

Example of what is
her goal of weight
loss amount of
weekly weight loss
and lengt...

[Health & Medicine](#), [Obesity](#)



Sandra is a 35 year old single female living in San Antonio. She has a 16 year old daughter. During her last annual exam her blood pressure is 142/92, height is 5 foot 2 inches, weight is 273 pounds, body fat 58%. She is also borderline diabetic. In general, she is alert, oriented, cooperative and in no apparent distress. She reported a decrease in her energy level, particularly in the afternoons.

She has started to become depressed about her weight. When she was younger she was active and liked to run, but now she states that her knees and joints hurt when she runs. She told her physician that she wants to lose weight, but did not know where to start. Her physician asked her more about her daily activities. For a typical day, Sandra wakes up at 5: 00 am rushes in the morning to get ready for work and get her daughter to school, that she does not eat breakfast. When she gets home from work, she cleans a bit, makes dinner or eats out, and then watches prime time television until she goes to bed at 11: 00. Her physician recommended that she go on a diet and exercise routine. She agreed to start the diet and exercise routine, only to stop one month later.

During Sandra's next annual exam her blood pressure remained constant and her weight varied slightly to 276. When the doctor asked her about her diet and exercise routine, she stated that it was too hard for her and she could not get away from tortillas, enchiladas, and rice and beans. 60% of her energy intake is from carbohydrates. She said every time her family came over, they cooked or brought foods which were often healthy. But that she wanted to start one again. The doctor noted that she was very adamant about the plan by asking a lot of questions about food intake and exercise.

She also mentioned that she was very upset about her body image and felt that people were ridiculing her. Her daughter does not want to bring her friends over to her house because she is embarrassed about her mother's weight. Sandra told the doctor that this really bothered her and she wants to lose weight not only for her own health but for her daughter.

Sandra's doctor recommended that she seek nutrition counseling and find a gym near her residence, but if there was no gym, find a good walking trail in her community.

1. a) According to the Practical Guide developed by the National Institutes of Health,

What should Sandra's caloric intake goal be for weight loss? Should Sandra start by limiting her intake to that goal right away? Why or why not?

Answer:

According to the U. S. Department of Health and Human Services (2000), the rate of weight loss should be 1 to 2 pounds per week, and the goal should be to lose 10 percent of body weight over 6 months. This means Sandra should lose about 28 pounds over a 6 month period.

As Sandra weighs more than 165 pounds, a diet between 1, 200 kcal/day and 1, 600 kcal/day would be appropriate for her. She should not limit her intake to that level right away. The caloric intake should be reduced slowly, by 500 to 1000 calories per day from her current level. Slowly decreasing the caloric intake is more likely to allow her to maintain her new goal diet over the long term.

1. b) Sandra is very eager to start her exercise routine; she found a nice walking trail near her house. What should be her activity goal?

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Answer:

Sandra should slowly increase her level of physical activity, by taking only short walks at the start of her routine, which are then gradually prolonged over a couple of weeks to achieve her long-term goal. Her long-term goal is to spend at least 30 minutes on most, if not all, days of the week in moderate intensity physical activity such as walking.

1. c) If Sandra is successful, she must learn the techniques and strategies to loss and maintain the weight loss.

What are some of the techniques that she should consider from Weight Management Techniques according to the Practical Guide developed by the National Institutes of Health?

Answer:

Techniques for weight management recommended by the Practical guide include:

1. Dietary Therapy: She should reduce 500 to 1000 kcal per day from her current dietary routine, to reach 1200-1600 kcal/day daily intake, in order to lose about 1 to 2 pounds per week. She should modify the composition of her diet to reduce the amount of total fat and cholesterol, and ensure that calcium and fiber are included in it. She should reduce portion sizes, choose low-calorie food items, and limit alcohol consumption, avoid adding fats and oils to foods. She should try to include oat bran, legumes, barley, and most fruits and vegetables in her diet.

2. Physical Activity: She should increase her physical activity to ensure that she performs moderate intensity physical activity of 30 to 45 minutes, 3 to 5

days per week. She can start by walking 10 minutes 3 days a week, then build up on that. She can also take up another activity she may enjoy to do regularly, such as dancing or volleyball.

3. Behavior Therapy: this is to help Sandra adhere to and maintain her new healthy dietary and physical lifestyle. It involves communication and discussion of the healthcare provider with the patient about the latter's weight management. The healthcare provider must have a strong understanding with the patient's issues and concerns, and be supportive to help them through their goals.

