

Back in Whack for Teens

Pediatric Weight Management Program

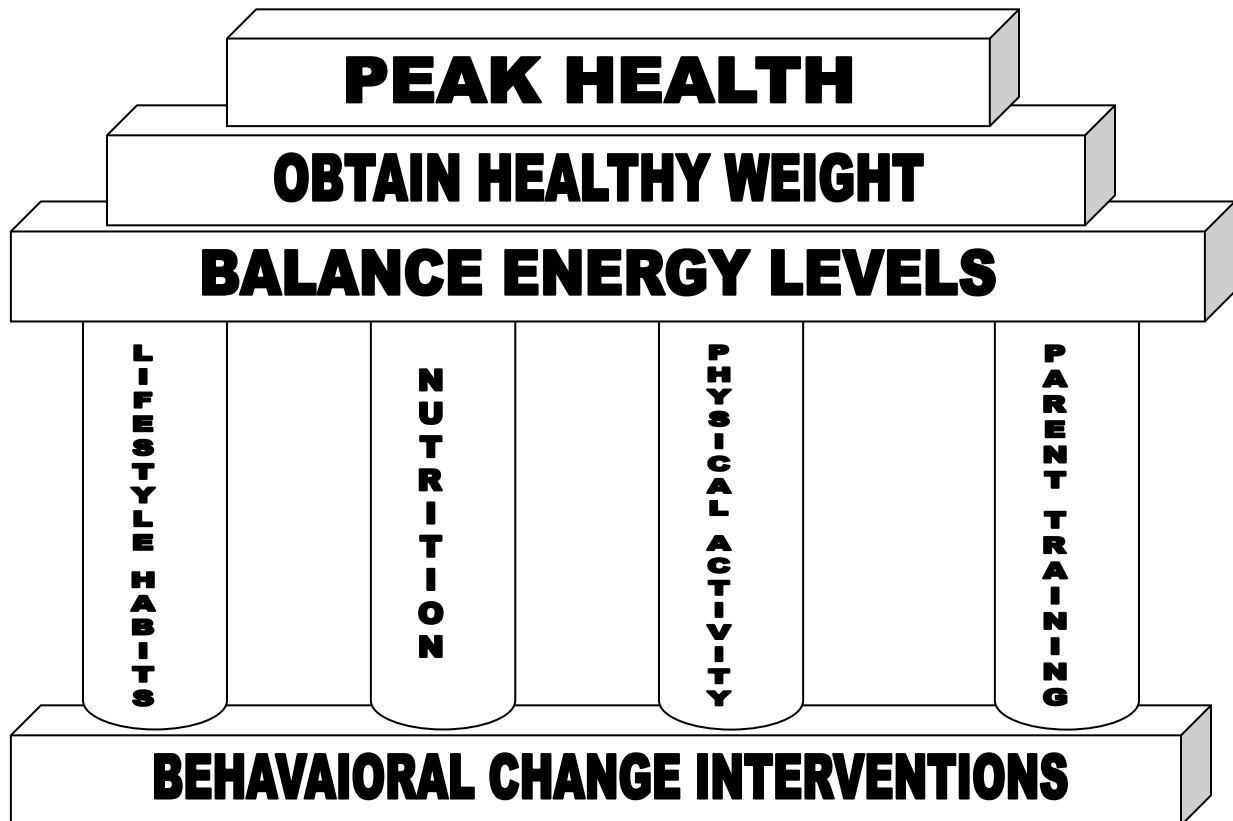
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Childhood obesity is a treatable condition. Multi-component weight-management programs for youth have shown to be much more successful than single-component programs for short- and longer-term weight management success. Researchers have identified four necessary components of successful weight-management programs for children and teens:

1. A nutrition component with an individualized nutrition plan that promotes an energy deficit combined with nutrition education tailored to the nutrition prescription;
2. A physical activity component;
3. A behavioral intervention component;
4. A parent training/modeling component;

Back in Whack for Teens [BiW4Teens] contains all four vital components of a successful pediatric weight-management program plus one additional component titled lifestyle habits. This additional component teaches youth and parents about high impact lifestyle habits that have positive and negative effects on the body's energy balance and body mass index [BMI].

BiW4Teens program structure utilizes the behavioral intervention component as the foundation for the program. This component supports the other four program components - lifestyle habits, nutrition, physical activity, parent training.



BiW4Teens utilizes teaching techniques that facilitate optimal learning. The program provides a variety of hands-on activities and tools, self-discovery exercises, treasure hunts, field trips, and activities that promote ownership in the learning process. Educational techniques take into consideration the cognitive and developmental levels of the participant.

