Diets in Weight Management

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A Healthy Diet is Appropriate for all People

The only difference for weight management may be in the portion size.
The Basic for Weight Loss

- A decrease in calories intake is the **MOST** important component of weight loss and maintenance.

- Centerpiece of dietary therapy for weight loss is a low-calorie diet (LCD) – 1200 to 1500 kcal/day.

- Losing weight may be easy, but keeping it off is not that easy.
  - Some dieters lose weight and then gain it all back and more!
Focus on the “Health” of the Calories

We know that:

– A low-fat diet alone will **NOT** produce weight loss – unless total calories are also reduced.

– Isocaloric replacement of fat with carbohydrates will reduce the percentage of calories from fat but will **not** cause weight loss.
The “Ideal” Diet!

- **Individualized** (1200 – 1800 kcal/d)

- **Balanced** (20-35% Fat, 45-60% CHO, 10-30% Protein)

- Minimum of **100 gms. Carbohydrates/day**

- Minimum of **50 gms. Protein/day**

- Flexible and practical

- Impose calorie deficit (-200 to 1000 kcal/day)

- Incorporates physical activity and positive behavior changes

- Supports health maintenance
Diets in Weight Management

- Balance Deficit Diets (BDD) >1200 kcal/d
  - Therapeutic Lifestyle Change (TLC) NCEP-ATP III
  - Dietary Guidelines (USDA, HHS)
  - American Heart Association Dietary Guidelines
  - DASH Diet
  - Mediterranean Diet
  - Volumetric

- Internet Weight Loss
Therapeutic Lifestyle Changes

- Saturated Fat: about 10-7% total calories
- Non/Saturated Fat: up to 30% total calories
- Total Fat: 25-35% of total calories
- Carbohydrates: 50-60% of total calories
- Fiber: 20-35 grams/day
- Protein: about 15% of total calories
- Cholesterol: less than 300 mg/day
- Total Calories: balance energy intake & expenditure to maintain healthy body wt & prevent weight gain
<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Recommended Intake</th>
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| Calories                         | **For people with BMI ≥35**  
Approximately 500 to 1,000 calories per day reduction from usual intake  
**For people with BMI between 27 and 35**  
Approximately 300 to 500 calories per day reduction from usual intake |
| Total fat                        | 35% or less of total calories                                                    |
| Saturated fatty acids^a          | 8 to 10% of total calories                                                       |
| Monounsaturated fatty acids       | Up to 15% of total calories                                                      |
| Polyunsaturated fatty acids       | Up to 10% of total calories                                                      |
| Cholesterol^a                    | <300 mg per day                                                                  |
| Protein^b                        | Approximately 15% of total calories                                              |
| Carbohydrate^c                   | 55% or more of total calories                                                    |
| Sodium/Sodium chloride^d         | No more than 2,300 mg of sodium or approximately 6 g of sodium chloride (salt) per day |
| Calcium                          | 1,000 to 1,500 mg per day                                                        |
| Fiber^c                          | 20 to 30 g per day                                                               |
DASH Diet
(Dietary Approach to Stop Hypertension)

- Increase Fruits & Vegetable servings to 8-11/d
- Increase servings of Whole Grain products
- Maintain servings of low fat Dairy to 2-3/d
- Include Nuts, Seeds & Beans 4-5x/wk
- Limit Meat intake to <6oz/day
- Limit servings of fat to 3/day

- Modifications for weight loss:
  - Limit calorie level
  - Use fat free dairy & ↑fruits and vegetables
Mediterranean Diet

- Increase monounsaturated fat (olive & canola oil)
- Increase servings of whole fruits and vegetable 8-10 serv/day (1 serving=1/2 cup)
- Eat fish 3-4x/wk, poultry 2x/wk, & red meat only 2-3x/month
- Select whole grains
Volumetrics