4. Pharmacotherapy: drugs to lose weight may be used when the above options are not sufficiently effective. They are used in patients with very high BMIs, such as for Sandra. Two main drugs mainly used previously are Orlistat, which reduces absorption of fat from the gut, and Sibutramine, which suppresses the appetite.

5. Weight loss surgery: this is the most serious treatment option for a patient who is 'morbidly' obese, fails other treatments, and is at high risk of suffering the complications of obesity. It involves either bypassing the stomach or reducing its volume, so that food is not digested or absorbed very well, leading to weight loss.

What are some of the strategies that she should consider according to information compiled by the National Weight Control Registry?

Answer:

Methods to manage weight recommended by the National Weight Control Registry include a low fat diet, regular exercise of about 1 hour per day, and,

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in addition, these measures:

- taking breakfast daily
- weigh herself once a week
- watch less than 10 hours of television per week

2. Using the Human Weight Simulator (<http://bwsimulator.niddk.nih.gov/>), calculate the following:

If she accomplished her physical activity goal that was set for in 1c), what would be her energy intake goal (kcal/d) to reach her weight loss goal?

Answer:

The following settings are used with the online Human Weight simulator (Hall et al, 2011) that her goal is to reduce weight from 276 to 248 pounds over 6 months that is 10% of her body weight, and she will exercise by moderate intensity walking 30 minutes 5 days a week.

Her energy intake goal during the initial weight loss phase with the simulator is 2050 kcal/day.

Cased Study #2: Prevention of obesity

John is a 10 year old boy. He is in 5th grade at an elementary school in the inner-city area of San Antonio. Last year, during John's annual check-up, his height was 4' 8" and his weight was 86 lbs. His doctor recommended that his mother should watch his diet and make sure that he was getting enough exercise, since John has gained some weight. His mother agreed and tried to follow the doctor's recommendations.

Over the next few weeks, John and his mother were eating a little better and walking every morning before John went to school. John did not like the

vegetables and fruit, and it was a struggle for his mother to get him to eat them. John and his mother's eating and exercise habits returned to the way they were prior to the doctor's visit.

One month after the doctor's visit John's mother lost her job, but then found a new job working over 50 hours a week. She was only getting paid minimum wage, and worked a lot of overtime. She would come home late every day. John would sometimes stay with an elderly neighbor after school, or just went home to an empty house. John's mother does not receive any type of support or child support from John's father so she has to work very hard to provide for John.

On a typical day going home to an empty house, John would make a sandwich, which consisted of two slices of white bread, bologna and cheese. Some days he would eat two or three of these sandwiches. After eating his snack, he would start his homework. While doing his homework he would eat some cookies or chips and drink a soda or Kool-Aid. After doing his homework, John would make himself dinner. Occasionally, his mom would leave money for him to go buy dinner, but she did try to make dinner for him that he could microwave. He eats dinner in front of the television, and once he is done he plays video games. His mom has sometimes come home to see John asleep on the couch, with the video game controller still in hand. John's mom does not have any fresh fruit or vegetables in the house because she only goes to the grocery store once or twice a month, and John doesn't eat them. She doesn't buy fresh fruit and vegetables because they are very expensive, and she usually ends up throwing them away because they become rotten.

It is time for John's annual check-up. John now weighs 115 lbs. with a height of 5'0". His daily energy intake is 3,200 kcal from a dietary analysis.

1. What is John's body weight status at his first and second visits, according to BMI percentile of CDC's growth chart (using BMI percentile calculator: <http://www.bcm.edu/cnrc/bodycomp/bmiz2.html>)? What is the prevalence of obesity in his age group in Bexar County and the United States? What are the health consequences of obesity for a child like John?

Answer:

At the first visit (John is 10 year old, 4'8" height, 86 lbs): His BMI is 18.5. His BMI percentile is 18.5.

At the 2nd visit (John is 11 years old, 5'0" height, 115 lbs): His BMI is 22.5. His BMI percentile is 93.7.

The prevalence of obesity in Bexar County is estimated to be 29%. The prevalence of obesity specifically in children in Bexar County has not been estimated. However, the prevalence of overweight/obesity is much higher in low income households, as high as 84%.

The prevalence of obesity in the United States in 10 year olds is about 17% (American Medical Association, 2010). The prevalence of obesity in the United States overall is about 27%, which is a slightly lower average than that for Bexar County.