BEHAVIORAL INTERVENTION COMPONENT

The behavioral intervention component utilizes themes, tools, and skills that have all been confirmed by research studies to positively influence, support, and facilitate behavioral change. The skills taught and the tools used in this program are referred to as power tools that support habit change.

1. Program Themes that Facilitate and Support Behavioral Change:

- a. Habit change starts in the brain and the brain is the boss of the body. This theme helps participants understand why it is important to use habit change skills and tools.
- b. We have amazing bodies that allow us to do everything we do. Body appreciation is taught and reinforced throughout the program. It is hard to take care of something you don't like or appreciate. Many overweight youth struggle with poor body image. This theme helps to improve body image. To further facilitate body acceptance, excess weight is usually referred to as extra stored energy. Because after all, that is what our adipose tissue is – stored energy. Occasionally it is necessary to use the words excess weight and unhealthy weight. The term obesity is never used during the course of this online, home-based program.
- c. Habit change is a journey. It is compared to hiking up a tall mountain. There is going to be days when the path is rough and the going gets tough. An individual may fall and even slip backwards. The important thing is that they get up and keep moving forward. Every one succeeds on this journey as long as they keep moving forward. Fear of failure is a common intrinsic roadblock for individuals. This theme helps diminish fear of failure.
- d. Youth are climbing up the Back in Whack path to Peak Health. Benefits of a healthy body are taught. Youth are asked to identify one thing they really want to do better when they reach Peak Health (i.e. teen that wants to get a college basketball scholarship or tween that wants to be able to run fast like the fast kids). This activity helps youth identify a personal intrinsic jackpot reward which serves as a motivational focal point. This helps motivate youth to keep moving forward on the Back in Whack path as they strive to obtain their identified jackpot reward when they reach Peak Health.
- e. Connect pleasure to health goals whenever possible. The brain is attracted to pleasure and avoids pain – includes real pain, imagined pain or perceived discomfort. Youth are encouraged to put something they enjoy with health goals that they don't enjoy (i.e. listen to favorite music when exercising). Youth and parents are taught how to implement positive reinforcements and reward systems. Success feels good and serves as an intrinsic motivation. Participants are encouraged to celebrate all identified success.
- f. *BiW4Teens* has a positive focus. The brain is attracted to positive. Participants are encouraged to focus on the positive in themselves, their goals, and their accomplishments. Positive focus serves as an intrinsic motivational factor.

- g. Autonomy is a basic human need. The program provides opportunities for teens/tweens to be in control of choosing healthy habits and to develop ownership of their weight management plan.
- 2. Self-Monitoring Tools.** It is well documented that children and teens who self-monitor goals are much more successful in accomplishing their goals and the results are long lasting into adulthood. *BiW4Teens* utilizes a couple different self-monitoring tools:
- a. *BiW Habit Tracker* (six-month chart);
 - b. *Food and Activity Log* [Note - Individuals eat 25% less food when they are documenting daily food intake eat.];
 - c. *Nutrition Plan Worksheets* (youth track how closely they are eating according to their nutrition plan).
- 3. Behavioral Change Tools:**
- a. Journaling;
 - b. “Make Healthy Choices” bracelet.
- 4. Cognitive Restructuring Skills:**
- a. Visualizations (referred to as mini movies);
 - b. Positive affirmations (referred to as mighty messages);
 - c. Stomp ANTs (Automatic Negative Thoughts) – technique used to block negative thoughts.
- 5. Program Derailment Management Skills:**
- a. Craving prevention and management – identify and modify social and environmental cues that trigger undesirable eating;
 - b. Problem solving – identify and define problem, list possible solution to correct the problem, choose the best solution, put solution into action;
 - c. Manage program roadblocks – identify and prevent potential roadblocks or devise a plan to re-route around encountered roadblocks.

NUTRITION COMPONENT

The nutrition component is comprised of two parts – an individualized nutrition plan that provides a balanced diet and promotes an energy deficit combined with nutrition education tailored to the nutrition plan. This combination increases effectiveness of the nutrition education and improves compliance with the nutrition plan. Research has validated that this type of nutritional intervention is an effective part of a successful multi-component weight management program for youth.

1. Individualized Nutrition Plan:

- a. Utilizes current dietary guidelines and reference standards for a diet with balanced macronutrients. It provides a balanced diet with a variety of healthy food choices;
- b. Provides a tailored diet for youth’s specific age and gender using caloric intake guidelines to meet the energy needs (expenditures) of a sedentary teen/tween. This nutrition plan will provide an energy deficit when the youth comply with the program’s physical activity recommendations.

