

Females are particularly more vulnerable to messages from the media in comparison to males. In a study conducted by Field et al. (2001), 69% of adolescents girls reported viewing the media influences their perception of the ideal body, 47% of which stated media consumption led them to want to diet and lose weight. On the contrary Ricciardelli et al. (2000) found males are less affected by the media and tend to view it merely as entertainment.

Lastly, there is also a genetic component to eating disorders. According to Klump McGue and Iacono (2000), genetics are responsible for about 50-83% of the variance observed in anorexia nervosa and bulimia nervosa. It was also observed that attitudes associated with these disorders such as weight preoccupations and concerns were also hereditary (Klump, McGue & Iacono, 2000). Two genes, serotonin 1D and delta opioid receptor, were observed to be linked to anorexia nervosa (Bergen, et al.,2003). Steiger et al. (2005) examined the relationship between the serotonin transporter (5-HTTPLR) and bulimia nervosa. Although the S allele was not associated with eating disorder symptoms, it showed a lower density of paroxetine binding sites, leading researchers to believe there may be a reduced response of selective serotonin uptake inhibitors. It is suggested that this dysregulation of serotonin may be an expression of genetic polymorphism as a result of extreme dieting seen in this population. In a study conducted by Branson et al. (2003)

assessing the genetic mechanisms of binge eating disorder, mutations were found in the melanocortin 4 receptor gene, which is believed to play a role in overeating and obesity (Faroqui et al., 2003). Although promising, the genetic contribution to eating disorders is not completely clear at this time.

Eating Disorder Diagnostic Criteria

Eating disorders are diagnosed using the Diagnostic and Statistical Manual of Mental Disorders (DSM), diagnostic criteria provided by the American Psychiatric Association (APA). As of May 2013, DSM 4th Edition Text Revision was used to diagnose individuals with eating disorders, however, the criteria has since been updated to DSM-V. The EDNOS category has been discontinued and revised into two categories: Other Specified Feeding or Eating Disorder (OSFED) and Unspecified Feeding or Eating Disorder (USFED). The OSFED category encompasses specific eating disorders that do not fall into the categories of anorexia nervosa, bulimia nervosa, and binge eating disorder, including atypical anorexia nervosa, subthreshold bulimia nervosa, subthreshold binge eating disorder, partial disorder, and night eating syndrome. Diagnosis of Unspecified Feeding or Eating Disorder is applied when symptoms are not specific to a particular disorder or there is not sufficient information available (American Psychiatric Association, 2013).

Changes have also been made to diagnostic criteria for anorexia nervosa and bulimia. Now, an individual can be diagnosed with anorexia nervosa without the presence of amenorrhea. Anorexia nervosa may also be diagnosed if body image disturbance or fear of weight gain is observed despite discrepancy from self-reports. In addition, the criterion of “significantly low body weight” has been adjusted to “less than minimally

expected" for children and adolescents. Changes made to the criteria for diagnosis of bulimia nervosa include the reduction of frequency of bingeing and purging to once per week as opposed to twice per week (American Psychiatric Association, 2013).

Changes were primarily made in the DSM-IV to reduce the prevalence of individuals assigned to the category "eating disorder not otherwise specified" (EDNOS). When applying DSM-IV in clinical settings, approximately 50% of individuals are diagnosed with EDNOS (Fairburn, 2007). In the community settings, this number increases to 70% (Machado, Goncalves & Hoek, 2013). Because individuals diagnosed with EDNOS suffer from similar symptom severity and persistence as those diagnosed with anorexia nervosa and bulimia nervosa, it is important that patients are properly and accurately diagnosed and treated (Thomas, Vartanian, & Brownell, 2009)

A study using prospective data collected over 6 years assessed the prevalence of eating disorders in male and female adolescents when applying DSM-IV-TR compared to DSM-V. Results showed the updated diagnostic criteria found in DSM-V led to fewer unspecified diagnoses and greater diagnosis of anorexia nervosa, bulimia nervosa, and binge eating disorder in female adolescents. Prevalence in male adolescents, however were not significantly different with the exception of at age 17 where higher prevalence was noted. Measures of depression, mental health and quality life were comparable in both DSM editions for male and female adolescents. Lastly, results indicate the transition from binge eating disorder to bulimia nervosa is common and binge eating disorder as well as partial disorder is predictive of developing bulimia nervosa later on in adolescence (Allen, Byrne, Oddy & Crosby, 2013).

Assessment and Physiological Effects

There are several significant medical complications of eating disorders. Bingeing is associated with similar consequences to obesity such as elevated cholesterol, blood pressure, and hyperlipidemia in addition to acute esophageal and gastric ruptures with large volume binges (NEDA). Physiological effects of purging include electrolyte imbalances, kidney stones secondary to dehydration, irreversible heart damage, and diffuse myositis. Forced vomiting can also cause dental erosion, parotitis, esophageal rupture, and Mallory Weiss tears. Individuals who restrict calories can suffer from malnutrition, affecting multiple areas of the body including the brain, heart, and bone. Complications include memory loss, impaired gastrointestinal function, osteopenia, and reduced heart function which may result in congestive heart failure, (Rome, 2012).

When assessing an individual for an eating disorder, is important to carefully obtain information of the patient's history and to conduct complete a physical examination. Often, the primary care physician will conduct a session with the adolescent and parent(s). During this time, the relationship between the child and parent is observed, taking notice of comfort level and whether the parent gives the child an opportunity to express his or herself. Depending on the clinician's judgment, the clinician may choose to complete a session with the child alone without a parent. A child may be more open when sharing information about their behavior if a parent is not present. It is especially important that rapport is established in this setting, creating an environment where the child feels safe disclosing sensitive information. The clinician should also assure the child that what is discussed is confidential and will not be shared with the parent. Questions asked by the clinician may be concerning whether the child

believes they are underweight, normal weight, or overweight, how they view their weight or shape and whether they would like to change it, and any insecurities (Walsh, Wheat & Freund, 2000). When obtaining dietary information, it can be helpful to speak to both the parent and child together to get a clearer picture. When asked about food choices and quantities, the patient may underestimate or overestimate, therefore it is valuable to have a parent who can provide a more objective measure. In a session with child and parent, the clinician can also observe what food challenges may be present within the household and the influence of a parent's food beliefs (Rome, 2012).

When completing a physical examination, height, weight and BMI should be obtained. Because some children and adolescents the process of obtaining a weight may evoke anxiety or trigger eating disorder attitudes or behaviors, the patient should be faced away from the number on the scale to avoid anxiety when being weighed. Consistency within the method of weighing may also help alleviate the patient's anxiety. Vital signs such as blood pressure and pulse are also taken. Due to the fact that some patients will alter their hydration status to influence their weight prior to a weigh-in, measurements of urine specific gravity, ketones, and proteinuria can help provide information regarding if the patient has overloaded on water or if dehydration is present. Additionally, the clinician must carefully monitor for parotitis, dental erosions, calluses on knuckles due to the repeated hitting on the teeth while purging, lanugo, and acrocyanosis. A thorough physical examination is particularly important because not all patients will exhibit all signs and symptoms. Additionally, severity of symptoms does not always correlate with medical complications. Someone who purges several times a day may not have abnormal

electrolytes, while someone who has not loss any weight can have dangerous medical complications such as hypokalemia or arrhythmia. (Rome, 2012)

Treatment Programs

The treatment of eating disorders involves a multidisciplinary team including a pediatrician, adolescent medicine specialist, therapist, family therapist, dietitian, and psychiatrist. The pediatrician plays an important role in coordinating the care plan between all disciplines. Due to the cognitive alterations such as emotional dysregulation, rigidity, and social difficulties occurring as a result of starvation, the repletion of nutrients is the first goal in treatment (Rome, 2012). The patient can then begin a treatment program for recovery.

Family-Based Treatment: The Maudsley Method

Few studies have addressed the topic of treatment for anorexia nervosa, as only 15 comparative trials have been completed and published within the past 20 years (Wilson, Grilo & Vitousek, 2007). Challenges accounting for this gap in research include the rarity of the disorder, medical complications that may require inpatient care, and prolonged time needed to achieve remission (Wilson et al., 2007). The Maudsley method, originating from Maudsley hospital in London, is a family based re-feeding program (Rome, 2012). This is an effective method of recovery for anorexia nervosa where patients participate in 10-20 counseling sessions with a clinician over a period of 6-12 months. It is recommended that the patient's family also be involved in the counseling sessions, known as conjoint family therapy. The first phase of treatment entails the parent taking control of the child's eating and weight with strategies learned from coaching. As the child complies with the parent's authority, external control reduces gradually. In the

final stages, the child is given age appropriate independence to resolve the eating disorder (Wilson et al., 2007)

A study by Russel et al.(1987), reported that among eighty adolescent patients participating in conjoint family therapy, 90% were symptom-free after 5 years. Several studies suggest the effectiveness of Maudsley method is limited to younger patients who are earlier in their illness. In a trial of family therapy in adolescents, those who had onset of symptoms within 8 months of treatment had significantly better outcomes compared to those who had symptoms for 16 months (Eisler et al., 2000).

In a study conducted by Lock et al (2010) the efficacy of family based treatment versus adolescent focused individual therapy on remission in anorexia nervosa patients was compared. Adolescent focused individual therapy focuses on improving self-efficacy, autonomy, and assertiveness in the individual while pairing with parent meetings to support the treatment. In the study, subjects who were age 12-18 years diagnosed with anorexia nervosa were able to achieve remission through both family based therapy and adolescent- focused individual therapy, however, results show the Maudsley method helped patients reach remission faster. In addition, the Maudsley method resulted in higher eating attitudes as demonstrated on Eating Disorder Examination scores, better BMI percentiles, and higher partial remission after 6 months. Promising outcomes were also found in a trial applying family based therapy where at the 4 year follow up the mean BMI of the patients was 20.6 and 90% of the patients had a return of their menstrual cycle (Lock, Couturier & Agras 2006). Implementation of family based therapy for one year in male and female adolescents ages 12-17 with anorexia nervosa resulted in increased mean %IBW, decreased EDE Restraint and Eating

Concern subscale scores, and two thirds of subjects regaining menstrual cycles (Loeb et al., 2007).

Cognitive-Behavioral therapy

An effective and commonly employed treatment for bulimia nervosa is cognitive behavioral therapy (CBT). In CBT, the focus is to challenge the patient's beliefs as they participate in behavioral experiments that work to eliminate dysfunctional thoughts and replace them with alternative beliefs. The origins of this strategy are founded on the understanding of the binge-purge cycle where the patient experiences weight or shape concerns leading to depression and an episode of bingeing, followed by guilt and shame, which worsens the original weight related concerns and further reinforces disordered eating. First, the behaviors of extreme dieting or weight control are explored through behavioral experiments intended to decrease the frequency of occurrence of the behaviors. Then, the cognitions underlying the eating disorder are addressed, including fear of weight gain. The ultimate goal is to normalize eating patterns and thoughts of the patient. CBT is facilitated in 15-20 sessions over a period of approximately five months (Fairburn, 1993). In all cases, an estimated 30%-50% cease binge eating and purging and the remainder see an improvement in symptoms, discontinue treatment, or fail to respond (Wilson et al., 2007). Individuals participating in CBT have significantly better outcomes than those who do not complete treatment at all. According to Dingemans et al. (2007), after 15 sessions of CBT, 63% of patients receiving treatment achieved abstinence from binge eating behaviors compared to 18% of patients who did not. Hilbert et al. (2012) conducted a trial on ninety adolescents with binge eating disorder to determine the efficacy of CBT. At the four year post-treatment follow up, recovery and

remission rates of binge eating symptoms were 52% and 72% respectively. This demonstrates the success in maintaining results over the long term. It is, however, noted that the recovery rates between post treatment and the one year follow up to the long-term follow up (Hilbert et al., 2012).

Dialectal behavioral treatment therapy

Dialectical behavioral therapy (DBT) is a strategy used in the treatment of bulimia and binge eating disorder. There are four areas of focus including mindfulness, distress tolerance, emotional regulation, and interpersonal effectiveness. This treatment method is based on the understanding that the behaviors of these eating disorders are performed in an attempt to influence, alter, or regulate painful emotions. Along with this is the acknowledgement that two different views can both be true. For example, a bulimia nervosa patient may be disturbed by their symptom of vomiting while at the same time find relief from it. In addition, in DBT, the patient learns alternative coping mechanisms, which include emotional regulation training, validation of self-worth, mindfulness skills, and how to make meaning to help facilitate acceptance (Hay, Bacaltchuk, Stefano, Kashyap, 2009). In a study by Telch, Agraas and Linehan (2001), binge eating patients completing DBT, 67% of patients were abstinent at the 3 month follow up, however abstinence was reduced to 56% at the 6 month follow up. Nearly all patients, 89%, continued to apply principles learned through therapy at the 6 month follow up (Telch et al., 2001). When compared to active comparison group therapy (AGGT), DBT had significantly better outcomes in abstinence rates, resulting in 67% abstinence while AGGT yielded 33%. After the 12 month follow up, however, the differences in outcomes were smaller and not statistically significant (Safer, Robinson & Jo, 2010).

Robinson and Safer (2012) studied the moderators affecting the efficacy of DBT compared to AGGT. Results show the factors having the greatest impact on response to treatment are the presence of avoidant personality disorder and the age of onset of overweight and dieting. Individuals with avoidant personality disorder responded more positively and had fewer binge eating days than those treated with AGGT. Additionally, participants with an earlier onset of overweight and dieting had poorer outcomes than participants with later onset when treated with AGGT compared to DBT (Robinson & Safer, 2012).

Prevention programs

Because the onset of eating disorders commonly takes place in early adolescence, it is important that prevention be targeted to this particular population. The most widely implemented strategy for prevention of body dissatisfaction and disordered eating in adolescents is psycho-education (Littleton & Ollendick, 2003). Through this approach, prevention programs have chosen to focus on several different areas. One program aimed at increasing the knowledge of healthy eating, fitness and nutrition in adolescents (Baranowski & Hetherington, 2001) while others have focused on educating on healthy weight loss and weight management strategies (Killen et al., 1993). The prevention program developed by Bawaronski et al (2001) sought to educate adolescents of eating disorder characteristics, warning signs, and negative outcomes. These psycho-education programs are based on the assumption that eating disorders such as binge eating disorder and restrictive dieting are developed as a result of the lack of knowledge of healthy and nutritious eating and weight management strategies. It is hypothesized that if adolescents are well informed of eating disorders, they will be less likely to develop them and those

currently practicing disordered eating behaviors are unaware of their potential outcomes (Littleton et al., 2003).

Other prevention programs focus their efforts on addressing the drive for thinness. Grave, De Luca and Campello, (2001) highlighted the pressure to be thin by examining the role of the media's influence on body image. The stereotypes of men and women created by society also may be discussed as a preventative approach to developing a positive body image along with providing adolescents with ways to cope with the pressures (O'Dea & Abraham, 2000). Because self-esteem is associated with the development of eating disorders, approaches aimed towards building positive self-esteem may also prove to be beneficial in prevention (Shisslak et al., 1998).

According to several studies, prevention-based programs have shown to increase knowledge of nutrition, healthy eating, and symptoms of eating disorders, however often show little effect on body image (Littleton et al., 2003). A large study conducted by Killen et al (1993) in four California middle schools implemented 18 sessions discussing healthy eating, healthy weight management strategies, and ways to challenge pressures to be thin. As a result of the intervention, a 49% improvement in body image satisfaction was observed compared to no improvements in controls. In subjects identified as high risk from the pretest completed prior to intervention, a 78% improvement was seen in body image satisfaction. Another study observing the efficacy of prevention programs found there was a 48% improvement in body image satisfaction, which was maintained a the 6 and 12 month follow ups (McVey & Davis, 2002). Unfortunately, the control group also saw similar improvements, posing the question of whether effects were attributable to factors not related to the program.

Stice et al (2008) conducted a large study where adolescent girls with body dissatisfaction were randomized to one of four prevention programs to assess their efficacy and long term effects. Subjects were assigned to one of the following groups: dissonance intervention, healthy weight intervention, expressive writing control intervention, or assessment-only control intervention. In the dissonance intervention, subjects participated in verbal, written and behavioral exercises challenging the thin ideal. The healthy weight intervention consisted of encouraging participants to make healthy lifestyle changes with the intention of reaching a healthier weight and greater body satisfaction. Subjects wrote about emotionally charged topics in three 45-minute sessions in the expressive writing intervention control. Lastly, subjects assigned to the assessment-only control intervention did not receive any intervention. The dissonance intervention resulted in a 60% decrease in risk of clinically significant eating pathology compared to the assessment only control intervention. Reduction on the onset of bulimic pathology specifically is also demonstrated in results of the dissonance intervention. In addition, the healthy weight control intervention showed a 61% reduction in the future onset of eating pathology. These effects were sustained at the 3-year follow up. It is of importance to note the greatest effects leading to reductions of initial symptoms and risk factors were seen earlier in follow ups, however greatest preventive effects were observed in later follow ups. This evidences the need for long-term follow up to assess the effects of prevention programs. To the researcher's knowledge, this was the first eating disorder prevention program to result in a reduction in the onset of eating pathology and with results being maintained over the long term.

Another promising eating disorder prevention program is ATHENA (Athletes Targeting Healthy Exercise and Nutrition Alternative). ATEHNA is a school based program targeting young female athletes in promoting healthy eating and fitness practices and educating on harmful behavior alternatives. An important component to this program is its peer based approach. In a study conducted by Elliot et al. (2004), the ATHENA curriculum was implemented in 18 high schools. Participants received eight 45 minute classroom sessions during their regularly scheduled training times. Sports nutrition, fitness, drug use, and depression, and media influence were among the topics discussed. Athletes participating in ATHENA demonstrated decreased diet pill use and vomiting for weight loss and increased healthy eating behaviors and media literacy.

To improve the outcomes of prevention-based programs on body image and disordered eating, Littleton et al. (2003), suggests implementation of comprehensive programs spanning an extended period of time, targeting different levels of symptomology, and changing the social environment in which the individual is placed to facilitate behavior change. Acknowledging the important role parents and school personnel can play in prevention is also worth noting. Students view educators and other members of the staff at school as role models and thus they can help to shape children's attitudes and behaviors by demonstrating healthy eating and being an example of positive self-esteem and body image. Parents can also do the same, in addition to being able to recognize an eating disorder in their child if educated to the warning signs to look for (Littleton et al., 2003).

Eating disorders are mental illnesses with serious medical consequences. Although more research is warranted in determining their etiology, they have been found

to have societal, social, and genetic implications. Existing treatment programs have shown to be promising, however, it is emphasized that prevention is crucial in ultimately reducing eating disorders.

