

Diet: Weight Reduction

1. Purpose

a. Nutrition Indicators

Weight loss may be needed in patients with an excessive intake of energy compared to their estimated energy requirements. Weight loss will help patients lower blood pressure, lower blood glucose, and improve serum lipid and lipoprotein levels.

b. Criteria to Assign the Diet

A person with a BMI greater than 25.0 may benefit from weight loss, especially if he or she has other health risk factors too. A BMI of 25-29.9 is considered overweight and in most cases it would improve health to lose weight. A BMI of 30.0 to 34.9 is considered obesity class 1, and 35.0 to 39.9 is obesity class 2. A BMI of 40 or above is extreme obesity, class 3, and the risk for disease is extremely high. (Nelms, Sucher, & Long, 2007, pg. 335)

c. Rationale for Diet

Weight reduction can reduce health problems drastically and reduce the risk for many diseases. Overweight and obesity cause many health consequences such as premature death, heart disease, diabetes, cancer, breathing problems, arthritis, and reproductive complications. Overweight and obesity are associated with an increased surgical risk as well as increased risk of gall bladder disease, incontinence and depression. Obesity can affect the quality of life through limited mobility and decreased physical endurance as well as through social, academic, and job discrimination. (Nelms, Sucher, & Long, 2007, pg. 344)

2. Population

a. Overview

In nearly every country in the world, the average body weight is increasing to such an extent that the obesity problem has now been considered pandemic. The percentage of Americans who are overweight has risen to above 60% and percentage of Americans who are obese is above 30%. The prevalence of overweight and obesity has also been increasing in children too. Non-Hispanic black females have the highest prevalence of obesity while non-Hispanic white females had the lowest rate of prevalence. Factors that also may effect the population of people who are obese or overweight are race, ethnicity, socioeconomic status, and age. (Nelms, Sucher, & Long, 2007, pg. 335-340)

b. Disease Process

A weight reduction diet can be used to decrease risk of disease or try to improve health or status of a current disease but the disease process varies according to individual situations. Weight loss is needed to treat overweight and obesity because if the individual continues to intake an excessive amount of kcal per day compared to their energy expenditure their weight will keep increasing and risk of disease will increase.

c. Biochemical and Nutrient Needs

A weight reduction diet is individualized for each patient by decreasing the intake of kcal per day. Specific disease states may alter the patient's nutrient needs but in general if the patient is not experiencing any health problems but they are overweight or obese they need the normal DRI for nutrients. In patients with severe obesity, a BMI of 40 or greater, weight loss or bariatric surgery may be required. In these patients it is necessary to monitor vitamin B12, iron, calcium, and magnesium. (Nelms, Sucher, & Long, 2007, pg. 354)

3. General Guidelines

a. Nutrition Rx

An individual low calorie diet (LCD) that reduces energy intake by 500 to 1,000 kcal per day will achieve a slow but progressive weight loss of 1 to 2 pounds per week. The low-calorie diet recommended by the national institutes of health is as follows:

- Calories: Approximately 500 to 1,000 kcal/day reduction from usual intake
- Total fat: 30% or less of total calories
- Saturated fatty acids: 8%-10% of total calories
- Monosaturated fatty acids: Up to 15% of total calories
- Polysaturated fatty acids: Up to 10% of total calories
- Cholesterol: Less than 300 mg/day
- Protein: Approximately 15% of total calories
- Carbohydrate: 55% or more of total calories
- Sodium chloride: No more than 100mmol/day (approximately 2.4 g of sodium or approximately 6 g of sodium chloride)
- Calcium: 1,000 to 1,500 mg/day
- Fiber: 20 to 30 g/day

(Nelms, Sucher, & Long, 2007, pg. 353)

Clinical trials have shown that very low calorie diets (VLCD) are no more effective in achieving weight loss after 1 year than are LCDs. Therefore, VLCD are discouraged.