- Eat a constant volume/weight of food over your 2 to 5 meals a day
- ↓ the concentration of calories in the food portions (energy density) but retain the volume
- Select foods which are high in water and fiber and low in fat (fruits, vegetables, soups)
  - Low Energy Density: whole grain cereal, low fat cottage cheese, lean ham, sweet potato
  - Medium Energy Density: eggs, whole wheat bread
  - High Energy Density: cookies, chocolate, salty snacks
Internet Weight Loss

- Make sure the sites are reliable
  - www.choosemyplate.gov
  - www.eatright.org
  - www.healthfinder.gov
  - www.niddk.nih.gov
  - www.nal.usda.gov/fnic
  - www.obesity.org
  - www.consumer.gov/weightloss/

- Most of them are:
  - Available 24/7
  - Provide meal and exercise plans
  - Some provided individualized feedback
  - May have chat room for support
  - They claimed that persons who “logged on” most often tend to lose the most weight
“Popular Diets”
for Obesity Treatment

- High Protein Diets
  - Sugar Busters
  - The Carbohydrates Addict’s Diet
  - The Zone
  - Protein Power
  - The Metabolic Breakthrough
  - Dr. Atkins New Diet Revolution

- Glycemic Index Diets
  - Dr. Arnot’s Revolutionary Weight Control Program
  - The Glucose Revolution

- High Carbohydrates Diets
  - Dr. Ornish’s Life Choice Program
  - The Pritikin Weight Loss Breakthrough
“Popular Diets”

- Are the Diets Effective?
  - Most fad diets will allow the person to restrict calories and lose weight for a short period of time.

- Are They Adequate?
  - Many fad diets restrict entire groups of foods such as grains, vegetables, or fruits in the case of low-carbohydrate diets.

- Are They Safe?
  - Some low-carbohydrate diets can adversely affect the pH balance of the blood or the linings of the blood vessels.

- Personal Responsibility
  - Many fad diets do not work because they don’t incorporate lifestyle changes that are long lasting.
Sugar Buster

**Claims:**
- Sugar increase the release of insulin which promote fat storage and obesity but by reducing the intake of simple or refine carbohydrates and sugar your appetite diminish.
- The diet is low in Carbohydrates and eliminate simple or refine carbohydrates and sugar.

**Counter Claims:**
- Diet plans average 1200 Kcal/d
- Insulin only promotes excess fat storage when too many calories are being consumed.
- Validity is based on anecdotal claims no proven science.
The Zone

Claims:
- Each meal must be a balance of 40% CHO, 30% Fat, 30% Protein
- Recommended 800-1200 Kcal/d for average person
- www.chefZone.com
  - $34.00/day

Counter Claims:
- Excess calories cause weight gain, not specific CHO
- Anyone following a low calories diet will lose weight
- No published studies on this theory of weight loss
Metabolic Effects of Low Carbohydrates (CHO) Diet

- Significant Decrease of:
  - Calorie intake
  - B vitamins
  - Fiber

- Significant Increase of:
  - Ketones formation in severe CHO restriction (less than 100gr./day)
  - Intake of saturated fat
The Body’s Response to a Low-Carbohydrate Diet

- Low-carbohydrate diets bring about responses similar to those seen when fasting

- As carbohydrate (CHO) runs low the body breaks down fat and protein for energy to feed the brain and ketones are formed

  - To prevent this the DRI for carbohydrates is set at 130 grams/day

    - 45%-65% of total energy intake from CHO is recommended for good health
The Body’s Response to a Low-Carbohydrate Diet

- Low-carbohydrate, high-protein diets bring about large initial weight losses
  - This large initial weight loss is primarily the water and glycogen losses that occur when carbohydrate is lacking
    - This kind of weight loss rapidly reverses when a person begins eating normally
  - Loss of appetite accompanies any low-calorie diet
High-Protein, Low-Carbohydrate Diets

- **Studies Reporting Negative Findings**
  - Population study of nearly 28,000 people
    - Those consuming a high-protein diet had a higher BMI than those consuming a more balanced diet