CHAPTER III

METHODOLOGY

Since adolescents may be at increased risk of developing eating disorders or disordered eating behaviors, it is important to focus efforts toward developing a prevention program to address this potentially vulnerable population. The "Nourishing the Adolescent Mind and Body" curriculum targets male and female adolescents age 11-14y in grades 6 to 8 in the San Fernando Valley region of Los Angeles County. Topics covered within the curriculum include self-esteem, body image, nutrition, media literacy, and overall health with the intention of promoting knowledge, awareness, and prevention of eating disorders. The following sections address the development, intended delivery, and evaluation of the "Nourishing the Adolescent Mind and Body" curriculum.

Curriculum Development

The "Nourishing the Adolescent Mind and Body" curriculum was created on the basis that adolescents are at a heightened risk for developing eating disorders. With this in mind, factors contributing to the development of eating disorders were explored. Among the primary factors are self -esteem, body image, and media literacy. As a result, the curriculum focused on these and other aspects of prevention to educate adolescents of eating disorders. The curriculum was designed as a multifaceted program encompassing several different areas for optimal outcomes.

Lesson 1 of the "Nourishing the Adolescent Mind and Body" curriculum provides an introduction to foundational concepts of body image, self-esteem, and nutrition that are further explored in the subsequent lessons. The intention of this introductory lesson is to gauge the students' present knowledge and provide a framework that will assist in

understanding the following lessons. In lesson 2, students are educated on how to create a balanced diet. Here, MyPlate is introduced as a guideline to help put together a balanced meal that includes all components. Each food group defined in Myplate is discussed in terms of its role and nutrients. At the conclusion of the lesson, students are asked to share examples of a balanced plate. A "Build a healthy meal" handout is provided for later review and reinforcement of the concepts taught. Lesson 3 educates students on the effects of the media on body image. In this lesson, messages of the standard of beauty in the media are discussed as well as how an individual's body image can be affected by them. Students are challenged to reflect on the discrepancies between the standard of beauty imposed on us by the media and reality. Accompanied with this lesson is a "10 steps to positive body image" handout that gives students tips on how to develop a positive body image. Lesson 4 introduces and explores the concept of intuitive eating where all foods fit. Students are taught to listen to their bodies for hunger and fullness cues to guide them as they eat. Also discussed is determining whether psychological or physiological hunger present. Students then participate in an activity where they are asked to apply principles of intuitive eating to eat a piece of chocolate. Next, in lesson 5 eating disorders are discussed. This lesson educates students on eating disorders anorexia nervosa, bulimia nervosa, and binge eating. The lesson covers characteristics of each disorder in addition to warning signs and prevention. Myths associated with eating disorders are also discussed. At the conclusion of the lesson, a "tips for kids on eating well and feeling good about yourself" handout is provided and students are asked to sign a "No weigh declaration of Independence from a weight-obsessed world" contract agreeing to live free from the pressures of weight from society.

Lesson 6 provides students with insight on how to read and understand a food label. Contrary to traditional label reading, students are challenged to view the product as whole including the way it is advertised and colors and descriptions used. Students then form small groups and engage in an activity comparing food labels of various products. In lesson 7, students learn the difference between whole and processed foods. Consistent with the all foods fit message, the benefits of choosing whole foods are emphasized while noted processed foods may still be enjoyed in moderation. Following the lesson, the "parts of a whole grain seed" worksheet is completed. Lastly, lesson 8 focuses on overall health, highlighting and dispelling commonly believed nutrition myths. In addition, risks of being underweight and overweight and how they may potentially relate to fad dieting is discussed.

Topics selected for the curriculum reflect risk factors leading to eating disorders such as body dissatisfaction (Liechty et. al, 2013), media influence (Field et al., 2001), and the lack of knowledge of healthy eating and weight management strategies (Littleton et. al, 2003). Information obtained to develop the curriculum was acquired from trusted, reliable sources.

The curriculum was designed to address a variety of learning styles so every student may comprehend and benefit from the lessons. Each lesson is delivered through a PowerPoint presentation and reinforced with a handout and/or an activity. Handouts were obtained from websites and organizations distributing educational materials. Activities implemented are clearly outlined in the curriculum to be replicated by another facilitator. Class participation and discussion is highly encouraged to facilitate application of critical thinking skills and instill newly learned principles.

To assess and measure the effect of the curriculum, a pre-test will be administered prior to each lesson as well as a post-test following the lesson. The pre-test and post-test will be identical to allow the change in response to be measured. Each pre/post-test will consist of five questions regarding the particular lesson taught. The question format is true/false, multiple choice, or fill in the blank.

Curriculum Delivery

The "Nourishing the Adolescent Mind and Body" curriculum is designed as an 8-month curriculum, with each of the in 8 lessons taught on the first week of each month, throughout the duration of the school year. Each lesson was created to last approximately 30-35 minutes and implemented during the general education health class period. All lessons are supplemented with a PowerPoint presentation and thus it is assumed the teaching space will be equipped with a computer and projector. Additionally, lessons are accompanied by handouts and/or activities. The curriculum was created to encourage class participation and discussion to promote an environment where peers can learn from each other and possibly be introduced to the opinions of another. This also helps to build unity and respect for differences within the classroom. Successful intervention programs demonstrate the effectiveness of interactive interventions over didactic psychoeducational approaches in engaging and helping participants to internalize concepts (Shaw, Stice, Becker, 2009). It is necessary that lessons are taught by a qualified individual such as a Credentialed Health or Nutrition Teacher, or a Registered Dietitian. Because of the sensitive nature of the topics discussed, the instructor must demonstrate sensitivity in addition to a knowledge and understanding of the subject matter. Middle school students located in the San Fernando Valley are the target for the curriculum. The curriculum

incorporated California State Standards for Health. Topics discussed in this curriculum are: body image, self-esteem, creating a balanced diet, media literacy, intuitive eating, understanding food labels, fitness, and developing healthy lifestyle behaviors for overall health.

Formative Evaluation

Formative Evaluation of Curriculum

The "Nourishing the Adolescent Mind and Body" curriculum is comprised of eight lessons complete with PowerPoint presentations, handouts, and activities (Appendices D & E) This curriculum is an education-based program, thus warranting an evaluation by a panel of experts to direct improvements and modification of the program prior to its implementation.

Evaluation by Experts

The evaluation panel includes faculty and professionals with backgrounds and training in nutrition and dietetics, psychology, education, and adolescent health. Contributions made by the panel of experts assist in its refinement and achieving accuracy and validity of the curriculum.

Expert Evaluation Procedures

The panel of experts was selected to evaluate the curriculum based on their extensive knowledge and experience working with eating disorders. Each member of the panel received a copy of the "Nourishing the Adolescent Mind and Body" curriculum on March 10th, 2014. Members of the panel were given two weeks to complete and return the Formative Evaluation Survey. No compensation was provided to the expert panel for completing the evaluation of the curriculum.

Expert Evaluation Measurements

The panel of experts evaluated the "Nourishing the Adolescent Mind and Body" curriculum by completing the Formative Evaluation Survey (Appendix C), consisting of two sections. Part I of the evaluation inquires about the characteristics and background of the panel. This includes age, gender, ethnicity, area of expertise, educational level, current position of employment, and experience with the particular population. Part II is the evaluation of the curriculum and asks the review to rate several items on a scale from 1 to 5, where 1=Strongly Disagree, 2=Disagree, 3= Not sure, 4= agree, 5= Strongly Agree. Following these items is a yes or no question asking the reviewer to state whether he or she would recommend the curriculum. Finally, a free response section is included where the reviewer is given the opportunity to provide additional comments, criticisms, or recommendations.

CHAPTER IV

RESULTS

Chapter IV presents the results from the formative review of the expert panel. The purpose of this project was to develop a curriculum, including information on nutrition, self- esteem, body image and overall health to promote the awareness and prevention of eating disorders in adolescents.

Expert Characteristics

Each member of the panel is a Registered Dietitian with extensive nutrition training and experience working with the eating disorder population. Furthermore, each panel member is female, White, Non-Hispanic, and has experience working with adolescents with and without eating disorders. The following paragraph includes more detailed information about each panel member, “A”, “B”, and “C”.

Panel member “A” is in the age range of 30-39 years old. This expert holds a PhD in Nutritional Biology, a Masters of Science in Exercise Physiology, and is currently employed as a University Professor. Panel member “B” is in the age range 60-69 years old. She is an expert in education, curriculum development, and health and holds an EdD in Organizational Leadership and Masters of Science in Nutrition and Food Science. Additionally, panel member “B” is currently employed as a University Professor. Panel member “C” is in the age range 20-29 years old. She is an expert in adolescent health with a Masters of Science in Nutrition, Dietetics, and Food Science. This expert is currently employed at a residential eating disorder treatment facility.

Results from the Evaluation by Experts

The results from the additional comments, criticisms, or recommendations section from the formative evaluation survey of the "Nourishing the Adolescent Mind and Body" curriculum are summarized below. A full review of comments can be found in Appendix C.

- Panel Member "A" stated the curriculum was "great work" in providing important, relevant information that is age appropriate with interactive activities. The expert also recommended including citations and references to the end of each lesson plan. Overall, the expert recommended the use of the curriculum. The following items were recommended for the current curriculum.
    - Lesson 1: What does "procedure" refer to? Are these the post-test items?
    - Lesson 5: Will 35 minutes be adequate time to cover all the information in this lesson?
- Furthermore, the expert suggested the following additional topics to be included in any future curriculum:
    - Fad diets-addressing common diets and clarifying why they are unhealthy
    - Dietary supplements-discussing the inappropriate use of and health risks associated with them.
    - The Female Athlete Triad- covering the issues involved with athletes and sports groups with heightened risk due to the pressure of thinness/leanness
- Panel Member "B" commented that the curriculum was very simple and could easily be implemented by an instructor. However, the expert expressed concern

that the curriculum is perhaps too simplified to be considered age appropriate. This expert responded “maybe” when asked if the curriculum would be recommended on the formative evaluation survey and stated would need to see the curriculum in action before its recommendation. Panel Member “C” applauded the curriculum’s comprehensiveness and concepts introduced. Additionally, the expert suggested some recommendations to further strengthen the curriculum.

- Lesson 1:Consider including binge eating disorder
- Lesson 2: Be aware of any messages that may conflicting and avoid calorie talk
- Lesson 6 and 7: Approach these topics with caution as they can be triggering to disordered eating
- Lesson 8: Recommend removing obesity statistics as this can be shaming
- Focus on being concise in wording on slides
- Be aware of using labeling and categorizing food

The following table summarizes the responses from the formative evaluation by the panel of experts.

Strongly disagree=1, Disagree=2, Not sure=3, Agree=4, Strongly Agree=5

Curriculum evaluation item	Average score
1. The curriculum topic was well researched and well displayed	4
2. The curriculum was clear and concise	4.2

3. The curriculum was presented in an effective way	4.3
4. The curriculum promoted class participation	4.3
5. The curriculum was appropriate for its target audience	4.3
6. The curriculum was easy to understand	4.5
7. Lessons, handouts and other accompanying materials supported the curriculum appropriately	4.3
8. The material used in the curriculum was cited and referenced properly	4

CHAPTER V

DISCUSSION

This chapter revisits the problem and purpose on which the proposed curriculum was developed. In addition, the implications and conclusions drawn from results from the formative review are discussed. The purpose of this project was to develop a curriculum aimed at educating adolescents age 11-14y on principles of nutrition, body image, and self-esteem with the goal of increasing awareness of and preventing eating disorders.

Summary of the Problem and Purpose

Adolescence is a vulnerable time for children as they transition into young adulthood. They are faced with pressures in many areas of their life and are influenced by messages from family, peers, and the media. It is during this pivotal time that adolescents are also most susceptible to developing eating disorders (Garfinkel et al., 1995). Risk factors related to the onset of eating disorders include low self-esteem, body dissatisfaction, dieting, media and societal pressure (Liechty et al., 2013, (Polivy et al., 2002). Influence from peers and the media can be particularly powerful (McCabe et al., 2005). Because eating disorders are life threatening mental illnesses that affect 0.1% of adolescents age 8-15y, prevention programs are vital (Merikangas et al., 2010). "Nourishing the Adolescent Mind and Body" is a prevention program targeting the risk factors associated with the development of eating disorders among this critical age group.

Curriculum Modifications

After the panel of experts reviewed the curriculum and provided feedback, the content was revised to address the panel's main comments. This section outlines the major changes made to the curriculum after the review.

According to Panel Member “A”, the language of the chapters required some adjustments. Therefore, the recommended edits were made to refine the wording, promote clarity, and ensure the curriculum accomplished its intended aims. Panel Member “A” also recommended that each lesson include a reference list, which would contain citations for the content used within each lesson and the citations of handouts.

Panel Member “B” commented that it was necessary to see the curriculum in action before recommending its implementation. This panel member also stated the material was very simple and perhaps too simplified for the age group. However, no major revisions were noted.

Panel Member “C” noted that lesson 1 did not introduce binge eating disorder. Therefore, since anorexia nervosa and bulimia nervosa are introduced in this lesson, binge eating was also included for consistency. Panel Member “C” commented that lesson 2 contains information that may be contradictory in relaying the “all foods fit” message. Instead of stating “choose fruits over fruit juice”, which implies one is superior to the other, the language was adjusted to read, “aim to make most of your fruit intake come from whole fruits”. The benefits of choosing whole fruits over juice are also emphasized. One stated benefit was that fruits contain less sugar and calories. However, Panel Member “C” pointed out that it is not appropriate to discuss calories, as this leads to the labeling of food as good or bad, which has the potential to trigger an eating disorder. Therefore, this benefit was removed.

Lessons 6 and 7 cover topics that can also be triggering to disordered eating. Lesson 6 discusses food labeling while lesson 7 discusses whole and processed foods. Panel Member “C” cautioned that these topics can be counterintuitive and cause the

student to rely less on intuitive eating. These lessons were altered to more closely match the "all foods fit" message. For example, the lessons teach students to view food labels and products more holistically by not only looking at the label but also reflecting on how other aspects such as colors and claims affect perception. Additionally, it was reinforced that although whole foods have greater health benefits than processed foods, it is acceptable to enjoy processed foods in moderation. Likewise, students are taught that foods should not be labeled "good" or "bad" and what we eat does not affect who we are as people.

Lesson 8, which discusses nutrition myths, was revised to place less emphasis on obesity. The lesson previously began with a discussion of the obesity epidemic, providing statistics and figures chronicling the increase of overweight and obese individuals over the years. However, it was pointed out by Panel Member "C" that the focus on obesity can be shaming and can actually be counterproductive by triggering disordered eating. The intention of this lesson was redefined by removing the figures and extensive information on obesity. Also, risk factors and health complications associated with being underweight were added to the lesson. These changes better illustrate to students the dangers of each weight extreme and importance of adopting healthy behaviors and practices.

Recommendations for future curriculum

Feedback from the panel of experts assisted in maintaining the intended messages to promote positive body image, self-esteem, and nutrition knowledge with the aim of preventing eating disorders. Panel member "A" recommended three additional topics are included in a future curriculum. This expert believed it was important to include

information on fad diets, dietary supplements, and the female athlete triad to the present material to improve the comprehensiveness of the curriculum. This suggestion is further validated through research.

In a study conducted by Grigg, Bowman, and Redman (1996) of 869 females ages 14-16 years old, 57% reported practicing unhealthy weight loss behaviors. Of those practicing unhealthy weight loss behaviors, 36% engaged in extreme weight loss practices with crash dieting and fasting being the most commonly used methods, 22% and 21% respectively. Overall, 12% of subjects were observed to have distorted body image. Factors correlated with unhealthy weight loss behaviors included the media pressure to fit the "ideal" body type, pressure from peers, and knowledge deficits of the potential harm of such practices (Grigg, et al., 1996). Since dieting and unhealthy weight reduction methods are often observed prior to the onset of eating disorders, education on this particular topic can play an important role in prevention (Polivy & Herman, 1985). Although fad dieting is briefly covered in lesson 8, the expert suggests providing more information on this subject discussing common fad diets and why they are unhealthy methods of losing weight. Adolescents are likely to be introduced to fad dieting through the media or more directly by peers or family members. For this reason, it is important they are provided with the resources to make informed choices about healthy weight maintenance practices.

Inclusion of the Female Athlete Triad is also recommended for a future curriculum. This is referred to as the relationship between energy availability, menstrual function and bone mineral density that may lead to eating disorders, osteoporosis, and amenorrhea (ACSM, 2007). Female athletes in all competitive sports are at risk for

developing this syndrome; however, athletes participating in sports emphasizing thinness are at even greater risk (Brownwell & Rodin, 1992; Sherman & Thompson, 2004). Sports with high risks for developing the female athlete triad include gymnastics, ballet, figure skating, cheerleading, swimming, diving, and distance running. Such sports may place emphasis on thinness or a small frame for a variety of reasons whether it is for appearance or performance. However, such pressure to maintain a particular shape or size can lead to disordered eating (Sherman et al., 2004). A study conducted by Byrne & McLean (2002) found there was a higher prevalence of eating disorders among male and female elite athletes compared to the general population. Elite athletes participating in sports emphasizing lean, thin builds were particularly at risk. Eating disorders were evidenced in 31% of the females competing in "thin build" sports compared to only 5.5% in the control population (Byrne et al., 2002). Because there is an emphasis on physical activity and its benefits in maintaining good health it is important that the extremes of fitness are also addressed.

In a study of 333 male and female adolescents ages 13-19, 42% reported use of multivitamin and mineral preparations (Bell, Dorsch, McCreary & Hovey, 2004). Adolescents who were more physically active believed supplements had performance enhancing benefits. The type of nutritional supplements consumed varied by gender. Males were more likely to take performance enhancing products as females were more likely to take herbal supplements or diet pills for weight management. Aside from multivitamins, protein supplements, and weight management products, subjects were unsure of benefits of nutritional supplements such as creatine, L-carnitine, and androsterone (Bell et al., 2004).

Overall, 68% of the adolescents studied were potential users of nutritional supplements that may offer no benefit to them (Bell et al., 2004). Knowledge and beliefs were also measured. Scores indicated that approximately half of the population believed protein supplements had performance enhancing capabilities while 37% reported they were not sure (Bell et al., 2004). Adolescents are susceptible to misinformation from peers, coaches, and media sources. Furthermore, research does not support the use of these supplements for performance enhancing benefits, especially in adolescents (Metzl, 1999). This lack of knowledge of dietary supplements demonstrates the need for this population to be provided with education regarding this topic.