- c. Is written in a format that lists number of servings (including description of serving sizes) per each food category/group. A list of healthy “whole” foods for each food group is included with the nutrition plan.
 - d. Supports lifestyle eating habits that promote a healthy weight:
 - i. Adequate intake of fruit and vegetable;
 - ii. Adequate intake of dairy and foods with calcium;
 - iii. Limits or excludes intake of sugary beverages and large quantities fruit juice;
 - iv. Limits intake of high fat foods;
 - v. Decreases energy dense foods in the diet.
2. **Nutrition Education** teaches parents and youth the following key points about their nutrition plan and about nutrition that supports health:
- a. Food groups;
 - b. Macronutrients provided by each food group and why the body needs all kinds of macronutrients;
 - c. Healthy “whole” foods in each group;
 - d. Appropriate serving sizes;
 - e. Important information on food labels;
 - f. Identify whole foods and understand that most whole foods provide slow-release energy (low to moderate glycemic index) and fiber. [Note: Fiber and low/moderate glycemic index foods are positively associated with attainment of and management of a healthy weight.];
 - g. Identify refined foods and understand they typically provide quick-release energy (high glycemic index) and are deficient in fiber, minerals and vitamins. [Note: Quick-release energy foods promote weight gain.];
 - h. Minimize consumption of refined foods;
 - i. Parents and youth use the nutrition plan as a **guide** for healthy eating and should not expect rigid adherence to the plan;
 - j. The whole family is encouraged to work on adopting healthier eating habits. [Note: Family participation has been shown to have positive effect on nutrition habits of youth, plus it is good for the whole family.];
 - k. Parents and youth are taught that the nutrition plan not only helps get their energy balance back in whack, but it also supports normal growth and development, healthy brain development and function, good emotional health, and decreases their risk of developing chronic diseases like heart disease, diabetes and cancer.

LIFESTYLE HABIT COMPONENT

Many factors influence the development of childhood obesity including family environment and economic status, heredity, nutritional knowledge, feeding behavior, and cultural parameters. The greatest influence however is family eating and exercise patterns, which play a significant role in etiology and management of childhood obesity. Research studies have shown that the following behavioral patterns are positively associated with childhood obesity. Youth and their parents are educated about these high impact habits and how they cause the body’s energy balance to get out of whack. They are then given the opportunity to identify which of these unhealthy habits are present in their lives.

1. High Impact Unhealthy Habits:

- a. Drinking sugary beverages on a regular basis (i.e. soda pop, sports drinks, fountain drinks, and large quantities fruit juice);
- b. Eating a high fat diet (greater than 35% of dietary intake);
- c. Excluding vegetables and fruits from the diet. Adequate intake of fruits and vegetables supports normal weight and increases chances that obese children will be a normal weight adult;
- d. Skipping breakfast;
- e. Inadequate daily intake of dairy and calcium;
- f. Consuming half or more of the daily caloric intake in the evening;
- g. Total daily caloric intake that exceeds daily caloric expenditures;
- h. Increased portion sizes of food servings;
- i. Frequency of foods consumed outside home, especially fast foods;
- j. Lack of physical activity and low levels of physical fitness.
- k. Spending more than 2 hours a day in front of a screen (television, video games, smart phone and computer);
- l. Having a television or gaming system in the bedroom. Televisions and gaming systems in children's bedrooms increase sedentary screen time and have been linked to higher adiposity levels in youth.

2. High impact habits that have been proven to support healthy weight are listed in the BiW Habit Tracker:

- a. Drink sugar-free beverages;
- b. Eat low fat foods and avoid high fat foods;
- c. Eat at least one serving of fruit or vegetable with each meal;
- d. Consume recommended daily servings of dairy or consume calcium rich foods or supplements;
- e. Comply with appropriate portion sizes defined in the nutrition prescription;
- f. Eat a healthy breakfast every morning;
- g. Parent schedules three regular meal and one to two healthy snacks per day;
- h. Parent provides home cooked meals most every day;
- i. Parents limit eating out to once a week;
- j. Order small serving sizes when eating at a restaurant;
- k. Family eats together at the table at least six times a week. [Note: Family meals are associated with a higher-quality diet and facilitate a healthy weight.];
- l. Be physically active a minimum of one hour each day;
- m. Limit screen time (television, video games, smart phones, computer) to two hours a day or less.