- **Laboratory studies** have shown that, when energy intake is the same, there is no difference in weight loss on a high-protein, low-carbohydrate diet compared to a lower-protein, higher-carbohydrate diet
High-Protein, Low-Carbohydrate Diets

Studies Reporting Positive Findings

- 6 month study: severely obese people on a high Protein, low Carbohydrate diet lost more weight than those on a low-fat diet

- 12 month study: weight losses were greater on a low-carbohydrate diet, especially during the first three months
  
  - At 6 months the weight loss gap between low-fat and low-carbohydrate diets narrowed
  
  - At 1 year: both groups regain weight; the weight gain was more rapid for those who had been on the low-carbohydrate diet; those on the low-fat diet exhibited a more stable weight loss
High-Protein, Low-Carbohydrate Diets

- Expert Opinions on the Findings
  - Weight loss differences in the different studies were small
  - Large numbers of individuals dropped out of the studies
  - Greater initial weight loss on high-protein diet may be due to:
    - Water and glycogen loss
    - People on low-carbohydrate diets consuming fewer calories

Most people who lose a substantial amount of weight and keep it off do so on low-fat, high-carbohydrate diets followed for long time
High Carbohydrate Diets

- Eat More, Weight Less: Dr. Ornish Life Choice Program for Losing Weight Safely
- Dr. Pritikin Weight Loss Breakthrough

In both of these diets the intake of fat average 10% of total daily calories which:
- Prolonged adherence may cause endocrine problems
- May lead to deficiencies in essential fatty acids & decrease absorption of fat-soluble vitamins
What people is lacking on their calorie-restricted diet plans is called SATIETY (feeling full after a meal)

- Research shows that simply eating less food will probably leave most people unsatisfied and hungry
Why Did I Eat That?

- Regulation of food intake
  - Hunger
    - Prompts eating; physiological desire
  - Satiation
    - Signals to stop eating
  - Satiety
    - Lack of hunger
  - Appetite
    - Psychological desire
1. **Physiological influences**
   - Empty stomach.
   - Gastric contractions.
   - Absence of nutrients in small intestine and bloodstream.
   - Digestive system hormones and neural signals create appetite.

2. **Sensory influences**
   - Endorphins (the brain’s pleasure chemicals) are triggered by the smell, sight, or taste of foods, enhancing the desire for them.

3. **Cognitive influences**
   - Presence of others, social stimulation.
   - Perception of hunger, awareness of fullness.
   - Favorite foods, foods with special meanings.
   - Time of day.
   - Abundance of available food.

4. **Postingestive influences**
   - (after food enters the digestive tract)
     - Food in stomach triggers stretch receptors.
     - Nutrients in small intestine elicit nervous and hormonal signals informing the brain of the fed state.

5. **Postabsorptive influences**
   - (after nutrients enter the blood)
     - Nutrients in the blood signal the brain (via nerves and hormones) about their availability, use, and storage.
     - As nutrients dwindle, so does satiety.
     - Hunger develops.

6. **Hunger and Appetite**

7. **Seek food and start meal**

8. **Satiety: Several hours of other activities**

9. **Satiation: End meal**

10. **Keep eating**

11. **Culminate influences**

12. **Conclude influences**
Strategies to Feel Full on Fewer Calories

- Avoid liquid calories
- Increase high-fiber foods (whole fruits, vegetables and whole grains)
- Increase intake of foods with greater volume and low calorie density (puffed cereals, vegetables, whole fruit)
- Include Protein foods in each meal (legumes, nuts, lean meat or poultry, fish or sea food)
- Don’t eat when you are not hungry
- Never eat until you cannot eat any more
- Avoid foods high in fat and/or sugar together
- Reduce the calorie density of the solid foods you eat by eating more whole fruit & vegetables, legumes, brown rice, nonfat yogurt or cottage cheese...