Limitations

Although the curriculum was well thought out and carefully reviewed, several limitations should be addressed. First, the curriculum was developed for implementation specifically among adolescents in the San Fernando Valley. Therefore, only a particular population was targeted and the curriculum may require modification prior to implementation to adolescents living in other regions.

The panel of experts was comprised of qualified professionals who provided valuable feedback in the formative review of the curriculum. However, the similar areas of expertise and experience working with the target population among the panel of experts should be noted. Including other health professionals, in addition to Registered Dietitians, belonging to the multidisciplinary treatment team, such as psychologists and psychotherapists, may prove beneficial in the review of the curriculum.

Littleton et al. (2003) emphasizes the importance of implementation of a prevention program that extends over the long-term greater than 6-12 lessons.

"Nourishing the Adolescent Mind and Body" is a curriculum consisting of 8 lessons taught over one school year. To improve the outcomes of this curriculum, perhaps more lessons can be included with increased frequency of two lessons taught per month. Furthermore, methods of evaluating targeted outcomes of this population can be improved. In the current curriculum, a post test and pretest are administered at each lesson to measure the students' knowledge at baseline and following the lesson. These tests evaluate knowledge regarding the lesson content, however they don't assess other variables such as self-esteem, body image, or eating attitudes and behaviors. Administering the Eating Attitudes Test 40 (EAT-40) and Eating Disorders Inventory (EDI) on the first day of instruction would provide student's baseline scores. The EAT 40 is a 6-point, forced choice survey with 40 items that measure symptoms and anorexia nervosa (Garner & Garfinkel, 1979). EDI is a self-report questionnaire that assesses the cognitive, affective, and behavioral aspects of anorexia nervosa and bulimia nervosa (Gamer & Olmsted, 1984). These surveys have both been tested for reliability and validity (Maloney, McGuire, Daniels & Specker, 1989). According to Espinoza et al. (2012), there is a need for continued education, as the benefits of an eating and body image disturbance prevention program were shown to decrease between the 7th and 30th month follow-up session. Therefore, a follow-up the EAT 40 and EDI could be administered one year following the prevention program to evaluate the potential long-term effects.

Lastly, the curriculum was designed to be implemented in a coed classroom of both male and females. Although according to Espinpza et al. (2013) who states this can have a positive effect on learning, this may also serve as a limitation. Individuals within

this age group are often insecure about their bodies and discussion of sensitive topics such as those included in this curriculum may promote heightened insecurity, preventing students from being open and honest. Therefore, it may be beneficial to administer the curriculum separately by gender to facilitate a comfortable environment that encourages open dialogue.

Implications

Students participating in the "Nourishing the Adolescent Mind and Body" eating disorder prevention program will receive information intended to improve self-esteem, body image, and knowledge of harmful versus healthy practices. It is anticipated that this curriculum will promote healthy eating behaviors and attitudes leading to a reduction in risk of developing eating disorders in adolescents. Participants will be introduced to topics that encourage overall health such as how to build healthy meals, principles of intuitive eating, media literacy, and characteristics as well as health implications of eating disorders. Due to the interactive nature of each lesson, it is expected that students will be engaged with the delivered material, leading to greater outcomes (Shaw et al., 2009)

The formative evaluation of the curriculum conducted by the panel of experts assisted in ensuring that the curriculum accomplished its intended goals while acknowledging the uniqueness of the target population and sensitive nature of the material.

Conclusion

"Nourishing the Adolescent Mind and Body" was designed to empower and provide adolescents with the tools they need to develop healthy behaviors. As demonstrated in this project, an adolescent eating disorder prevention program such as

this is particularly important as this vulnerable population embarks on the journey of self-discovery. The goal is for each adolescent participating in this prevention program to learn how to appreciate and take care of their bodies, lessons that will last a lifetime, in hopes of diminishing eating disorders.

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Appendix A
"Nourishing the Adolescent Mind and Body" curriculum

Lesson: Introduction to body image, self esteem and nutrition

Grade Level: 6^{th}- 8^{th} grade

Content Area: This lesson will introduce students to the basic nutrition principles and familiarize students with body image and self esteem issues found in adolescents and young adults. Students will be provided with an overview of the topics to come in following sessions.

Standard:
CA Nutrition and physical activity 2.2.N Evaluate internal and external influences on food choices.
CA Nutrition and physical activity 1.9.N Analyze the harmful effects of engaging in unscientific diet practices to lose or gain weight.
CA Mental, emotional and social health 1.3.M Identify qualities that contribute to a positive self-image.
CA Mental, emotional and social health 1.5.M Recognize diversity among people, including disability, gender, race, sexual orientation, and body size.

Objective:

- Students will be able to determine their familiarity with body image and self esteem issues
- Students will be able to identify two types of eating disorders
- Students will gain an understanding of the overview of the nutrition education sessions

Materials: Powerpoint

Time: 35 minutes

Introduction/ Anticipatory Set:
Due to the media, environment, and other influences, adolescents and young adults may become self conscious of their bodies and appearance. As a result of this, individuals may develop a low self esteem or negative body image. Not only do these individuals suffer from low self esteem and a negative body image, but in some instances these feelings of inadequacy can lead to disordered eating and related illnesses such as anorexia and bulimia. It is important for adolescents and young adults to be conscious of these issues and engage in thoughts and behaviors that encourage and promote a positive body image and healthy self esteem.

Procedure:
1. How would you define body image?

a. Body image is how you view your physical self — including whether you feel you are attractive and whether others like your looks

2. What is self esteem?

a. Self esteem is how much you feel you are worth and how much you feel other people value you

3. How are body image and self esteem related to each other?

a. A person's body image can affect a person's self esteem. If a person has a negative body image, it is likely they will also have a low self esteem. This is also true in the reverse. A person having a positive body image is likely to have a high self esteem.

4. How can a person's body image be affected?

a. The media
b. Family
c. Friends
d. Peers
e. Teammates

5. What sorts of problems could happen when people have body image issues?

a. Anorexia nervosa
b. Bulimia nervosa
c. Binge eating disorder
d. Low self esteem

6. What role does nutrition play in body image and self esteem?

a. Practicing an all foods fits motto will help individuals to know that all foods are good in moderation. It is okay to enjoy your favorite foods in moderation. You do not have to feel bad about eating foods you enjoy. Also, understand the foods you eat should not change the way you feel about yourself.

Closure/ Conclusion: Adolescents and young adults receive a great deal of pressure from a variety of sources regarding different issues, including their image. Such pressure can negatively affect a child's body image and self esteem. By emphasizing all foods fit and the importance of developing a strong self worth students will have greater confidence and be more likely to have a positive body image.

Next lesson: Creating a balanced diet

Extended Activities: Home and school connection

References:

http://kidshealth.org/teen/food_fitness/wellbeing/body_image.html

Lesson # 2

Lesson: Creating a balanced diet

Grade Level: 6^{th}-8^{th} grade

Content Area: This lesson will discuss the components of a balanced diet and how to create balanced meals

Standard: CA Nutrition and physical activity 1.2.N Research and discuss the practical use of current research-based guidelines for a nutritionally balanced diet.
CA Nutrition and physical activity 1.4.N Describe dietary guidelines, food groups, nutrients, and serving sizes for healthy eating habits.
CA Nutrition and Physical Activity 1.7.N Describe the benefits of eating a variety of foods high in iron, calcium, and fiber.

Objective:

- Students will be able to identify all components of a balanced meal
- Students will be able to provide examples of each food group
- Students will be able to apply concepts to create a balanced meal

Materials: Powerpoint presentation, Build a healthy meal Handout

Time: 35 minutes

Introduction/ Anticipatory Set:
Ask students if they are familiar with MyPlate. What is it used for? How can it help individuals to eat healthy?
Oftentimes people wonder how much of which foods they should be eating. My plate is a tool that helps consumers to answer these questions. It provides a visual of a plate that allows the consumer to see what their plate should ideally look like. By using MyPlate as a model, students can build a meal that is healthy and balanced.

Procedure:
What are the 5 food groups?
Vegetables, Fruits, Grains, Protein, and Dairy

Refer to Myplate and point out each food group

What are some examples you can give of each food group?

1. Vegetables
    a. Contain many vitamins and minerals- important to choose a variety of vegetables because each provide different nutrients-Orange, red, dark leafy greens, purple
    b. Contain fiber to help keep us full

2. Fruits
    a. Like vegetables, fruits also have many vitamins and minerals, along with fiber
    b. Choose whole fruits over fruit juice because they contain less sugar and calories. Also, whole fruits have fiber.
    c. Half of your plate should be made up of fruits and vegetables
3. Grains
    a. Choose whole grains over refined- there is a greater amount of nutrients and fiber

Does anyone know what refined and enriched grains are? What's the difference between the two?

    b. Refined grains- vitamins and minerals are removed during the processing
    c. Enriched grains- the vitamins and minerals that are removed during the processing are added back in
    d. Try to make at least half of grains whole
    e. Your plate should be about ¼ grains

4. Protein
    a. Foods with protein help to build and repair tissue and muscles
    b. Choose lean and low fat meats
    c. Minimize processed meats such as lunch meats, as they are high in sodium
    d. Your plate should be about ¼ of protein rich foods

5. Dairy
    a. This group is made up of foods that are high in calcium
    b. Calcium is necessary to build strong teeth and bones
    c. Try to choose 1%, fat free milk, or water instead of sodas or sugary drinks

Closure/ Conclusion:

1. *Ask for volunteer to create a balanced meal by applying the MyPlate principles learned using food models.*
2. Next Lesson: Body image and the media

Extended Activities:

1. Practice creating balanced meals that include all food groups at home and school.
2. Visit http://www.choosemyplate.gov/

References:

http://kidshealth.org/teen/food_fitness/dieting/myplate.html#

http://www.choosemyplate.gov/food-groups/downloads/TenTips/DGTipsheet7BuildAHealthyMeal.pdf

Lesson # 3

Lesson: Body image and the media

Grade Level: 6^{th}-8^{th} grade

Content Area: This lesson will discuss the media's influence on body image

Standard: CA Nutrition and physical activity 2.2.N Evaluate internal and external influences on food choices.
CA Mental, emotional and social health 1.5.M Recognize diversity among people, including disability, gender, race, sexual orientation, and body size.
CA Personal and community health 2.4.P Analyze the influence of culture, media, and technology on health decisions.
CA Mental, emotional and social health 1.3.M Identify qualities that contribute to a positive self-image.

Objective:

- Students will be able to name 2 ways that the media affects body image
- Students will determine strategies to build a positive body image

Materials:

- Powerpoint, Ten steps to positive body image handout

Time: 35 minutes

Introduction/ Anticipatory Set: The media sends out many messages of what the standard of beauty is. We are bombarded with images of women who are thin and men with athletic builds, but this does not represent reality. In truth, not everyone is built this way. Each person has a different genetic makeup and therefore do not look nor are meant to look the same. This is what makes us unique and beautiful as individuals. Furthermore, the individuals depicted in the media do not even look the way they are depicted. These images are created with Photoshop and other photo retouching technologies. As a result, it is important that we do not rely on these images to feel valued and beautiful but instead look within ourselves.

Procedure:
Begin by pointing out Fiji on a map

1. In 1994, the standard of beauty for Fiji women was to be round and full. It was considered unattractive to be thin. In 1995, the standard of beauty for Fiji women was to be slender. At this time about 74% of teenagers dieted, stating they felt "too big or too fat". Also, during this time cable TV was introduced to Fiji

Ask students:

a. Why do you think these women changed their standard of beauty?
b. Was this a positive or negative change?
c. What does this tell you about the media, such as television?

Play Dove Self Esteem Fund. "Evolution" clip

2. The media portrays unrealistic images

   a. According to the media, thin is beautiful. However, not everyone is thin and this should not be the standard. Images presented in the media have been photoshoped and retouched to portray a "perfect" image that does not represent reality. Not even the individuals depicted in the images in the media look that way in real life
   b. Don't believe all that you see and hear in the media. Understand that what is represented is not true and therefore we cannot rely on the messages and images provided to us.
3. Why are these images and messages put out?
   a. They are meant to make us feel insecure about ourselves
   b. Why would advertising aim to make us feel insecure?
   c. This is a tactic that is used to help products sell. If we feel insecure, we will be more likely to buy that product, putting that product in demand
4. Beauty is found in all shapes and sizes
   a. There is no set shape or size that is more beautiful than the other. A beautiful individual is one who is healthy and takes care of themselves. Taking time to put the right fuel in your body and do things that make you happy will help you to feel good about yourself
5. Ideal body weight is individual
   a. Because each person has a different genetic makeup, there is no set ideal weight that can be attributed to all individuals. Even if everyone were to eat the same exact things and have the same exact exercise for one year, we all would not look the same.
   b. Do not expect to look like anyone else because we are made up differently. It is important to not compare ourselves to others for this reason. This is what makes us unique as individuals
6. We can create our own standard of beauty
   a. We do not need the media to tell us what is beautiful. We have the power to define beauty ourselves.
7. Strategies to build a positive body image
   a. Focus on your strengths and what you like about yourself
   b. Realize your beauty comes from within
   c. Reflect on what you like about yourself that does not involve your appearance

Closure/ Conclusion:

The media places an unrealistic standard of beauty and attractiveness on us. It tells us how we should look and feel about ourselves. This can negatively affect our body image and self esteem if we rely on these messages to be validated. However, we do not have to give into these messages. We have the ability to define beauty for ourselves.

Next Lesson: Exploring intuitive eating

Extended Activities:

Have students come up with a slogan that will help people to feel good about themselves and celebrate the difference in looks.

References

http://www.learningtogive.org/lessons/unit409/lesson3.htmlNotes:

Dove Self-esteem fund. “Evolution” http://www.youtube.com/watch?v=7rSjh52fGTg

http://www.nationaleatingdisorders.org/every-body-different

https://uhs.berkeley.edu/whatseatingyou/pdf/TenStepsBodyImage.pdf

Lesson # 4

Lesson: Exploring intuitive eating

Grade Level: 6th -8th

Content Area: This lesson will discuss the method of intuitive eating, which emphasizes all foods fit in moderation and listening to your body cues to begin and finish eating.

Standard: Nutrition and physical activity 1.3.N Explain the importance of variety and moderation in food selection and consumption.

Objective:

- Students will be able to identify 2 intuitive eating concepts that they can comfortably apply to their lifestyle
- Students will be able to identify the type of eater they are
- Students will determine which intuitive eating concepts they would like to work towards adopting into their lifestyle.

Materials: PowerPoint, chocolate candies

Time: 35 minutes

Introduction/ Anticipatory Set:
Ask students what they think intuitive eating means
Intuitive eating is about listening to your body and allowing it to tell you when you are hungry and when you are full. Students can use these concepts to implement a healthy lifestyle. There is no need to stop eating your favorite foods. All foods fit, so you can still eat your favorite foods while maintaining a healthy lifestyle. When we listen to our bodies, we become satisfied and content without overeating.

Procedure:
There are ten key principles with intuitive eating.

1. Reject the diet mentality
    a. Let go of the idea that diets are the answer. Diets may work temporarily but they do not work for long term. It is more important to focus on a healthy lifestyle. By doing this you create consistency and stability
2. Honor your hunger
    a. Pay attention to your body's hunger cues. Eat when you are feeling biologically hungry. Try to eat before you become very hungry because at that point your body will not able to know as well when you are full, causing you to overeat
3. Make peace with food
    a. Give yourself permission to eat. Often times when we do not allow ourselves to eat certain foods, it only makes us want them more. This then makes us feel like we are depriving ourselves. Eventually we end up giving in and eating this food, however, by this time we have such a

craving and desire to eat it that we overeat. Overeating then causes us to feel guilty and can even lower our self esteem.

4. Challenge the food police
    a. Release the thoughts that you're "good" if you eat all the right foods and "bad" if you have a piece of cake. It is important to not attach your self worth and value to the way you eat. What you eat does not change who you are.
5. Respect your fullness
    a. Listen to your body to determine if you are full. Pay attention to cues that your body is giving and begin to use these to know when to stop eating. When eating, ask yourself if you are hungry and check in with yourself to determine your hunger/fullness level.
6. Discover the satisfaction factor
    a. When we restrict ourselves from eating the foods we want we end up eating more to try and fill our craving. However, when we eat the foods that we really want we feel satisfied and that we have had enough with less food.
7. Honor your feelings without using food
    a. Sometimes we like to use food to make us feel better. We may be bored, anxious, nervous, or sad and feel we can solve our problems by eating. This is usually the case with comfort foods. They may help to remind us of a good memory. This will only work for the short term, however, once we finish eating we will realize that those bad feelings are still there. This is because we must deal with our emotions. If we are sad, we must find out why and address that. If we're bored, we can decide on an activity other than eating that can keep us busy.
8. Respect your body
    a. Accept your body shape for what it is. Everyone is not meant to have the same body. Realize that your genes make your body unique and individual. Demonstrate that you value your body by showing it respect and not being judgmental about how it looks.
9. Exercise-feel the difference
    a. Exercise not to burn calories but to enjoy the benefits of being active. This includes having more energy and thinking clearer, not to mention having fun. There are many great ways to be active such as playing a sport, riding a bike, or jump roping.
10. Honor your health
    a. Look at the bigger picture, which is your health overall. It is not each food that you put into your body that counts, it is how you fuel your body overall. Eating cookies one day will not make you gain weight. Consistency is key and what you do over time is what is important.

Closure/ Conclusion:

We can achieve a healthy lifestyle by listening to our bodies using the cues that it gives us to decide when, what, and how much we will eat. By doing this we can be fulfilled

Next lesson: Eating disorders decoded

Extended Activities:
Chocolate exercise:

Each student will be given two chocolate candies of their choice. When prompted, students will eat their first chocolate they way they normally would. Next, when prompted, students will eat the second chocolate using the principles of intuitive eating.

When eating the second chocolate, ask students to pay special attention to:

- Taste
- Texture
- How the chocolate feels in their mouth
- The speed they are chewing
- How their body feels
    - How would they rate their hunger on a scale from 1-10?
    - How would they rate their satisfaction on a scale from 1-10?

Follow up questions:

- Did you notice a difference between eating the first and second chocolate? If so what was the difference?
- How did you feel when eating the second chocolate?
- Did you feel more satisfied when eating the first or second chocolate?

References

http://www.intuitiveeating.org/content/10-principles-intuitive-eating

Tribole, E. & Resch, E. (2003). *Intuitive eating: A revolutionary program that works.* New York: Martin's Press.

Lesson # 5

Lesson: Eating disorders decoded

Grade Level: 6^{th-} 8^{th} grade

Content Area: This lesson will provide an introduction of eating disorders to students including anorexia, bulimia, and binge eating disorder.