PHYSICAL ACTIVITY COMPONENT

Research studies have revealed many important findings about physical activity and youth. Youth who participate in at least one hour of physical activity on a daily basis have lower BMI's, get better grades in school and make healthier food choices. Regular physical activity and sports participation results in significant improvements in weight status and body composition in youth. Youth who participated in a lifestyle type physical activity (i.e. walking, biking) maintained

greater weight loss for two years when compared to youth who took aerobics and calisthenics classes.

Screen time (television, video games, smart phones and computer) increases sedentary activity which increases risk of obesity. Numerous studies have confirmed that obesity is directly related to the number of hours spent watching television. Television time is also associated with increased consumption of energy-dense foods.

Physical activity interventions aim to increase physically active to one hour or more per day, decrease sedentary activities, and limit screen time to 2 hours a day as follows:

1. Teach youth and parents about kinds of physical activity that have a positive effect on the body's energy balance and support a healthy weight
 - a. Lifestyle activities
 - b. Aerobic activity
 - c. Muscle strengthening activities
2. Help youth identify benefits of physical activity that they would like to experience
3. Help youth identify a variety of physical activities they might enjoy and could use accomplish the *BiW 360 Goal* (360 minutes of aerobic activity per week)
4. Youth develop their own personal activity pyramid
5. Help youth identify alternative activities to replace screen time

PARENT TRAINING COMPONENT

Treatment of childhood obesity is not effective in the absence of parental participation. Research studies indicate that including parents as agents of change in the treatment of their child's obesity is associated with both short- and longer-term (more than one year) improvements in the child's weight. Teens can be success without parental involvement, however it is much more difficult and the success rate for teens without parental involvement is much lower. It is recommended that parents be involved with this teen program as follows:

1. Parents and youth will sign a *Back in Whack Commitment Contract* and a *Back in Whack Habit Change Contract*. These contracts increases communication, cooperation, and diminishes conflict between parents and youth.
2. Explain parenting skills that supports behavior change in youth:
 - a. Positive, supportive parenting;
 - b. Allow youth autonomy with their program goals;
 - c. Avoid harsh food restrictions concerning healthy food choices.
3. The *Discussion Guide*, in the *Parent Support Pack*, facilitates engaging interaction between parents and youth. This type of interaction produces cognitive stimulation which supports the behavioral change process in the teen's brain.
4. Explain the impact of parental modeling of healthy habits. Youth experience positive changes in a weight status and adiposity when parents model healthy eating and physical activity habits.

Teens and tweens who have the whole family get involved with healthier eating and exercise plans are even more successful than youth that only have a parent in the family working with them. Biw4Teens creates multiple opportunities for family involvement in the program. Parents are informed that family involvement in nutrition and exercise programs improves success with lifestyle changes in youth.

DESIRED OUTCOMES FOR THE PROGRAM

1. Youth will adopt healthy eating and lifestyle habits that support the attainment and maintenance of a healthy weight.
2. High BMIs will begin to improve within six months. This can be a result of either of the following:
 - a. Weight stabilization as a growing-teen/tween grows taller. This is usually the most appropriate method of improving a growing-teen/tween's BMI. Weight stabilization in growing-teens/tweens is associated with improvements in BMI and other measures of adiposity.
 - b. Weight loss is appropriate for the teen who has finished growing taller. One pound a week is a reasonable and healthy pace to reduce weight. It is recommended that teens do not exceed a 2 pound per week weight loss.
 - c. Weight loss may be appropriate for the growing-teen/tween who suffers from a more extreme case of obesity with serious complication(s) resulting from the excess weight.
3. If improvements in the teen/tween's BMI are not seen in six months, physician should consider the implementation of more intensive treatment measures (i.e. medication, caloric restricted diets 900 – 1,200 calories).

TWO ADDITIONAL PROGRAM BONUSES

1. *BiW4Teens* program is helping meet *Healthy People 2030 Objectives* as follows:

- Ten of the *Nutrition and Healthy Eating* objectives
- Six of the *Physical Activity* objectives
- *Obesity* objective
- *Diabetes* objective
- Two *Sleep Health* objectives

This program is helping meet a total of **20** different *Healthy People 2030 Objectives*.

2. Fourteen of the 28 healthy habits in the program help to reduce the risk of diabetes, heart disease, and cancer per research studies conducted by the Centers for Disease Control, American Diabetes Association, American Heart Association, Nation Institute of Health, and American Cancer Society.

LIST OF RESEACH SUMMARIES AND GUIDELINES THAT SUPPORT PROGRAM CONTENT AND STRUCTURE

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13. Sharma, Manoj & Romas, John. (2012). *Theoretical Foundations of Health Education and Health Promotion*. (Second Edition). Sudbury, MA: Jones and Bartlett Learning. (pp. 96-113).