The health consequences of obesity in childhood for a child like John include the developing of psychosocial problems, poor self-esteem, and social discrimination, all of which could negatively impact his academic performance. From the health perspective, obesity puts him at higher risk of

sleep apnea, asthma, and a higher risk for cancer. Furthermore, a predisposition to developing cardiovascular risk factors such as high blood pressure, high cholesterol, and glucose intolerance or overt diabetes is seen in obese children.

What are the risk factors that may be contributing to John's excessive weight gain from a socio-ecological perspective?

Answer:

3. What is the recommended treatment for John, according to the American Medical Association? What tips and strategies would you make for John and his mother to prevent the development of obesity? Briefly explain the strategies.

Answer:

The American Medical Association recommends, to counteract childhood obesity, that standard nutrition foods be served in all schools, vegetables and fruits be provided in school lunch programs, banning food commercials for children, and providing improved nutritional information in restaurants. They also recommend mandating physical education programs, daily free play or physical education for elementary school children, and health education in schools. They also advise educating the public about the adverse effects of obesity. They also recommend annual health visits for children where measurements of weight, height, body mass index, health and dietary history are recorded, and the parent/guardian is given advice on what to give the child to promote healthy eating, and also to promote outdoor physical activities (Bexar County Department of Community

Resources, 2010).

Tips that I would recommend for John and his mother (Division of Nutrition, Physical Activity and Obesity, National Center for Chronic Disease Prevention and Health Promotion, 2011):

- To not keep high-calorie foods such as cookies and sodas in the house for John.
- To explain to John to limit the portion of his sandwich meals.
- To teach John to eat the healthy food meals at school
- To forbid John from watching TV on school nights, or to change her shifts at work to allow her to come home in the evening and give John a healthy dinner before setting him to bed
- To walk with John to school every morning
- Purchase low-fat or no-fat foods, and reduce the monthly amount of cheese purchased for John's sandwiches.
- Bring home one or two fruits every day at the end of work, and ask John to eat them with his lunch sandwich.
- On her day off, engage in physical activities with John such as playing tag or skipping in the neighborhood park

These strategies would reduce the quantity of calories in John's diet, improve the nutritional content of his diet, and increase his level of physical activity so that he may lose some weight (Ogden et al, 2012).

A worksite obesity prevention and intervention program, titled the Work, Weight, and Wellness program (3-W), was developed for employees in 31

hotels on the island of Oahu in Hawaii. Information of the 3-W program is presented in an article titled. Data was collected from 4536 employees.

Use the Obesity Cost Calculator, you will calculate the costs in the following five categories:

Costs for medical expenditures

Prescription drug costs

Inpatient costs

All other medical costs

Dollar value of increased absenteeism resulting from obesity

If the 3-W program produced a 5% reduction in overweight and 3% reduction in obesity across all groups (total, male, and female employees), what are the estimated cost savings in the five categories?

Costs based on state percentages for BMI

Costs after 3% reduction in obese and 5% reduction in overweight employees

Costs for medical expenditures

Prescription drug costs

Inpatient costs

All other medical costs

Dollar value of increased absenteeism resulting from obesity

If you were asked to re-design the 3-W program, what are the three strategies that you would recommend according to the Community Guide

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Recommendations and CDC's Promising Practices from CDC's LEAN

Works! Website? Briefly explain your recommendations (minimum 200 words).

Based on the recommendations by the CDC's Promising Practices from LEAN Works! (Division of Nutrition, Physical Activity and Obesity, National Center for Chronic Disease Prevention and Health Promotion, 2011), three strategies that could possibly improve the 3-W program are:

1. To implement changes in environmental policies which enhance workers' access to physical activity, along with providing health education. This policy is aimed at the entire workforce, rather than individuals. It could include the development of fitness centers at or near worksites, for example. Also, it would involve holding regular activities and classes on health exercises.
2. To inform and educate the workforce on the importance of fighting obesity. This would include providing people with education on exercise, nutrition, cardiovascular disease risks, weight loss maintenance, etc. It would also include 'exercise prescriptions' tailored to suit the individual, and the use of small media such as brochures and pamphlets.
3. Promote interventions to impart behavioral changes among employees. This would include, for example, weight loss competitions and incentives provision for behavioral practices. Participatory skill development and other programs could be promoted, with or without incentives. An example of a behavioral practice that would be promoted is one-on-one or group consultations, which involve personalized goals or plans to help employees lose weight and achieve better physical activity routines and dietary habits.

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