Standard:
CA Nutrition and physical activity 2.2.N Evaluate internal and external influences on food choices.
CA Mental, emotional and social health 1.9.M Identify the signs of various eating disorders
CA Nutrition and physical activity 1.9.N Analyze the harmful effects of engaging in unscientific diet practices to lose or gain weight.
CA Nutrition and physical activity 1.11.N Identify the causes, symptoms, and harmful effects of eating disorders
CA Nutrition and physical activity 1.12.N Explain why people with eating disorders need professional help.

Objective:

- Students will be able to identify three types of eating disorders
- Students will be able to name characteristics of anorexia, bulimia, and binge eating disorder
- Students will be able to give examples of what contributes to eating disorders.

Materials: Powerpoint, Tips for kids on eating well and feeling good about yourself handout

Time: 35 minutes

Introduction/ Anticipatory Set:
There is a great amount of stigma surrounding eating disorders. A big reason for this is because there is not much awareness and therefore people do no have a lot of knowledge in this area. As a result, eating disorders are given a label. Oftentimes the label given to eating disorders are negative and do not represent the truth. Eating disorders are much more than a person trying to look a certain way; they actually involve a person's mental health. We will discuss in which ways eating disorders are linked to mental health.

Procedure:
Introduce some facts regarding body image and eating disorders

- 40-60% of elementary school girls (ages 6-12) are concerned about their weight or about becoming too fat
- 20 million women and 10 million men suffer from a clinically significant eating disorder at some time in their life in the U.S.

- Of American, elementary school girls who read magazines, 69% say that the pictures influence their concept of the ideal body shape. 47% say the pictures make them want to lose weight
- 35-57% of adolescent girls engage in crash dieting, fasting, self-induced vomiting, diet pills, or laxatives. Overweight girls are more likely than normal weight girls to engage in such extreme dieting

1. Ask students to throw out words that come to mind when they think about eating disorders.

- Write words on a board or somewhere that is visible for all to see

2. Address myths regarding eating disorders

1. Eating disorders are mainly about food

a. Eating disorders are much more than food. It is not helpful to simply tell someone with anorexia to eat or someone with binge eating disorder to stop eating. There are deeper problems that the person must deal with.

2. People who have a normal weight or overweight cannot have eating disorders.

a. You cannot tell whether a person has an eating disorder by simply looking at them. Just like people without eating disorders, people with eating disorders come in all shapes and sizes. Therefore, size cannot predict whether a person has an eating disorder or not. For example, a person with bulimia may be of average or even above average weight and a person with binge eating disorder is likely to be overweight more so than underweight.

3. You can never exercise too much

a. While exercise is great for health, it is possible for a person to exercise too much. Exercise can be used by people with eating disorders to compensate for the amount of food eaten. Too much exercise can lead to dehydration, fatigue, injuries, arthritis and heart problems.

4. Only women can be affected by eating disorders

a. In addition to women, men can also have eating disorders. Eating disorders in men is not as commonly talked about it but it does occur. The latest information states that 1 in 4 or 25% of eating disorder cases involve men.

5. Eating disorders are a choice

a. People do not chose to have eating disorders. Just like any other mental illness like schizophrenia, eating disorders aren't chosen. Eating disorders are serious and require treatment with the help of professionals.

6. They're all about food

a. People with eating disorders are hurting inside and they choose food as a way to deal with their pain. They may feel their life is out of control and what they eat is the one thing in their life that the can actually control so they may eat too much or too little. This makes them feel better temporarily.

7. Eating disorders are only found in people with a higher socioeconomic status
a. Eating disorders have been found in people of different socioeconomic statuses, age groups, sexes, religions, and countries.

8. Eating disorders are only found in young girls and adolescent females
a. While eating disorders often present themselves in this population, they are not only found in young girls and adolescent females. Eating disorders do not discriminate between age or gender. There are a growing number of middle age women developing eating disorders.

9. An eating disorder is cured when the person gets to a normal weight
a. For a person that has become underweight as a result of the eating disorder, it is important that they return to a normal weight. However, having a normal weight is only part of recovery. Eating disorders are very complicated and require other types of treatment.

3. What is anorexia?

- An eating disorder that can be characterized by an individual starving themselves, leading to the individual losing a large amount of weight.
- Approximately 90-95% of anorexia nervosa suffers are girls and women
- Main symptoms:
    - Refusal in staying at a healthy weight for height and age
    - Having the fear of gaining weight or being fat, even if they are below normal weight
    - Extremely underweight
    - Having a misconception of their body weight- not believing they have a low body weight and/or not understanding the seriousness of it
- Health consequences
    - Dry hair and skin, hair loss
    - Fatigue
    - Brittle bones
    - Severe dehydration that can lead to kidney failure
    - Muscle loss and weakness
    - Growth of hair throughout the body (even face) called lanugo

4. What is bulimia?

- An eating disorder where a person binge eats and then performs and act to compensate for the food they have eaten. This may be done by restricting the amount eating, vomiting, exercising in excess, or other activities
- About 80% of people suffering from bulimia are females
- Many people who are suffering from bulimia are of average weight
- Main symptoms
    - Eating a large amount of food in a short period
    - Compensating for large amount of food eaten by using extreme measures
    - Compulsive behavior
    - Extreme concern for weight or body shape

- Health consequences
  - A weakened heart- heart failure
  - A damaged esophagus
  - Tooth decay
  - Gastric rupture
- *What are some warning signs of bulimia?*
  - Disappearance of a large amount of food
  - Rearranging schedule for binging a purging
  - Discoloration or staining of the teeth
  - Concern with weight loss or controlling what food is eaten

5. What is binge eating disorder?

- A disorder where an individual binge eats however, unlike bulimia they do not perform any acts to compensate for the food eaten.
- About 1-5% of the population suffer from binge eating disorder
- Binge eating disorder affects women more than men with 60% of women and 40% of men being affected
- People with binge eating disorder can be of average or greater than average weight
- Characterized by:
  - Frequent episodes of eating large amounts of food in a short period of time
  - The individual feeling out of control during an episode
  - Once the episode is over, the individual feels guilty, depressed, embarrassed, or disgusted by the behavior
  - Individuals may eat when are not hungry or until they are too full
- Health consequences:
  - Similar to the health consequences seen in obesity
  - High blood pressure
  - High cholesterol
  - Heart disease
  - Diabetes mellitus
  - Gallbladder disease

6. What are warning signs of an eating disorder?

- Dramatic weight change
- Denial of hunger
- Development of food rituals (eating food in certain orders, excessive chewing of food, rearranging food on plate)
- Anxiety about gaining weight or being fat
- Restriction of foods
- Consistent excuses to avoid meal time or activities involving food
- Withdrawal from friends and usual activities

7. How can eating disorders be prevented?

- Do your best to not comment on weight, body shape, and what someone is eating- something not involving food or appearance
- Be a mindful eater

- Be informed and know the warning signs
- Have a way to express feelings- through writing, art, dance
- Do not diet
- Eat a variety of foods
- Remember thinner is not happier

8. What should you do if a friend or someone you care about has an eating disorder?

- Talk to the person you are concerned about in a loving and caring
- Communicate your concern
- Ask your friend to get help
- Tell an adult you trust

Closure/ Conclusion:

Eating disorders, though not talked about often, are serious and should not be taken lightly. These are complex disorders that are a result of many different factors and can also affect several areas of a person's life. Eating disorders are often seen in adolescence but can happen during any time in life. Because of their seriousness, it is important to reach out if you are concerned that someone you know has an eating disorder.

Next Lesson: Understanding food labels

Extended Activities:

1. Complete No weigh! Declaration of independence from a weight-obsessed-world form

References:

http://www.allianceforeatingdisorders.com/debunking-eating-disorder-myths

http://www.nationaleatingdisorders.org/get-facts-eating-disorders

http://www.nationaleatingdisorders.org/sites/default/files/ResourceHandouts/NoWeigh.pdf

http://www.nationaleatingdisorders.org/sites/default/files/ResourceHandouts/TipsForKids.pdf

Lesson # 6

Lesson: Understanding food labels

Grade Level: 6th-8th grade

Content Area: This lesson will discuss how to read and interpret food labels

Standard: CA Nutrition and physical activity 1.4.N Describe dietary guidelines, food groups, nutrients, and serving sizes for healthy eating habits.
CA Nutrition and Physical Activity 1.7.N Describe the benefits of eating a variety of foods high in iron, calcium, and fiber.

Objective:

- Students will be able to identify all components of a nutrition label
- Students will be able to identify the percentage of fat, calories, and protein
- Students will be able to apply food label reading skills to decide which foods are nutritious

Materials: Powerpoint presentation, Let's get fooducated! food labels nutrition worksheet

Time: 35 minutes

Introduction/ Anticipatory Set:
Ask students a few questions related to label reading:
Who reads or looks at food labels when choosing foods to eat?
Who knows what to look for in a food label?
Why may reading food labels be important?

It is required by law for foods to be labeled. Also, with this law there are specific components that need to be included. This is important because it allows for us to know what is in our foods. If there are ingredients that we particularly do not want to eat then we can choose not to eat that food. Knowing how to read labels then can help us to make nutritious food choices.

Procedure:

1. Which foods require nutrition labels?
    a. The food and drug administration (FDA) requires that all packaged foods be labeled
    b. Raw fruits, vegetables, fish, meat, and poultry are not required to be labeled
    c. FDA labeling laws apply to about 75% of all food consumed in the United States
2. What information is required to be on a label?
    a. Name of the product
    b. Net contents or weight

   c. Date by which the product should be sold
   d. Name and place of business of the manufacturer, packager, or distributor
   e. Most food labels also include a “Nutrition Facts” panel and a list of the food’s ingredients
3. What is included in the “Nutrition Facts”?
   a. Serving size
   b. Total calories
   c. Calories from fat
   d. Amount of nutrients per serving
   e. How the food fits into the overall diet
4. What does the serving size section of the food label tell us?
   a. Tell the total number of servings per container
      i. Will let you know how many sittings it should take you to finish a food
      ii. If you eat two servings, you’re consuming twice as many calories
   b. Allows you to compare different products
      i. Can help decide which snack has more sugar or fat
5. What do the daily values tell us?
   a. Food list of the amount of total fat, saturated fat, trans fat, cholesterol, sodium, total carbohydrate, dietary fiber, sugars, and protein per serving
   b. Daily values help us to see how a food fits into our overall diet
      i. Based on a 2,000 calorie diet
      ii. For example, if a food provides 10% of the daily value for fiber, then it provides 10% of the recommend amount of fiber for a 2,000 calorie diet
      iii. Helps us to see if a food has a little or a lot of specific nutrient
   c. Because daily values are based on a 2,000 calorie diet they may not be as useful for kids because kids have different calorie needs
      i. Depending on age, whether male or female, and activity level
   d. For most nutrients the daily value is the target for intake
   e. For some nutrients such as total fat, saturated fat, and cholesterol, the daily value represents the maximum recommended amount
      i. For example, if a food has a daily value of 15% saturated fat, then it contains 15% of the recommended amount of saturated fat for a 2,000 calorie diet
   f. Food labels must provide daily values for total fat, saturated fat, cholesterol, sodium, total carbohydrate, and dietary fiber in addition, to vitamin A, vitamin C, calcium, and iron
6. Daily values for specific nutrients
   a. Fat
      i. 30% of calories
   b. Saturated fat
      i. 10% of calories
   c. Cholesterol
      i. 300 mg
7. Ingredients list

   a. List ingredients from highest to lowest amount by weight
   b. The first ingredient listed means it makes up the greatest amount of that food
8. Remember information found on the food label is only a guide. Keep in mind:
   a. The colors and wording used in the packaging
   b. What do the claims say?
   c. What is your overall impression of the product?
   d. A food is not considered “good” or “bad”

Activity:
Students will be broken up into groups of 4. Each group will receive a sample food label and will work together to complete worksheet comparing the food labels.

Closure/ Conclusion: It is valuable to understand how to read and interpret a food label because it gives us the power to make informed decisions about what we eat. We then can use this skill to choose foods that contribute to a healthy lifestyle.

Next Lesson: Whole vs. processed foods

Extended Activities:
Students will be encouraged to read labels the next time they see a packaged food and consider whether it is nutritious.

References
Smolin, L., & Grosvenor, M. (2008). *Nutrition: Science and applications*. Hoboken, NJ: John Wiley & Sons, Inc

http://blog.fooducate.com/2012/08/14/fun-nutrition-worksheets-for-kids/

Lesson # 7

Lesson: Whole vs. processed foods

Grade Level: 6^{th}-8^{th} grade

Content Area: This lesson will discuss the differences of whole vs. processed foods

Standard: CA Nutrition and Physical Activity 1.7.N Describe the benefits of eating a variety of foods high in iron, calcium, and fiber.

Objective:

- Students will be able to identify the differences between whole and processed foods
- Students will be able to describe the benefits of choosing whole foods

Materials: Powerpoint presentation, Part of a whole grain seed worksheet

Time: 35 minutes

Introduction/ Anticipatory Set:

Ask students a couple of questions:
Who has heard of whole foods?

Lately, there has been a lot of talk about whole foods. There is a movement for people to follow healthier lifestyles and as a result, eat better. A big reason why this has become such a commonly discussed topic is because of the obesity epidemic taking place. Today we will discuss what the buzz is all about.

Procedure:

1. What are whole foods?
    a. Foods that have not been processed or refined, or received minimal processing and refining
    b. Close to their natural and original states, usually look similar to the way they look in nature
    c. Include little or no additives
2. Benefits of eating whole foods
    a. Receive all the nutrients of the food including the vitamins, minerals, and fiber
    b. Make you feel better
3. What are some examples of whole foods?
    a. Fruits
    b. Vegetables
    c. Beans
    d. Unpolished grains
4. What is whole grain?

   a. A food made from the entire seed of the grain
   b. Grains have different parts including: the bran (outermost layer), the endosperm (the middle layer), and the germ (the innermost layer)
   c. The bran and germ part of the seed contain fiber
5. What are some examples of whole grains?
   a. Oats, rye, miller, bulgur, brown rice, wild rice, whole wheat bread
   b. When choosing foods, look for whole grain ingredients to be listed first on the label
6. What's the difference between whole and refined grains?
   a. Refined grains are stripped of the bran and germ
7. *What nutrient, then are refined grains missing?*
   a. Fiber
8. *What does fiber do in our bodies?*
   a. Helps to keep us full
   b. Helps keep our intestines healthy
9. What are processed foods?
   a. Food that has gone through a process to become what is.
   b. Packaged or convenience foods
   c. Contain additives in order to be able to last when on the shelf at the grocery store
   d. During processing, the food is stripped of many nutrients including B vitamins and minerals
   e. Just like refined grains, much of the fiber is removed from processed foods
   f. High in calories but low in nutrients
10. What are some example of processed foods
   a. Poptart
   b. Hot cheetos
   c. Doritos
11. Asks *students to give an example of processed food and the whole food it comes from. For example:*
   a. Whole apple versus apple pop tart
   b. White rice versus brown rice
   c. White bread versus whole wheat bread
   d. Fresh corn versus tortilla chips
12. What are some ways we can choose healthier options?
   a. Check the ingredient list
      i. Enjoy foods with sugar or high fructose corn syrup as their first ingredient in moderation
   b. In the grocery store whole foods are found in the outside aisles
      i. Meat, dairy, eggs, fruits and vegetables
      ii. Packaged and processed foods are found in the middle aisles

Closure/ Conclusion: It is easy to get lost among the many foods choices surrounding us daily. By choosing more whole foods and less processed foods we will get more nutrients, giving us all the energy we need to learn and grow. Not to mention, eating this way will also make us feel better!

Next Lesson: Dispelling nutrition myths

Extended Activities:
1. Ask students to go on a scavenger hunt next time they go to the grocery store. Determine which foods are whole and which are processed. Notice more nutritious foods are found in the outside aisles of the grocery store as opposed to the inside aisles.
2. Parts of a whole grain worksheet

References
http://www.healthteacher.com/content/id/70/

Lesson #8

Lesson: Dispelling nutrition myths
Grade Level: 6th -8th

Content Area: This lesson will discuss commonly believed myths about nutrition. In addition, students will be provided with information about obesity and its effects on health

Standard: CA Combination of Movement Pattern and Skills 4.5. Explain the effects of nutrition and participation in physical activity on weight control, self-concept, and physical performance.
CA nutrition and physical activity 1.8.N Describe the prevalence, causes, and long-term consequences of unhealthy eating.
CA Nutrition and physical activity 1.9.N Analyze the harmful effects of engaging in unscientific diet practices to lose or gain weight.

Objective:

- Students will be able to explain the truth of 2 nutrition myths.
- Students will be able to identify 3 ways obesity can affect health.
- Students will be able to explain why it is not a good idea to participate in fad dieting

Materials: Powerpoint presentation

Time: 35 minutes

Introduction/ Anticipatory Set:
Ask students what comes to mind when they think about nutrition?
Take several volunteers and write responses on a board or large piece of paper for all to see.
If no incorrect nutrition information is provided, add a couple of myths to the board/paper
Ask students if they see anything wrong the statements on the board/paper
Point out the incorrect information and clarify

Obesity is now an epidemic in our country. This leads to several health problems such as diabetes, heart disease, and high blood pressure, which can impact a person's quality of life. As a solution to being obese or overweight some people turn to quick ways to lose weight. There is a lot of information out there about nutrition. Nutrition information can be found in magazines, online, the newspaper, television and books. The average person finds much of their information about nutrition on the internet. While it is great that such information can be quickly accessed, it may not always be reliable. This is important because if people are not careful and mindful, they may follow nutrition advice that may actually be harmful to their health. Today we will discuss some myths about nutrition and learn the truth about them. We will also talk about the threats obesity can pose on an individual's health.