b. Adequacy of Nutrition Rx

A decrease in kcal per day is still giving the patient adequate nutrition as long as they eat a variety of nutrient dense foods. Any reduction in the proportion of kcal coming from carbohydrates should be accomplished by reducing intake of foods and beverages containing refined sugars and milled grains, not by sacrificing consumption of whole grains, legumes (dried beans and peas), vegetables, and fruits, which have a low energy and are associated with reduced CVD risk.

c. Goals

By decreasing kcal by 500 to 1,000 kcal per day we are aiming for a goal of a 1 to 2 pound weight reduction each week. Losing weight faster than 1 or 2 pounds per week can be unhealthy. Aim for long-term weight loss in order to keep reduced risk of disease. Keep fat intake to less than 30% and follow DRI in order to make sure all nutrients are being received.

d. Does it Meet DRI

DRI for all nutrients should be met because, although we are decreasing kcal, the patient is still receiving sufficient amount of calories to fulfill all their nutrient needs.

4. Education Material

a. Nutrition Therapy

Explaining the importance of a healthy weight and all the complications of being overweight or obese will help the patient understand why they need to comply with the diet. Teaching them about the energy value of different foods and the composition (fats, carbohydrates, protein), and how to read nutrition labels would all help. Websites such as FitDay may also help the patient keep track of what they eat easily or they can keep a food journal. Evaluating the patients usual diet intake and explaining it to the patient can help them see how to cut out kcal and fats and what the correct portion size and adequate intake is.

b. Ideas for Compliance

Motivating the patient with new information on healthy foods and cooking healthier can help the patient comply. Also, using a website such as FitDay insures that the patient will know if they are meeting their goals for nutrients and if they are hitting the goal for their kcal per day. Also, make sure patient is aware that physical activity is an important component of weight loss therapy. Exercising at least 30 to 45 minutes 3 to 5 days a week should be an initial goal. Behavioral therapy also provides patients with techniques to identify and overcome barriers to positive dietary, exercise, and other lifestyle habits. (Nelms, Sucher, & Long, 2007, pg. 352)

5. Sample Menu

a. Foods Recommended

Low fat foods, lean meats, vegetables, fruits, skim milk, low fat dairy products, whole grains

b. Foods to Avoid

Foods high in fat, especially saturated fat, alcohol and high kcal beverages, fatty fast foods, foods high in refined grains and added sugars (avoid excessive amounts of sweets such as chocolate, cake, etc.)

c. Example of a meal plan

Breakfast: $\frac{3}{4}$ cup oatmeal, 1 medium orange, 1 piece wheat toast with 1 tsp margarine, 8 oz orange juice

Lunch: turkey sandwich (3 oz turkey, 2 slices whole wheat bread, lettuce, tomato, 1 Tbsp low fat mayonnaise), 1 medium apple, $\frac{1}{2}$ cup pretzels and 2 Tbsp low fat peanut butter, 8 oz. skim milk

Snack: 6 oz. low fat yogurt, $\frac{1}{2}$ banana

Dinner: 3 oz salmon, $\frac{1}{2}$ cup brown rice, $\frac{3}{4}$ cup steamed broccoli, 8 oz. skim milk

Approximate nutritional analysis: 1,745 kcal, 45.2 g fat (11.3 g saturated, 13.2 polyunsaturated, 16.9 monosaturated), 244.6 g carbohydrate, 28.3 g fiber, 101 g protein

6. Websites

a. Organizations with Websites

WebMD <http://www.webmd.com/diet/default.htm>

Help Guide http://helpguide.org/life/healthy_eating_diet.htm

b. Government Websites

Medline Plus www.medlineplus.gov

Nutrition.gov <http://www.nutrition.gov>

MyPyramid <http://www.mypyramid.gov>

7. References

a. Journal articles references

Nelms, M., Sucher, K., & Long, S. (2007). *Nutrition therapy and pathophysiology*. Belmont, CA: Thomson Higher Education.