Procedure:

1. What is obesity?
    a. A condition where person has excess body fat and weighs too much for their height
    b. 65% of adults in the US are overweight or obese
    c. 31% are obese
2. How has obesity become a bigger problem now than in the past?
    a. The amount of people who are obese has increased over the past 40 years
    b. People are eating more food
        i. Less meals are eaten home; more fast food is eaten
    c. Less physical activity
        i. People are not as physically active as they were before
        ii. Videogames vs. riding bikes
3. What are some health complications associated with obesity?
    a. Diabetes
    b. Heart disease
    c. High blood pressure
    d. Sleeping problems
    e. Respiratory problems
    f. Cancer
4. Risks of being underweight
    a. Weakened immune system
    b. Low energy
    c. Anemia
    d. Nutrient deficiencies
    e. Fragile bones
5. In order to counter obesity, some people take extreme measures to lose or maintain their weight.
    a. Fad dieting
        i. a popular and quick fix way of losing weight
        ii. eliminate foods groups or specific foods
        iii. may focus on a specific type of food
        iv. may promote a particular product
        v. may require food groups such as carbohydrates, protein, or fat to be above or below what is normally recommended by health organizations
        vi. do not provide all nutrients
6. Let's dispel some commonly believed myths about nutrition
    a. Eating fat makes you fat
        i. Fat does contain more calories than protein and carbohydrates, but eating fat does not make you fat. People become overweight when they eat more calories than their body burns. It is all about balance. We should aim to eat just as many calories as we burn.
    b. Fat is bad for you

i. There are fats that can be harmful for your health if we eat too much of them. Such fats are saturated and trans fats. Saturated fats are found in meats, cheese, milk, and butter. Trans fats are found in processed and packaged foods such as crackers, cookies, and chips. Eating these types of fats in excess can lead to heart problems and high blood pressure. However, there are fats that are good for your health. Fats that are good for you are omega 3 and omega 6. These fats are found in fish like salmon and also nuts such as walnuts. Eating these types of fats can help to keep your heart healthy. Fats found in bananas and avocados are also good for you.

c. Carbohydrates make you fat
   i. Eating carbohydrates will not make you fat. Again, eating too many calories is what causes people to become overweight, not eating a specific nutrient. Balance is key. We need carbohydrates to give us energy. If we do not eat enough of them, our bodies will feel tired. Also we need carbohydrates for our brain. They help our brain to function so we can think clearly and learn at school.

d. If you skip a meal you can eat whatever you want the next meal
   i. Skipping a meal is never a good idea. Our bodies need nutrients from the foods we eat to function properly. If we skip meals we will feel tired, have difficulty concentrating, and not to mention, be hungry.

   Ask students to recall what we learned during the intuitive eating lesson

   Skipping a meal makes us overly hungry so the next time we do eat, we end up overeating. Everything you put in your body counts. We must treat our bodies with respect by giving it the proper fuel it needs.

e. If you exercise, you can eat as much as you want
   i. Although exercising can help to maintain your weight, it is also important that we fuel our body with the foods we need. Eating a balanced diet will help to give us energy and protect from nutrition or diet related diseases. This will also help us to feel better.

Closure/ Conclusion: Our aim should be to consume balanced meals with all food groups. There is a lot of unreliable information stating it is okay to completely eliminate certain food groups and nutrients from our diet. However, we now know that this way of eating is not healthy. It is also important that we remain physically active in order keep our bodies healthy and keep a balance between how much we eat and how much we burn. By doing these things we can be healthy overall.

References

http://www.eatingwell.com/nutrition_health/weight_loss_diet_plans/diet_reports_information/3_weight_loss_myths_debunked

Smolin, L., & Grosvenor, M. (2008). *Nutrition: science and applications*. Hoboken, NJ: John Wiley & Sons, Inc

Lesson #8

http://kidshealth.org/teen/food_fitness/dieting/fad_diet_tips.html

Appendix B

Nourishing the Adolescent Mind and Body
Creating a Balanced Meal

Pre/Post test

Please complete each question by filling in the blank, circling an answer or writing in your response as directed.

1. Name the food groups

2. Myplate helps people to create a balanced meal using the four food groups.
    a. True
    b. False

3. ____ of all grains eaten should be whole.
    a. 1/8
    b. ¼
    c. ½
    d. ¾

4. What amount of your plate should be made up of fruits and vegetables?
    a. 1/8
    b. ¼
    c. ½
    d. ¾

5. Beans are an example of which food group?

6. Which food group contains foods that are high in calcium?

Nourishing the Adolescent Mind and Body
Body Image and the Media

Pre/Post test

Read each statement and choose whether you strongly agree, agree, disagree, or strongly disagree.

1. The media always reports the truth.
    a. Strongly agree
    b. Agree
    c. Disagree
    d. Strongly disagree

2. Someone does not need to be thin to be attractive.
    a. Strongly agree
    b. Agree
    c. Disagree
    d. Strongly disagree

3. A healthy weight for each person is the same.
    a. Strongly agree
    b. Agree
    c. Disagree
    d. Strongly disagree

4. Being thin is not the same as being healthy.
    a. Strongly agree
    b. Agree
    c. Disagree
    d. Strongly disagree

5. Beauty comes in one shape or size.
    a. Strongly agree
    b. Agree
    c. Disagree
    d. Strongly disagree

6. Each person can create their own standard of beauty
    a. Strongly agree
    b. Agree
    c. Disagree
    d. Strongly agree

Nourishing the Adolescent Mind and Body
Eating Disorders Decoded

Pre/Post test

Free response
Read each question and write your response in the space provided.

1. Name three types of eating disorders
    a.
    b.
    c.

2. What are three things that eating disorders can lead to?
    a.
    b.
    c.

True/False
Read each statement and choose whether it is true or false.

3. Eating disorders are a choice.
    a. True
    b. False

4. Eating disorders are all about food.
    a. True
    b. False

5. People who have a normal weight or overweight cannot have eating disorders.
    a. True
    b. False

Fill in the blank
Read each question and fill in the blank with your response.

6. Self-starvation, the fear of gaining weight, and insisting on being extremely underweight are characteristics of which eating disorder? _____

7. Eating a large amount of food in a short period of time followed by compensation for the food eaten and feelings of guilt and shame are characteristics of what eating disorder?_____

Nourishing the Adolescent Mind and Body
Dispelling Nutrition Myths

Pre/Post test

Read the following question and write your response in the space provided.

1. Name 3 health problems that are related to obesity.
    a.
    b.
    c.

Read the following statement and decide whether you strongly agree, agree, disagree, or strongly disagree.

2. Fad diets can be used as a healthy way for someone to lose weight.
    a. Strongly agree
    b. Agree
    c. Disagree
    d. Strongly agree

True/False

Read each statement and choose whether it is true or false.

3. Eating fat makes you fat.
    a. True
    b. False

4. Fat is bad for you.
    a. True
    b. False

5. If you skip a meal you can eat whatever you want the next meal.
    a. True
    b. False

6. If you exercise, you can eat as much as you want.
    a. True
    b. False

Appendix C

Formative Evaluation

Nourishing the Adolescent Mind and Body: An Eating Disorder Prevention Program

Please return to Alexis Brooks by March 24th, 2014

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

Formative Evaluation Survey

Thank you for taking the time to evaluate my curriculum. The *Nourishing the Adolescent Mind and Body* curriculum, comprised of 8 lessons, is designed to promote the awareness and prevention of eating disorders in male and female adolescents aged 11-14 years. Topics covered within the curriculum include nutrition, body image, self-esteem, media literacy, and overall health. The formative survey is intended to acquire your expert opinion of this curriculum project, which was prepared for my Master's of Science Degree in Family and Consumer Sciences, Option Nutrition and Dietetics from California State University, Northridge. Your valued feedback is important for the success and collaboration of this program. Please answer the questions on this survey completely and honestly. Any additional comments, criticisms, and recommendations are also appreciated.

Alexis Brooks

03/08/2014

Formative Evaluation Survey

PART I: General Information

Please mark or fill in the appropriate response

1. Please indicate your appropriate age range:

☐ 20-29 yrs ☐ 30-39 yrs ☐ 40-49 yrs ☐ 50-59 yrs ☐ 60-69 yrs ☐ >70 yrs

2. Please indicate your gender:

☐ Male ☐ Female

Please indicate your ethnicity:

☐ White, Non Hispanic ☐ Asian/Pacific Islander

☐ Black, Non Hispanic ☐ American Indian

☐ Hispanic/Latino ☐ Other;_____

Which most appropriately describes your area(s) of expertise:

☐ Education ☐ Eating Disorders ☐ Curriculum ☐ Psychology ☐ Health

☐ Adolescents ☐ Other:_____

Please indicate your highest Degree

☐ PhD ☐ EdD ☐ DrPH ☐ MA/MS ☐ Other:_____

Please indicate your current position of employment:

☐ Junior High School Teacher ☐ High School Teacher

☐ University/College Professor ☐ Public Health Advocator

☐ Other:_____

Do you have any experience working with adolescents' ages 13-14 yrs?

☐ Yes ☐ No

Do you have any experience working with adolescents with eating disorders?

☐ Yes ☐ No

Formative Evaluation Survey

PART II: Evaluation of curriculum

Instructions: Using the scale below, please write the number that best rates your evaluation of the Nourishing the Adolescent Mind and Body curriculum.

Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1	2	3	4	5

1. The curriculum topic was researched and well displayed:_____
2. The curriculum was clear and concise:_____
3. The curriculum content was presented in an effective way:_____
4. The curriculum promoted class participation:_____
5. The curriculum was appropriate for its target audience:_____
6. The curriculum was easy to understand:_____
7. Lessons handouts and other accompanying materials supported the curriculum appropriately:_____
8. The material used in the curriculum was cited and referenced properly:_____

Would you recommend the use of this curriculum?

Yes_____ No_____

Additional comments, criticisms, or recommendations:

_____

_____

_____

_____

Formative Evaluation Survey

PART I: General Information

Please mark or fill in the appropriate response

1. Please indicate your appropriate age range:

☐ 20-29 yrs ☐ 30-39 yrs ☐ 40-49 yrs ☐ 50-59 yrs ☐ 60-69 yrs ☐ >70 yrs

2. Please indicate your gender:

☐ Male ☐ Female

Please indicate your ethnicity:

☐ White, Non Hispanic ☐ Asian/Pacific Islander

☐ Black, Non Hispanic ☐ American Indian

☐ Hispanic/Latino ☐ Other;_____

Which most appropriately describes your area(s) of expertise:

☐ Education ☐ Eating Disorders ☐ Curriculum ☐ Psychology ☐ Health

☐ Adolescents ☐ Other: Nutrition_____

Please indicate your highest Degree

☐ PhD ☐ EdD ☐ DrPH ☐ MA/MS ☐ Other:_____

Please indicate your current position of employment:

☐ Junior High School Teacher ☐ High School Teacher

☐ University/College Professor ☐ Public Health Advocator

☐ Other:_____

Do you have any experience working with adolescents' ages 13-14 yrs?

☐ Yes ☐ No

Do you have any experience working with adolescents with eating disorders?

☐ Yes ☐ No

Formative Evaluation Survey

PART II: Evaluation of curriculum

Instructions: Using the scale below, please write the number that best rates your evaluation of the Nourishing the Adolescent Mind and Body curriculum.

Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1	2	3	4	5

1. The curriculum topic was researched and well displayed: **4 (though references need to be included)**
2. The curriculum was clear and concise: **4.5**
3. The curriculum content was presented in an effective way: **5**
4. The curriculum promoted class participation: **5**
5. The curriculum was appropriate for its target audience: **5**
6. The curriculum was easy to understand: **4.5**
7. Lessons handouts and other accompanying materials supported the curriculum appropriately: **5**
8. The material used in the curriculum was cited and referenced properly: **3**

Would you recommend the use of this curriculum?

Yes **X** No_____

Additional comments, criticisms, or recommendations: Full description of comments are included in my prior e-mail. Great work including important/relevant & age-appropriate lessons with interactive activities. Makes sure to cite properly on each lesson plan and consider including the additional topics for any future curriculum.

Curriculum Feedback:
Overall great work! I have included my edits and comments on the word document portion of each curriculum. The primary comment is that it will be very important that you include the references used for each lesson. You can include these references as a list at the end of each of your eight lesson plans.

Also, I wanted to mention additional topics that were not addressed in the curriculum that I see as important and relevant to your curriculum aim of "The purpose of this project was to develop a curriculum to raise awareness of eating disorders in adolescents through lessons of nutrition, self- esteem, body image and overall health".

The three additional topics that would be important to address in a future curriculum focused on Disordered Eating and Eating Disorders in children and adolescents (i.e. areas for additional research or development) would be:
1) Fad Diets- addressing common diets and clarifying why they are unhealthy (as teens can be inundated with information about these trends and may be exposed to them from family members [i.e. parent or sibling] or peers)
2) Dietary Supplements (since children and teens may use supplements as a means of losing weight and or filling voids from their diet. However, these supplements may be useless or unhealthy/unsafe)
3) The Female Athlete Triad (i.e. while exercise and physical activity are health and recommended due to its many benefits, there may be some athletes or sport gropu s at risk of developing disordered eating/eating disorders due to an increased pressure to be thin and/or lean).

You do not need to create or edits your curriculum to include this information, however, in your Ch. 5 it will be important to discuss these topics and why they would be important/relevant for future curriculum to address and include.

Formative Evaluation Survey

PART I: General Information

Please mark or fill in the appropriate response

1. Please indicate your appropriate age range:

☐ 20-29 yrs ☐ 30-39 yrs ☐ 40-49 yrs ☐ 50-59 yrs ☐ 60-69 yrs ☐ >70 yrs

2. Please indicate your gender:

☐ Male ☐ Female

Please indicate your ethnicity:

☐ White, Non Hispanic ☐ Asian/Pacific Islander

☐ Black, Non Hispanic ☐ American Indian

☐ Hispanic/Latino ☐ Other;_____

Which most appropriately describes your area(s) of expertise:

☐ Education ☐ Eating Disorders ☐ Curriculum ☐ Psychology ☐ Health

☐ Adolescents ☐ Other:_____

Please indicate your highest Degree

☐ PhD ☐ EdD ☐ DrPH ☐ MA/MS ☐ Other:_____

Please indicate your current position of employment:

☐ Junior High School Teacher ☐ High School Teacher

☐ University/College Professor ☐ Public Health Advocator

☐ Other:_____

Do you have any experience working with adolescents' ages 13-14 yrs?

☐ Yes ☐ No

Do you have any experience working with adolescents with eating disorders?

☐ Yes ☐ No

Formative Evaluation Survey

PART II: Evaluation of curriculum

Instructions: Using the scale below, please write the number that best rates your evaluation of the Nourishing the Adolescent Mind and Body curriculum.

Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1	2	3	4	5

1. The curriculum topic was researched and well displayed: 4
2. The curriculum was clear and concise: 4
3. The curriculum content was presented in an effective way: 4
4. The curriculum promoted class participation: 4
5. The curriculum was appropriate for its target audience: 4
6. The curriculum was easy to understand: 5
7. Lessons handouts and other accompanying materials supported the curriculum appropriately:4
8. The material used in the curriculum was cited and referenced properly: 5

Would you recommend the use of this curriculum?

Yes No_____ Maybe (X): I'd need to see it in action first.

Additional comments, criticisms, or recommendations:

The curriculum was very simple and would be easy to use in a classroom setting.

The curriculum is very simple; good use of materials. Was not sure if all were materials created by others. Also, the handouts and activities might be over-simplified for the grade level.

Formative Evaluation Survey

PART I: General Information

Please mark or fill in the appropriate response

1. Please indicate your appropriate age range: 20-29

20-29 yrs ☐ 30-39 yrs ☐ 40-49 yrs ☐ 50-59 yrs ☐ 60-69 yrs ☐ >70 yrs

2. Please indicate your gender: Female

☐ Male ☐ Female

Please indicate your ethnicity: White

☐ White, Non Hispanic ☐ Asian/Pacific Islander

☐ Black, Non Hispanic ☐ American Indian

☐ Hispanic/Latino ☐ Other;_____

Which most appropriately describes your area(s) of expertise: Eating disorders, adolescents

☐ Education ☐ Eating Disorders ☐ Curriculum ☐ Psychology ☐ Health

☐ Adolescents ☐ Other:_____

Please indicate your highest Degree: MS

☐ PhD ☐ EdD ☐ DrPH ☐ MA/MS ☐ Other:_____

Please indicate your current position of employment: Dietitian, residential ED tx.

☐ Junior High School Teacher ☐ High School Teacher

☐ University/College Professor ☐ Public Health Advocator

☐ Other:_____

Do you have any experience working with adolescents' ages 13-14 yrs?: yes

☐ Yes ☐ No

Do you have any experience working with adolescents with eating disorders?: yes

☐ Yes ☐ No

Formative Evaluation Survey

PART II: Evaluation of curriculum

Instructions: Using the scale below, please write the number that best rates your evaluation of the Nourishing the Adolescent Mind and Body curriculum.

Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1	2	3	4	5

1. The curriculum topic was researched and well displayed:__4__
2. The curriculum was clear and concise:__4__
3. The curriculum content was presented in an effective way:__4__
4. The curriculum promoted class participation:__4___
5. The curriculum was appropriate for its target audience:__4__
6. The curriculum was easy to understand:__4___
7. Lessons handouts and other accompanying materials supported the curriculum appropriately:__4__
8. The material used in the curriculum was cited and referenced properly:__4_

Would you recommend the use of this curriculum?

Yes__x__ No_____

Additional comments, criticisms, or recommendations:

The presentations provide a wealth of information to students in the middle-high school age range. Some of the slides were a bit "wordy" and I would recommend consolidating some of the information. I appreciated that Alexis avoided labeling foods as good/bad

but would recommend that health/unhealthy is not used in a way that connotes good/bad as that emotionally charges food and eating. Beautiful job overall!

I am so impressed by your curriculum! It is so comprehensive and I love that you included information on Intuitive Eating, a concept so many people have not been introduced to but one that is so helpful for all individuals.

A couple things that I noted based on my experience:

Lesson 1
- Consider adding binge eating disorder here (you did cover it later so maybe introduce at this point)

Lesson 2
- Look for conflicting messages, e.g. "all foods fit" but there are some phrases that conflict with this, such as "choose fruit over fruit juice," this could be re-worded to be like how you worded the recommendation to make at least 1/2 grains whole
- I would recommend avoiding kcal talk, this tends to lead to labeling food as good/bad in my experience

Lesson 6 and 7
- These topics can be triggering to disordered eating, often, even with education, people misinterpret label reading and consider food as good and bad; this takes away from intuitive eating
- I have my patients look at food packages in terms of intuitive eating, e.g. focus on the colors, the claims, how all this feels to them

Lesson 8
- Discussion about obesity can be shaming based on research I've read and my experience with my patients
- Focus on the content you have after that, it is very effective and probably accomplishes what we would want with the discussion of obesity statistics

Nourishing The Adolescent Mind and Body

Lesson 1:

Body Image, Self-Esteem, and Nutrition

Objectives

- Students will be able to determine their familiarity with body image and self esteem issues
- Students will be able to identify two types of eating disorders
- Students will gain an understanding of the overview of the nutrition education sessions

What is body image?

Body image is...

- how you view your physical self
  - whether you feel you are attractive and whether others like your looks

Image from http://www.cooptel.com.ar/noticia/advierten-crecimiento-de-casos-de-bulimia-y-anorexia-944

What is self esteem?

Self esteem is…

- how much you feel you are worth and how much you feel other people value you

Image from http://www.appszoom.com/android_applications/health_and_fitness/dreaming-confidence_inava.html

Linking body image to self esteem

- Negative body image → low self esteem
- Positive body image → high self esteem

What can body image be affected by?

- The media
- Family
- Friends
- Peers
- Teammates

Image from http://www.axonsports.com/whatsnew.cfm
http://topicstock.pantip.com/chalermthai/topicstock/2009/12/A8714876/A8714876.html

Problems associated with negative body image

- Eating disorders
  - Bulimia nervosa
  - Anorexia nervosa
  - Binge eating disorder
- Low self esteem

Image from http://eslchestnut.com/category/more/education/links/teen-matters/

Linking body image and self esteem to nutrition

- All foods fit!
- What you eat shouldn't change how you feel about yourself
- When you take care of yourself, you will feel better

Image from http://dark-os.com/viewtopic.php?t=112789
http://www.youtube.com/user/Wygrywamzanoreksja
http://www.123rf.com/photo_14192882_romain-lettuce-isolated-on-a-white-background.html
www.meetup.com/Ice-Cream-Innovators-of-Bali/

Image from blog.daum.net/_blog/hdn/ArticleContentsView.do?blogid=0lj3K&articleno=58&looping=0&longOpen=

Thank you

Image from http://new-you.me/nutrition-food/

Nourishing the Adolescent Mind and Body

Lesson 2:
Creating a balanced meal

Objectives

- Students will be able to identify all components of a balanced meal
- Students will be able to provide examples of each food group
- Students will be able to apply concepts to create a balanced meal

MyPlate

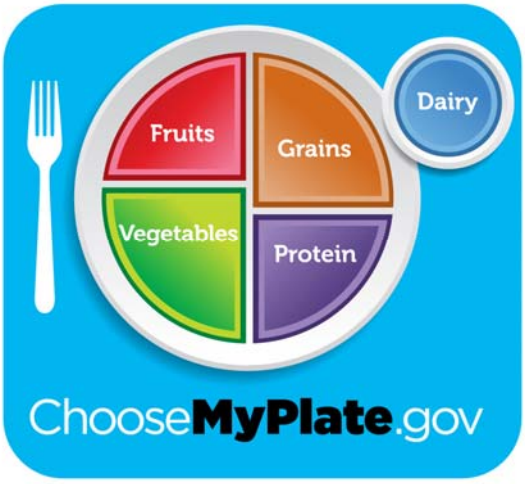


Image from www.polk-fl.net

What are the Five Food groups?

- Fruits 
- Dairy 
- Vegetables 
- Protein 
- Grains 

Images from:
www.girlsinclimestone.ca
http://www.przedszkole3wolsztyn.pl/wydrukuj-125.html
http://www.globalpublishers.info/profiles/blogs/mbinu-za-kujikinga-na-saratani-ya-matiti

Vegetables

- Contain vitamins and minerals
- Choose a variety of vegetables
- Contain fiber to help keep us full

Images from wellness.wellcall.com www.shelbycomagazine.com

Fruits

- Contain vitamins and minerals along with fiber
- Choose whole fruits over fruit juice
- ½ plate should be made up of fruits and vegetables

Images from
http://lenagold.ru/fon/clipart/ja/jabl/raz.html
http://www.dasaran.am/apps/wiki/view/id/5272

http://fytorio.zogopoulos.eu/index.php?option=com_phocagallery&view=category&id=95&Itemid=82

Grains

- Refined vs. enriched grains
- Try to make at least half of grains whole
- Your plate should be about ¼ grains

Images from
http://sites.tufts.edu/balanceyourlife/category/cooking/page/2/
http://www.business.hr/ekonomija-7/sisacko-moslovacka-zupanija-poljoprivredi-daje-3-4-milijuna-kuna

Protein

- Helps build and repair tissue and muscles
- Choose lean and low fat meats
- Minimize processed meats
- Your plate should be about ¼ of protein rich foods

Images from
http://www.batesrealestatereport.com/tag/boston-real-estate-developers/
http://wedishnutrition.wordpress.com/tag/glycemic-index/
http://wedishnutrition.wordpress.com/tag/glycemic-index/

Dairy

- High in calcium
- Calcium is necessary to build strong teeth and bones
- Try to choose 1%, fat free milk, or water instead of sodas or sugary drinks

Image from http://pehtina-spajza.si/?post_type=product

MyPlate in practice

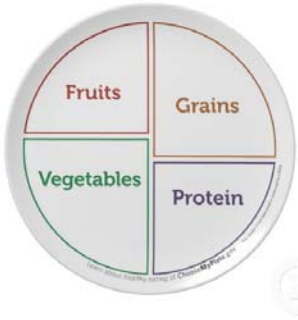


Image from http://www.zazzle.com.au/portion+plates

Key points

- Make your grains whole
- Choose a variety of colors of fruits and vegetables
- Make you plate half fruits and vegetables

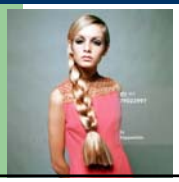
Image from http://ministryhealth.org/HC/Home/Summer2011/Takenoteofwhatyoureeating.nws

Thank you

Image from http://www.hercampus.com/school/strath

Nourishing the Adolescent Mind and Body

Lesson 3:
Body Image and the Media



Images from
http://www.hercampus.com/school/strath
http://pocketwatchkid.wordpress.com/2012/03/20/summer-time/
http://www.kinomania.ru/people/493341/photos/64123/

Objectives

- Students will be able to describe how the media affects body image
- Students will be able to apply strategies to build positive self esteem

Body image in Fiji

Image from http://goo-gets.blogspot.com/2011/08/where-is-fiji.html

Body image and Fiji

- In 1994, the standard of beauty for women was to have round and full bodies
- In 1995, Fiji women began to diet
- About 74% of teenagers dieted and said they felt "too big or too fat"
- In 1995, cable TV was also introduced to Fiji

Body image and Fiji

- Why do you think these woman changed their standard of beauty?

Body image and Fiji

- Do you think cable TV had a positive or negative effect on the body image of Fiji women?

Can the media be trusted?

You can't believe everything you see on TV

- Dove Self Esteem Fund." Evolution"
- http://www.youtube.com/watch?v=7rSjh52fGTg

The media vs reality

- "perfection" is not reality
- Photoshop and retouching
- You do not need to be thin to be beautiful

Marketing strategy

- The media aims to make us insecure.
  - Why is that?

Beauty is in all shapes in sizes

- There is no shape or size that is more beautiful than the other
- We come in different shapes and sizes, this makes us unique

Is there an ideal body weight?

Ideal body weight

- There is no standard ideal body weight
- Each person has different genes
- A healthy weight for one person may not be healthy for the other
- Avoid comparing yourself to others, you are your own standard

Creating your own definition of beauty

- We don't have to depend on the media to tell us what is beautiful
- We have the power to create our own standards of beauty

When viewing the media…

- Have the right mindset
- Understand the media does not represent reality
- See it for what it is-entertainment

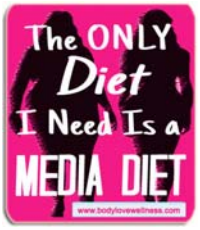


Image from http://womensbodyimageadvertising.blogspot.com/

Strategies to build a positive body image

- Focus on your strengths and what you like about yourself
- Realize your beauty comes from within
- Reflect on what you like about yourself that does not involve your appearance

Thank you

Image from http://www.youtube.com/watch?v=LWA0m8STa4g

Nourishing the Adolescent Mind and Body

Lesson 4:
Intuitive Eating

Objectives

- Students will be able to identify 2 intuitive eating concepts that they can comfortably apply to their lifestyle
- Students will determine which intuitive eating concepts they would like to work towards adopting into their lifestyle.

What is intuitive eating?

Intuitive eating is…

- Listening to your body and allowing it to tell you when you are hungry and when you are full
- All foods fit
- Satisfied and content without overeating

Principles of intuitive eating

1. Reject the diet mentality
2. Honor your hunger
3. Make peace with food
4. Challenge the food police
5. Respect your fullness
6. Discover the satisfaction factor
7. Honor your feelings without using food
8. Respect your body
9. Exercise-feel the difference
10. Honor your health

#1 Reject the diet mentality

- Diets are not the answer.
- Diets are a temporary fix
- Focus on a healthy lifestyle
- Create consistency and stability

Image from http://nowadebata.pl/2011/05/

#2 Honor your hunger

- Pay attention to your body's hunger cues
- Eat when you feeling biologically hungry.
- Can help prevent overeating

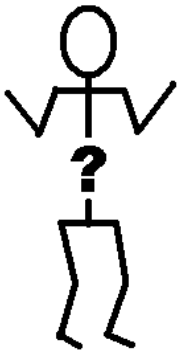


Image from http://cepusa.com.au/tag/conference/

#3 Make peace with food

- Give yourself permission to eat
- Depriving ourselves of foods can make us overeat
- Overeating can make us feel guilty and even lower our self esteem.

Image from http://howtosleeponyourback.com/sleep-and-hunger-whats-the-link/sleep-53/

#4 Challenge the food police

- Release the thoughts that you're "good" if you eat all the right foods and "bad" if you have a piece of cake.
- Your self worth and value should not depend on the way you eat.
- What you eat does not change who you are

Image from http://tsalagiman2.blogspot.com/2010_11_01_archive.html

#6 Discover the satisfaction factor

- Restricting foods can cause us to have cravings and eat more
- We feel satisfied when we eat the foods we want and end up eating less

Image from http://1ms.net/i-m-hungry-308435.html

#5 Respect your fullness

- Listen to your body to determine if you are full
- Pay attention to body cues letting you know when to start and stop eating
- When eating, ask yourself “am I hungry?”

Image from http://woogi81.tistory.com/category

#7 Honor your feelings without using food

- Food can only temporarily make us feel better.
- We must decide if we are actually hungry or eating from emotion
- If we find out we actually are not hungry we must address that.

Image from http://denikbojovnice.blogspot.com/2013_10_01_archive.html

#8 Respect your body

- Accept your body shape for what it is
- Everyone is not meant to have the same body.
- Demonstrate that you value your body by showing it respect and not being judgmental about how it looks.

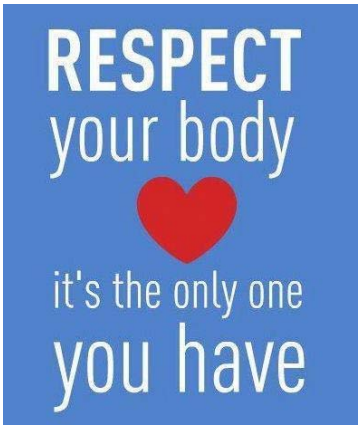


Image from http://www.alinaloves.com/2013/01

#9 Exercise-feel the difference

- Exercise not to burn calories but to enjoy the benefits of being active
- More energy, clearer thinking and fun!
- Be active by playing a sport, riding a bike, or jump roping.

Image from http://gwyawp.com/top-stories/2013/05/17/exercise-and-being-healthy/

#10 Honor your health

- Look at the bigger picture
- It is not each food that you put into your body that counts, it is how you fuel your body overall.
- Consistency is key and what you do over time is what is important.

Image from http://www.athomemagazine.co.uk/lifestyle/health-fitness/preparing-your-body-for-the-marathon/

Chocolate exercise

- Chocolate #1
  - Eat normally
- Chocolate #2
  - Eat using intuitive eating principles
  - Pay attention to:
    - Taste
    - Texture
    - How the chocolate feels in their mouth
    - The speed they are chewing

Image from http://www.huffingtonpost.com/amanda-gutterman/spread-the-word-to-end-the-word_b_4905334.html

Chocolate exercise cont.

- How would you rate your hunger on a scale from 1-10?
- How would you rate your satisfaction on a scale from 1-10?

Image from http://q.equinox.com/topics/asktheexperts

Chocolate exercise cont.

- Did you notice a difference between eating the first and second chocolate? If so what was the difference?
- How did you feel when eating the second chocolate?
- Did you feel more satisfied when eating the first or second chocolate?

Image from http://q.equinox.com/topics/asktheexperts

Conclusion

- We can achieve a healthy lifestyle by listening to our bodies using the cues that it gives us to decide when, what, and how much we will eat

Thank you

Image from http://www.energybasedhealth.com/category/news/

Nourishing the Adolescent Mind and Body

Lesson 5
Eating Disorders: Decoded

Image from http://www.spsu.edu/recwellness/

Objectives

- Students will be able to identify three types of eating disorders
- Students will be able to name characteristics of anorexia, bulimia, and binge eating disorder
- Students will be able to give examples of what contributes to eating disorders.

Body image and eating disorder facts

- 20 million women and 10 million men suffer from a clinically significant eating disorder at some time in their life in the U.S.
- 40-60% of elementary school girls (ages 6-12) are concerned about their weight or about becoming too fat
- Of American, elementary school girls who read magazines, 69% say that the pictures influence their concept of the ideal body shape. 47% say the pictures make them want to lose weight
- 35-57% of adolescent girls engage in crash dieting, fasting, self-induced vomiting, diet pills, or laxatives. Overweight girls are more likely than normal weight girls to engage in such extreme dieting

What comes to mind when you think of eating disorders?

Anorexia

- Characterized by self starvation
- ~90-95% of anorexia nervosa suffers are girls and women
- Main symptoms:
  - Refusal to stay at a healthy weight for height and age
  - fear of gaining weight or being fat
  - misconception of their body weight

Image from http://m.trusper.com/tips/Tips-To-Stay-Motivated-During-Weight-Loss/8620361

Anorexia cont.

- Health consequences
  - Dry hair and skin, hair loss
  - Fatigue
  - Brittle bones
  - Severe dehydration that can lead to kidney failure
  - Muscle loss and weakness
  - Growth of hair throughout the body (even face) called lanugo

Bulimia

- Characterized by cycle of binge eating and compensation
- ~80% of people suffering from bulimia are females
- Many people who are suffering from bulimia are of average weight

Image from http://m.trusper.com/tips/Tips-To-Stay-Motivated-During-Weight-Loss/8620361

Bulimia cont.

- Main symptoms
  - Eating a large amount of food in a short period
  - Compensating for large amount of food eaten by using extreme measures
  - Extreme concern for weight or body shape
- Health consequences
  - A weakened heart- heart failure
  - A damaged esophagus
  - Tooth decay
  - Gastric rupture

Warning signs of bulimia

- Disappearance of a large amount of food
- Rearranging schedule for binging a purging
- Discoloration or staining of the teeth
- Concern with weight loss or controlling what food is eaten

Binge eating disorder

- Characterized by binge eating without compensation for the food eaten.
- About 1-5% of the population suffer from binge eating disorder
- Binge eating disorder affects more women than women
  - 60% women,40% men
- Those affected can be of average or greater than average weight

Characteristics of binge eating disorder

- Frequent episodes of eating large amounts of food in a short period of time
- Feeling out of control during an episode
- Feeling guilty, depressed, embarrassed, or disgusted after an episode
- Eating when not hungry or until too full

Image from http://www.gurl.com/2012/08/08/yolo-you-only-live-once/

Health consequences of binge eating disorder

Similar to the health consequences seen in obesity:

- High blood pressure
- High cholesterol
- Heart disease
- Diabetes mellitus
- Gallbladder disease

Myth #1

MYTH

- Eating disorders are mainly about food

TRUTH

- Eating disorders are much more than food
- There are deeper problems the person must deal with

Image from http://maispinhais.com.br/

Myth #2

MYTH

- People who have a normal weight or overweight cannot have eating disorders

TRUTH

- You cannot tell whether a person has an eating disorder by simply looking at them.
- People with eating disorders come in all shapes and sizes.

Image from http://www.redbrick.me/2014/03/eating-disorder-awareness-week/

Myth #3

MYTH

- You can never exercise too much

TRUTH

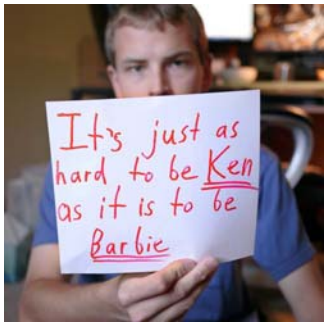
- Exercise can be used by people with eating disorders to compensate for the amount of food eaten
- Too much exercise can lead to dehydration, fatigue, injuries, arthritis and heart problems.

Image from http://www.liveitupwithf1.com/2013_03_01_archive.html

Myth #4

MYTH

- Only women can be affected by eating disorders



TRUTH

- Men can also have eating disorders
- The latest information states that 1 in 4 or 25% of eating disorder cases involve men.

Image from http://imgfave.com/collection/45233/cutestuff

Myth #5

Myth

- Eating disorders are a choice

TRUTH

- People do not chose to have eating disorders
- Eating disorders are serious and require treatment with the help of professionals.

Images from http://www.bodywhys.ie/aboutED/

Myth #6

MYTH

- They're all about food

TRUTH

- People with eating disorders are hurting inside and they choose food as a way to deal with their pain
- This makes them feel better temporarily.

Image from http://www.arabzok.com/archives/11898

Myth #7

MYTH

- Eating disorders are only found in people with a higher socioeconomic status

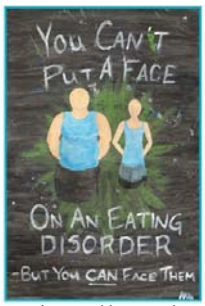


Image from https://www.dosomething.org/blog/chatterbox/national-eating-disorder-week-feb-22-28

TRUTH

- Eating disorders have been found in people of different socioeconomic statuses, age groups, sexes, religions, and countries.

Myth #8

MYTH

- Eating disorders are only found in young girls and adolescent females

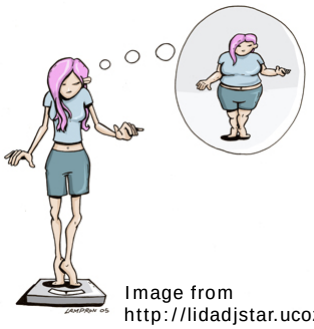


Image from http://lidadjstar.ucoz.co.uk/blog/15_percent_women_are_affected_by_binge_eating_behaviours_and_attitud/2013-06-02-60

TRUTH

- Eating disorders do not discriminate between age or gender
- There are a growing number of middle age women developing eating disorders

Myth #9

MYTH

- An eating disorder is cured when the person gets to a normal weight

TRUTH

- Having a normal weight is only part of recovery
- Eating disorders are very complicated and require other types of treatment

Image from http://www.leadingeffectively.com/using-the-motivational-triad-to-eat-healthier-part-3-avoiding-pain/135697577sm/

What causes eating disorders?

- Low self esteem
- Feeling of lack of control
- Feelings of depression, anxiety, anger, stress or loneliness
- Difficulty expressing emotions and feelings
- Feeling the need to be thin of have the "perfect body"
- Troubled personal relationships

What are warning signs of an eating disorder?

- Dramatic weight change
- Denial of hunger
- Development of food rituals (eating food in certain orders, excessive chewing of food, rearranging food on plate)
- Anxiety about gaining weight or being fat
- Restriction of foods
- Consistent excuses to avoid meal time or activities involving food
- Withdrawal from friends and usual activities

How can eating disorders be prevented?

- Do your best to not comment on weight, body shape, and what someone is eating- something not involving food or appearance
- Learn to know when and how much to eat
- Have a way to express feelings- through writing, art, dance

What should you do if a friend or someone you care about has an eating disorder?

- Talk to the person you are concerned about in a loving and caring
- Communicate your concern
- Ask your friend to get help
- Tell an adult you trust

Key points

- Eating disorders are serious conditions
- Anyone can develop an eating disorder
- Eating disorders are preventable

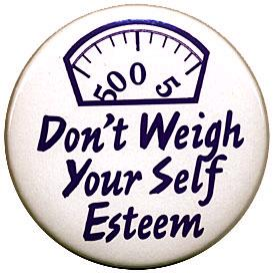


Image from https://runningpfuhl.wordpress.com/category/running-2/

Thank you

Image from http://www.luuux.com/viz/positivity-the-best-remedy

Nourishing the Adolescent Mind and Body

Lesson 6:
Understanding Food Labels

Objectives

- Students will be able to identify all components of a nutrition label
- Students will be able to identify the percentage of fat, calories, and protein on a food label
- Students will be able to apply food label reading skills to decide which foods are nutritious

Which Foods require Nutrition Labels?

- The food and drug administration (FDA) requires that all packaged foods be labeled
- Raw fruits, vegetables, fish, meat, and poultry are not required to be labeled
- FDA labeling laws apply to about 75% of all food consumed in the United States

What information is required to be on a label?

- Name of the product
- Net contents or weight
- Date by which the product should be sold
- Name and place of business of the manufacturer, packager, or distributor
- Most food labels also include a “Nutrition Facts” panel and a list of the food’s ingredients

What is included in the "Nutrition Facts"?

Nutrition Facts
Serving Size 1 bar (2 lbs)
Servings Per Package 1

Amount	% Daily Value
Calories 4600	
Fat 260 g	**400 %**
Saturated 160 g + Trans 0 g	**800 %**
Cholesterol 200 mg	**120 %**
Sodium 1400 mg	**40 %**
Carbohydrate 960 g	**320 %**
Dietary Fiber 40 g	
Sugars 840 g	
Protein 120 g	

Vitamin A	0 %	Vitamin C	0 %
Calcium	320 %	Iron	80 %

- Serving size
- Total calories
- Calories from fat
- Amount of nutrients per serving
- How the food fits into the overall diet

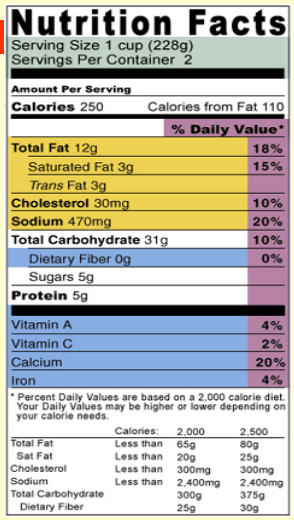
Image from http://newsser.fda.moph.go.th/food/file/BenefitAdmin/GDA4Sec2011/GDA4Sec2011_3.pdf

What does the Serving Size Section of the Food Label tell us?

- Tell the total number of servings per container
- Allows you to compare different products

What do the daily values tell us?

- The amount of total fat, saturated fat, trans fat, cholesterol, sodium, total carbohydrate, dietary fiber, sugars, and protein per serving
- how a food fits into our overall diet
- Based on a 2,000 calorie diet so not useful for kids
- The amount of calories you need is based on your age, whether you are a boy or girl, and how active you are



Nutrition Facts

Serving Size 1 cup (228g)
Servings Per Container 2

Amount Per Serving

Calories 250	Calories from Fat 110
	% Daily Value*
Total Fat 12g	18%
Saturated Fat 3g	15%
Trans Fat 3g	
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%

* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Image from http://www.ahsd.org/fcscience/michaels/powerpoints/Food%20Label%20FDA%20Powerpoint%20-%20FDA%20%5BCompatibility%20Mode%5D.pdf

Daily values cont.

- For most nutrients the daily value is the target for intake
- For some nutrients the daily value represents the maximum recommended amount
- Daily values are required for total fat, saturated fat, cholesterol, sodium, total carbohydrate, and dietary fiber in addition, to vitamin A, vitamin C, calcium, and iron

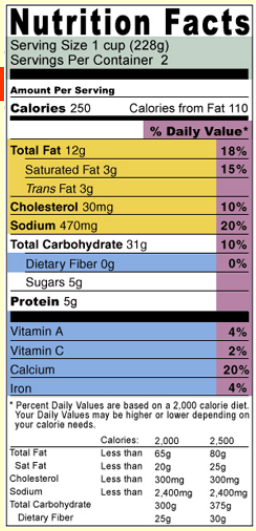


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Image from http://www.ahsd.org/fcscience/michaels/powerpoints/Food%20Label%20FDA%20Powerpoint%20-%20FDA%20%5BCompatibility%20Mode%5D.pdf

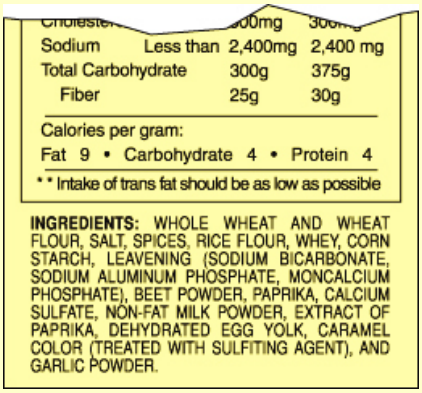
Daily Values For Specific Nutrients

	% Daily Value*
Total Fat 12g	18%
Saturated Fat 3g	15%
Trans Fat 3g	
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%

- Fat
  - 30% of calories
- Saturated fat
  - 10% of calories
- Cholesterol
  - 300 mg

Image from http://www.ccebroomecounty.com/wp-content/uploads/2013/04/ESNY_Newsletter_4th-FINAL.pdf

Ingredients List



Sodium	Less than 2,400mg	2,400 mg
Total Carbohydrate	300g	375g
Fiber	25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

** Intake of trans fat should be as low as possible

INGREDIENTS: WHOLE WHEAT AND WHEAT FLOUR, SALT, SPICES, RICE FLOUR, WHEY, CORN STARCH, LEAVENING (SODIUM BICARBONATE, SODIUM ALUMINUM PHOSPHATE, MONCALCIUM PHOSPHATE), BEET POWDER, PAPRIKA, CALCIUM SULFATE, NON-FAT MILK POWDER, EXTRACT OF PAPRIKA, DEHYDRATED EGG YOLK, CARAMEL COLOR (TREATED WITH SULFITING AGENT), AND GARLIC POWDER.

- Listed from highest to lowest amount by weight
- The first ingredient listed means it makes up the greatest amount of that food

Image from http://www.modelinia.com/blog/lonneke-engels-nutrition-tip-of-the-day/22784

Pop tart ingredients

Ingredients: ENRICHED FLOUR (WHEAT FLOUR, NIACIN, REDUCED IRON, THIAMIN MONONITRATE [VITAMIN B1], RIBOFLAVIN [VITAMIN B2]), CORN SYRUP, HIGH FRUCTOSE CORN SYRUP, DEXTROSE, SOYBEAN AND PALM OIL (WITH TBHQ FOR FRESHNESS), CRACKER MEAL, CONTAINS TWO PERCENT OR LESS OF WHEAT STARCH, SALT, DRIED STRAWBERRIES, DRIED PEARS, DRIED APPLES, LEAVENING (BAKING SODA, SODIUM ACID PYROPHOSPHATE, MONOCALCIUM PHOSPHATE), CITRIC ACID, CORNSTARCH, CARAMEL COLOR, SOY LECITHIN, XANTHAN GUM, MODIFIED WHEAT STARCH, VITAMIN A PALMITATE, RED #40, YELLOW #6, NIACINAMIDE, REDUCED IRON, PYRIDOXINE HYDROCHLORIDE (VITAMIN B6), RIBOFLAVIN (VITAMIN B2), THIAMIN HYDROCHLORIDE (VITAMIN B1).

Image from http://www.poptarts.com/flavors/nutrition

Activity

- Groups of 4
- Each group will receive a food label
- Work together as a group to complete the food label worksheet

With Food Label reading SKILLS We...

- Have the power to make good decisions about what we eat
- Can chose foods that are good for us and contribute to a healthy lifestyle

Thank you

Image from http://wholesometummiesblog.com/reading-and-understanding-food-labels-for-kids/

Nourishing the Adolescent Mind and Body

Lesson 7:
Whole vs Processed foods

Objectives

- Students will be able to identify the differences between whole and processed foods
- Students will be able to describe the benefits of choosing whole foods

What are whole foods?

- Foods that have not been processed or refined, or received minimal processing and refining
- Close to their natural and original states, usually look similar to the way they look in nature
- Include little or no additives

Benefits of Eating Whole Foods

- Receive all the nutrients of the food including the vitamins, minerals, and fiber

Image from http://kupujdoma.uz.ua/new/ru/

What are some examples of whole foods?

- Fruits
- Vegetables
- Beans
- Unpolished grains

Image from http://fineartamerica.com/featured/fresh-bell-peppers-at whole-foods-in-new-orleans-sean-gautreaux.html

Image from http://www.shutterstock.com/pic-29426209/stock-photo-dried-legumes-and-cereals-on-a-white-background.html

Image from http://splendidhealthkiss.wix.com/splendidhealthkissstore#!__store-spanish/pkg

What is a whole grain?

- Made from the entire seed of the grain
- Grains have different parts: the bran, the endosperm, and the germ
- The bran and germ part of the seed contain fiber

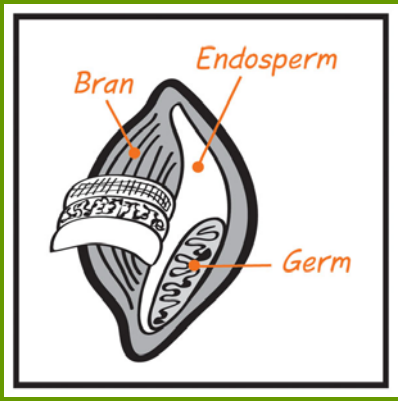


Image from http://blog.greatharvest.com/the-bread-business-blog/whole-grains-rock-but-can-i-be-a-whole-whole-grain-bakery

What are some examples of whole grains?

- Oats, rye, miller, bulgur, brown rice, wild rice, whole wheat bread
- When choosing foods, look for whole grain ingredients to be listed first on the label

Image from http://www.osaapafarms.com/portfolio/

What's the difference between whole and refined grains?

- Refined grains are stripped of the bran and germ

Image from http://experiencelife.com/article/the-truth-about-refined-grains/

Is it Whole Grain or not?

If the ingredient says...	Is it Whole Grain?
Whole [name of grain] Whole [name of grain] flour Whole grain [name of grain] [name of grain] berries Stoneground whole [grain] Oats, oatmeal Whole white wheat Bulgur Graham flour	**Yes** These are all Whole Grain.
Wheat flour unbleached Semolina Durum wheat Organic flour Multigrain (may contain a mix of grains)	**Maybe** Some parts of the grain may be missing, so these products may lack the benefits of Whole Grain.
Enriched flour Degerminated Bran Wheat germ Pearled barley Grits, hominy, farina	**No** These are not Whole Grain ingredients.

Adapted from the Whole Grains Council

Image from http://www.eatlivelove.it/p/home&c=3

What nutrient then , are refined grains missing?

Fiber!

What does fiber do in our bodies?

- Helps to keep us full
- Helps keep our intestines healthy

What are processed foods?

- Food that has gone through a process to become what is.
- Packaged or convenience foods
- Contain additives
- Stripped of many nutrients including B vitamins and minerals during processing
- Much of the fiber is removed
- ↑ in calories but ↓ in nutrients

What are some example of processed foods

- Poptart
- Hot cheetos
- Doritos

Images from http://www.travelingfeast.net/category/play/
http://vorotila.ru/Item74126/Cheetos-lyubit-Chipsy
http://www.eatlivelife.com/2014/03/18/food-additives-preservatives/
http://www.onepennysheet.com/2010/page/29/

Can you think of an example of a processed food and the whole food it comes from?

What are some ways we can choose healthier options?

- Check the ingredient list
  - Avoid high fructose corn syrup
  - Chose whole grains

- In the grocery store whole foods are found in the outside aisles

Images from http://attractingwellness.net/2011/10/28/enjoying-whole-grains/
http://nourishedblog.wordpress.com/2014/02/24/protect-your-heart-diet-exercise-and-weight-loss/

Activity

- Next time you go to the grocery store, determine which foods are whole and which are processed
- Do you notice more nutritious foods in the outside aisles of the grocery store as opposed to the inside aisles?

Thank you

Image from http://blog.mountainstarmedicalgroup.com/blog/2012/05/24/healthy-eating-healthy-families/

Nourishing the Adolescent Mind and Body

Lesson 8:
Dispelling Nutrition Myths

Objectives

- Students will be able to explain the truth of 2 nutrition myths.
- Students will be able to identify 3 ways obesity can affect health.
- Students will be able to explain why it is not a good idea to participate in fad dieting

What is obesity?

- A condition where a person has excess body fat and weighs too much for their height
- 65% of adults in the US are overweight or obese
- 31% are obese

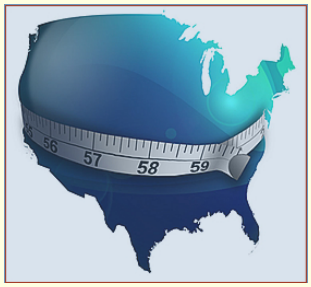


Image from http://obesityinamerica.org/

How has obesity become a bigger problem now than in the past?

- The amount of people who are obese has increased over the past 40 years
- People are eating more food
- Less physical activity

Image from http http://www.ccac.edu/files/PDF_Document/b0c3a6aeee1b4f84a7c43cef5a3a3b67.pdf

What are some health complications associated with obesity?

- Diabetes
- Heart disease
- High blood pressure
- Sleeping problems
- Respiratory problems
- Cancer

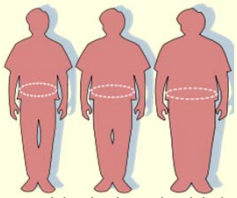


Image from http://facts-pictures.vidzshare.net/overweight-obesity-and-weight-loss-fact-sheet/giniesayles.com*obesity-in-america-2012-facts-715.jpg/

Risks of being underweight

- Weakened immune system
- Low energy
- Anemia
- Nutrient deficiencies
- Fragile bones

Fad dieting

- A popular and quick fix way of losing weight
- Eliminate foods groups or specific foods
- May focus on a specific type of food

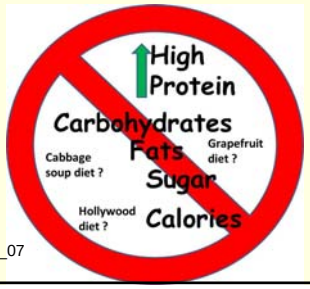


Image from http://mvhospitalfordiabetes.blogspot.com/2012_07_01_archive.html

Fad dieting

- May promote a particular product
- May require food groups to be above or below what is normally recommended by health organizations
- Do not provide all nutrients

The cabage soup diet

The cookie diet

Image from http://www.pearltrees.com/t/cookies/id7736419

Image from http://newshealth.net/tag/body/page/2/

Nutrition Myths

Eating Fat Makes you Fat

- Eating fat does not make you fat
- People become overweight when they eat more calories than their body burns
- We should aim to eat just as many calories as we burn.

Image from http://www.endalldisease.com/butter-the-queen-of-fats/

Fat is bad For you

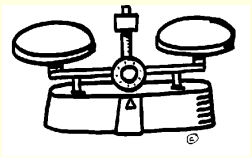
- Not all fats are created equal
- Saturated and trans fats should be eaten in moderation

- Omega 3 and Omega 6 fats are healthy
- Fats found in bananas and avocados are also good for you

Image from http://www.care2.com/greenliving/wonder-nut-walnut.html
http://www-edlab.cs.umass.edu/cs383/Supervised%20Learning.pdf

Carbohydrates Make you Fat

- Eating carbohydrates will not make you fat
- Balance is key



- Carbohydrates give us energy
- Our brain needs carbohydrates

Images from https://learni.st/users/52903/boards/42624-choosing-tools-of-measurement-common-core-2-md-1 http://www.healthybrainforlife.com/images/brain/pinkbrain.jpg/view

If you Skip a Meal, you can eat Whatever you Want the Next Meal

- Skipping meals can make you:
  - Overly hungry
  - More likely to overeat
  - Tired
  - Have a difficulty concentrating
- Everything you eat counts
- Respect your body by giving it the fuel it needs

If you exercise, you can eat as much as you Want

- It is also important that we fuel our body with the foods we need
- Eating a balanced diet will help to give us energy and protect from nutrition or diet related diseases.

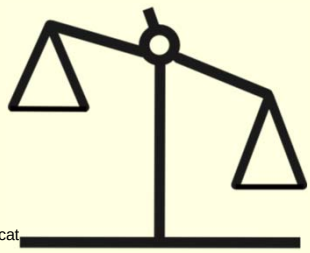


Image from https://ourcommongroundtalk.wordpress.com/category/women-issues/

Key points

- Balance is key
- All food groups and nutrients are important
- Keeping active and eating balanced meals help prevent obesity

Thank you

Image from http://new.pitchengine.com/pitches/89254a21-5a32-4c88-b4d2-342271671c37

10 tips
Nutrition Education Series

build a healthy meal

10 tips for healthy meals

A healthy meal starts with more vegetables and fruits and smaller portions of protein and grains. Think about how you can adjust the portions on your plate to get more of what you need without too many calories. And don't forget dairy—make it the beverage with your meal or add fat-free or low-fat dairy products to your plate.

1 make half your plate veggies and fruits

Vegetables and fruits are full of nutrients and may help to promote good health. Choose red, orange, and dark-green vegetables such as tomatoes, sweet potatoes, and broccoli.

2 add lean protein

Choose protein foods, such as lean beef and pork, or chicken, turkey, beans, or tofu. Twice a week, make seafood the protein on your plate.

3 include whole grains

Aim to make at least half your grains whole grains. Look for the words "100% whole grain" or "100% whole wheat" on the food label. Whole grains provide more nutrients, like fiber, than refined grains.

4 don't forget the dairy

Pair your meal with a cup of fat-free or low-fat milk. They provide the same amount of calcium and other essential nutrients as whole milk, but less fat and calories. Don't drink milk? Try soymilk (soy beverage) as your beverage or include fat-free or low-fat yogurt in your meal.

5 avoid extra fat

Using heavy gravies or sauces will add fat and calories to otherwise healthy choices. For example, steamed broccoli is great, but avoid topping it with cheese sauce. Try other options, like a sprinkling of low-fat parmesan cheese or a squeeze of lemon.

6 take your time

Savor your food. Eat slowly, enjoy the taste and textures, and pay attention to how you feel. Be mindful. Eating very quickly may cause you to eat too much.

7 use a smaller plate

Use a smaller plate at meals to help with portion control. That way you can finish your entire plate and feel satisfied without overeating.

8 take control of your food

Eat at home more often so you know exactly what you are eating. If you eat out, check and compare the nutrition information. Choose healthier options such as baked instead of fried.

9 try new foods

Keep it interesting by picking out new foods you've never tried before, like mango, lentils, or kale. You may find a new favorite! Trade fun and tasty recipes with friends or find them online.

10 satisfy your sweet tooth in a healthy way

Indulge in a naturally sweet dessert dish—fruit! Serve a fresh fruit cocktail or a fruit parfait made with yogurt. For a hot dessert, bake apples and top with cinnamon.

USDA United States Department of Agriculture
Center for Nutrition Policy and Promotion

Go to www.ChooseMyPlate.gov for more information.

DG TipSheet No. 7
June 2011

Ten Steps To Positive Body Image

One list cannot automatically tell you how to turn negative body thoughts into positive body image, but it can help you think about new ways of looking more healthfully and happily at yourself and your body. The more you do that, the more likely you are to feel good about who you are and the body you naturally have.

1. Appreciate all that your body can do. Every day your body carries you closer to your dreams. Celebrate all of the amazing things your body does for you --running, dancing, breathing, laughing, dreaming, etc.

2. Keep a top-10 list of things you like about yourself -- things that aren't related to how much you weigh or what you look like. Read your list often. Add to it as you become aware of more things to like about you.

3. Remind yourself that "true beauty" is not simply skin-deep. When you feel good about yourself and who you are, you carry yourself with a sense of confidence, self-acceptance, and openness that makes you beautiful regardless of whether you physically look like a supermodel. Beauty is a state of mind, not a state of your body.

4. Look at yourself as a whole person. When you see yourself in a mirror or in your mind, choose not to focus on specific body parts. See yourself as you want others to see you -- as a whole person.

5. Surround yourself with positive people. It is easier to feel good about yourself and your body when you are around others who are supportive and who recognize the importance of liking yourself just as you naturally are.

6. Shut down those voices in your head that tell you your body is not "right" or that you are a "bad" person. You can overpower those negative thoughts with positive ones. The next time you start to tear yourself down, build yourself back up with a few quick affirmations that work for you.

7. Wear clothes that are comfortable and that make you feel good about your body. Work with your body, not against it.

8. Become a critical viewer of social and media messages. Pay attention to images, slogans, or attitudes that make you feel bad about yourself or your body. Protest these messages: write a letter to the advertiser or talk back to the image or message.

9. Do something nice for yourself -- something that lets your body know you appreciate it. Take a bubble bath, make time for a nap, find a peaceful place outside to relax.

10. Use the time and energy that you might have spent worrying about food, calories, and your weight to do something to help others. Sometimes reaching out to other people can help you feel better about yourself and can make a positive change in our world.

Tips for Kids on Eating Well and Feeling Good About Yourself

NEDA Feeding hope.
National Eating Disorders Association

It is no fun to worry all the time about how much you weigh, how much you eat, or whether you are thin.

Here are some things you can do to:

- Be healthy and fit!
- Have fun!
- Concentrate on who you are rather than how you look!
- Eat when you are hungry. Stop eating when you are full.

All foods can be part of healthy eating. There are no "good" or "bad" foods, so try to eat lots of different foods, including fruits, vegetables, and even sweets sometimes. When having a snack, try different types. Sometimes raisins might be good, sometimes cheese, sometimes a cookie, sometimes carrot sticks or celery dipped in peanut butter. If you are sad or mad or have nothing to do—and you are not really hungry—find something to do other than eating. Often, talking with a friend or parent or teacher is helpful.

Remember, kids and adults who exercise and stay active are healthier and better able to do what they want to do, no matter what they weigh or how they look. Try to find a sport (like basketball or soccer) or an activity (like dancing or karate) that you like and do it! Join a team, join the YMCA, join in with a friend or practice by yourself!

Good health, feeling good about yourself, and having fun go hand in hand. Try out different hobbies, like drawing, reading, playing music, or making things. See what you're good at and enjoy these things.

Remember that healthy bodies and happy people come in all sizes, and that no one body shape or body size is a healthy one or the right one for everybody.
Some people believe that fat people are bad, sick, and out of control, while thin people are good, healthy, and in control. This is not true and it is unfair and hurtful. Get to know people and find out for yourself!

Do not tease people about being too fat, too thin, too short, or too tall. And, don't laugh at other people's jokes about fat (or thin) people or short (or tall) people. Teasing is unfair and it hurts.

If you hear someone (your mom or dad, a sister or a friend) say they are "too fat and need to go on a diet." Tell them:

- Please don't, because dieting to lose weight is not healthy—and no fun—for kids or adults.
- You think they look great just the way they are.
- Don't diet; eat a variety of foods and get some exercise.
- Remember, being "thinner" is not the same as being healthier and happier.

Appreciate yourself for all you are –respect and like who you are, enjoy playing and being active, and eat a variety of healthy foods.

No Weigh! A Declaration of Independence from a Weight-Obsessed World

NEDA Feeding hope.
National Eating Disorders Association

I, the undersigned, do hereby declare that from this day forward I will choose to live my life by the following tenets. In so doing, I declare myself free and independent from the pressures and constraints of a weight-obsessed world.

- I will accept my body in its natural shape and size.
- I will celebrate all that my body can do for me each day.
- I will treat my body with respect, giving it enough rest, fueling it with a variety of foods, exercising it moderately, and listening to what it needs.
- I will defy our society's pressures to judge myself and other people on physical characteristics like body weight, shape, or size. I will respect people based on the qualities of their character and the impact of their accomplishments.
- I will refuse to deny my body valuable nutrients by dieting or using weight loss products.
- I will avoid categorizing foods as either "good" or "bad." I will not guilt or shame myself for eating certain foods. Instead, I will nourish my body with a balanced variety of foods, listening and responding to what it needs.
- I will not use food to mask my emotional needs.
- I will not avoid participating in activities that I enjoy (e.g., swimming, dancing, enjoying a meal with friends) simply because I am self-conscious about the way my body looks. I will recognize that I have the right to enjoy any activities regardless of my body shape or size.
- I will base my self-esteem and identity on that which comes from within!

_____ _____

Signature **Date**

NAME:_____ CLASS:_____ DATE:_____

Let's Get **Food**ucated!

Product:

Nutrition Grade

Ingredient List:

Ingredients: Whole Grain Oats (includes the oat bran), **Sugar, Modified Corn Starch, Honey, Brown Sugar Syrup, Salt, Tripotassium Phosphate, Canola and/or Rice Bran Oil, Natural Almond Flavor. Vitamin E** (mixed tocopherols) **Added to Preserve Freshness.**

Vitamins and Minerals: Calcium Carbonate, Zinc and Iron (mineral nutrients), **Vitamin C** (sodium ascorbate), **A B Vitamin** (niacinamide), **Vitamin B_6** (pyridoxine hydrochloride), **Vitamin B_2** (riboflavin), **Vitamin B_1** (thiamin mononitrate), **Vitamin A** (palmitate), **A B Vitamin** (folic acid), **Vitamin B_{12}, Vitamin D_3.**

CONTAINS ALMOND; MAY CONTAIN WHEAT INGREDIENTS.

Nutrition Facts:

Nutrition Facts

Serving Size 0.75 cup (28g)
Serving Per Container 12

Amount Per Serving	
Calories 110	Calories from Fat 15
	% Daily Values*
Total Fat 1.5g	**2%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Potassium 115mg	**3%**
Sodium 160mg	**7%**
Total Carbohydrate 22g	**7%**
Dietary Fiber 2g	**8%**
Sugars 9g	
Protein 2g	**4%**
Vitamin A 10% •	Vitamin C 10%
Calcium 10% •	Iron 25%

*Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2400mg	2400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

1. What do you think is used to sweeten this cereal?

_____

2. Underline all the sweeteners listed in the Ingredient List. How many did you find? _____

3. How many grams of sugar per serving? _____

4. Approximately how many teaspoons of sugar are in a serving of this cereal? _____
(HINT: there are 4 grams of sugar per teaspoon)

5. Are there any nuts in Honey NUT Cheerios? _____

6. What cereal do you like to eat? _____

7. Fooducate recommends a cereal with 6 or less grams of sugar per serving.
Does this cereal have more sugar or less? _____

8. What nutrition grade should this product get? (examples: A, B+, C-) Write the grade in the Nutrition Grade circle above.

0 16000 27527 0

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NAME:_____ CLASS:_____ DATE:_____

Let's Get **Food**ucated!

Product:

Nutrition Grade

Ingredient List:

TOMATO CONCENTRATE FROM RED RIPE TOMATOES, DISTILLED VINEGAR, HIGH FRUCTOSE CORN SYRUP, CORN SYRUP, SALT, SPICE, ONION POWDER, NATURAL FLAVORING.

Nutrition Facts:

Serving Size 1 Tbsp (17g)
Serving Per Container 60

Amount Per Serving	
Calories 20	
	% Daily Values*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 160mg	**7%**
Total Carbohydrate 4g	**1%**
Dietary Fiber 0g	**0%**
Sugars 4g	
Protein 0g	**0%**

Vitamin A 1% • Vitamin C 2%

*Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2400mg	2400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

1. Read the ingredient list. What sweeteners are used here? _____

_____

2. What is a serving size for ketchup? Do you use more than that or less? _____

_____

3. How many grams of sugar are in a single serving of ketchup? _____

4. How many teaspoons of sugar are in a single serving of ketchup? _____
(HINT: there are 4 grams of sugar per teaspoon)

5. What other condiments could you use instead of ketchup? _____

6. What nutrition grade should this product get? (examples: A, B+, C-) Write the grade in the Nutrition Grade circle above.

0 13000 00124 3

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NAME:_____ CLASS:_____ DATE:_____

Let's Get **Food**ucated!

Product:

Nutrition Grade

Ingredient List:

Carbonated Water, High Fructose Corn Syrup, Caramel Color, Phosphoric Acid, Natural Flavors, Caffeine

Nutrition Facts:

Serving Size 1 can (12 fl oz)
Serving Per Container 1

Amount Per Serving	
Calories 140	
	% Daily Values*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 45mg	**2%**
Total Carbohydrate 39g	**13%**
Dietary Fiber 0g	**0%**
Sugars 39g	
Protein 0g	**0%**

*Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2400mg	2400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

1. How many grams of sugar are in this can? _____

2. Approximately how many teaspoons of sugar are in this sodal? _____
(HINT: there are 4 grams of sugar per teaspoon)

3. Have you ever tried drinking a glass of water with the same amount of sugar added? _____

4. How many calories are in a can? _____

5. How many of the calories are from sugars? _____
(HINT: each sugar is 4 calories)

6. What would be a better alternative to a soft drink? _____

7. What nutrition grade should this product get? (examples: A, B+, C-) Write the grade in the Nutrition Grade circle above.

0 49000 04251 1

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NAME:_____ CLASS:_____ DATE:_____

Let's Get **Food**ucated!

Product:

Nutrition Grade

Ingredient List:

Enriched Flour (Wheat Flour, Niacinamide, Reduced Iron, Thiamin Mononitrate [Vitamin B1], Riboflavin [Vitamin B2], Folic Acid), Corn Syrup, High Fructose Corn Syrup, Dextrose, Vegetable Oil (Soybean, Cottonseed and Hydrogenated Cottonseed Oil (Less than 0.5 g Trans Fat per Serving) with TBHQ and Citric Acid for Freshness), Sugar, Cracker Meal, Contains Two Percent or Less of Wheat Starch, Salt, Dried Strawberries, Dried Apples, Dried Pears, Cornstarch, Leavening (Baking Soda, Sodium Acid Pyrophosphate, Monocalcium Phosphate), Citric Acid, Milled Corn, Modified Wheat Starch, Gelatin, Caramel Color, Partially Hydrogenated Soybean and/or Cottonseed Oil (Less than 0.5 g Trans Fat per Serving), Modified Corn Starch, Xanthan Gum, Soy Lecithin, Color Added, Niacinamide, Reduced Iron, Red No. 40, Vitamin A Palmitate, Yellow No. 6, Pyridoxine Hydrochloride (Vitamin B6), Riboflavin (Vitamin B2), Thiamin Hydrochloride (Vitamin B1), Folic Acid, Turmeric Color, Blue No. 1.

Nutrition Facts:

Nutrition Facts

Serving Size 1 pastry (52g)
Serving Per Container 8

Amount Per Serving	
Calories 200	Calories from Fat 45
	% Daily Values*
Total Fat 5g	**8%**
Saturated Fat 2g	**10%**
Trans Fat 0g	
Polyunsaturated Fat 2g	
Monounsaturated Fat 1g	
Cholesterol 0mg	**0%**
Sodium 170mg	**7%**
Total Carbohydrate 38g	**13%**
Dietary Fiber 0g	**0%**
Sugars 16g	
Protein 2g	**4%**
Vitamin A 10% •	Iron 10%

*Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2400mg	2400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

1. What flavor is this Pop Tart? _____

2. Underline the strawberries in the ingredient list.

3. Circle the ingredients used to color the strawberry filling.

4. Do you think "Made with real fruit" that appears on the front of the package is a credible description? _____

5. How many grams of sugar are there per serving/Pop Tart?_____

6. How many teaspoons of sugar are in a Pop Tart? _____
(HINT: there are 4 grams of sugar per teaspoon)

7. What nutrition grade should this product get? (examples: A, B+, C-) Write the grade in the Nutrition Grade circle above.

0 38000 31710 1

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NAME:_____ CLASS:_____ DATE:_____

Let's Get **Food**ucated!

Product:

Ingredient List:

SUGAR, UNBLEACHED ENRICHED FLOUR (WHEAT FLOUR, NIACIN, REDUCED IRON, THIAMINE MONONITRATE {VITAMIN B1}, RIBOFLAVIN {VITAMIN B2}, FOLIC ACID), HIGH OLEIC CANOLA AND/OR PALM OIL, COCOA (PROCESSED WITH ALKALI), HIGH FRUCTOSE CORN SYRUP, CORNSTARCH, LEAVENING (BAKING SODA AND/OR CALCIUM PHOSPHATE), SALT, SOY LECITHIN, VANILLIN--AN ARTIFICIAL FLAVOR, CHOCOLATE. CONTAINS: WHEAT, SOY.

Nutrition Grade

Nutrition Facts:

Serving Size 3 cookies (34g)
Serving Per Container 15

Amount Per Serving	
Calories 160	Calories from Fat 60
	% Daily Values*
Total Fat 7g	**11%**
Saturated Fat 2g	**10%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 160mg	**7%**
Total Carbohydrate 25g	**8%**
Dietary Fiber 1g	**4%**
Sugars 14g	
Protein 1g	**2%**
Calcium 2% •	Iron 10%

*Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2400mg	2400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

1. How many cookies are in a serving? _____

2. How many servings are in a package? _____

3. How many cookies are in a package? _____

4. How many cookies do you have for a snack? _____

5. What's the first ingredient listed in the ingredient list? _____

6. How many grams of sugar per serving? _____

7. How many teaspoons of sugar per serving? (HINT: there are 4 grams of sugar per teaspoon) _____

8. Approximately how many teaspoons of sugar are in each cookie? _____

9. What nutrition grade should this product get? (examples: A, B+, C-) Write the grade in the Nutrition Grade circle above.

0 44000 00820 8

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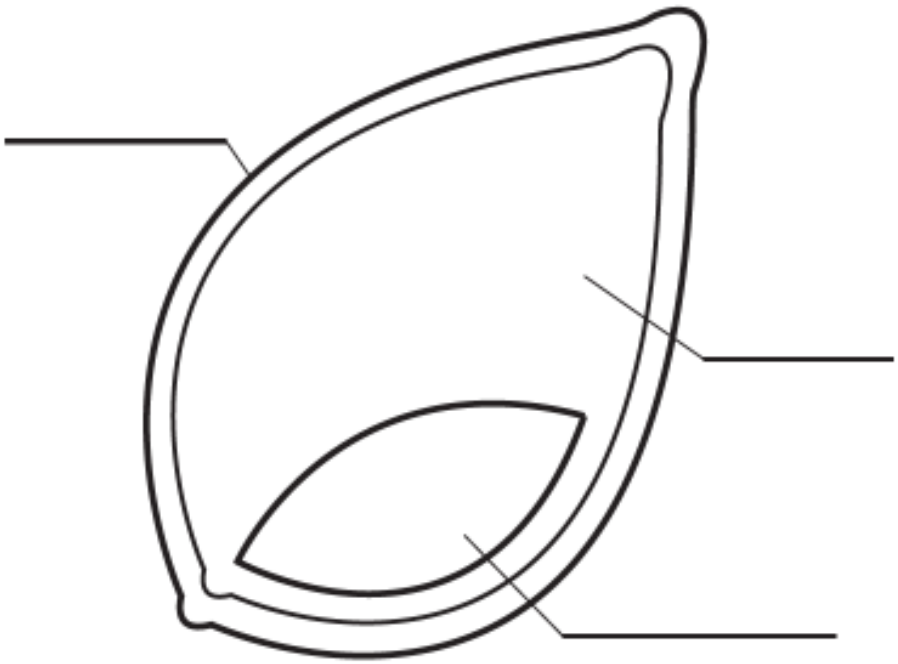
Parts of a Whole Grain Seed

(Also known as a kernel of corn, wheat, rice, oats, barley, rye, etc.)



Whole grains contain many healthy things, especially fiber! Since most of the healthy things are found in the germ and bran, foods made with the entire kernel can play an important role in having good health!

Which parts of the kernel are the fiber?

_____ and _____