

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 9.10

RECOMMENDATIONS FOR A WEIGHT-LOSS DIET

Nutrient	Recommended Intake
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:

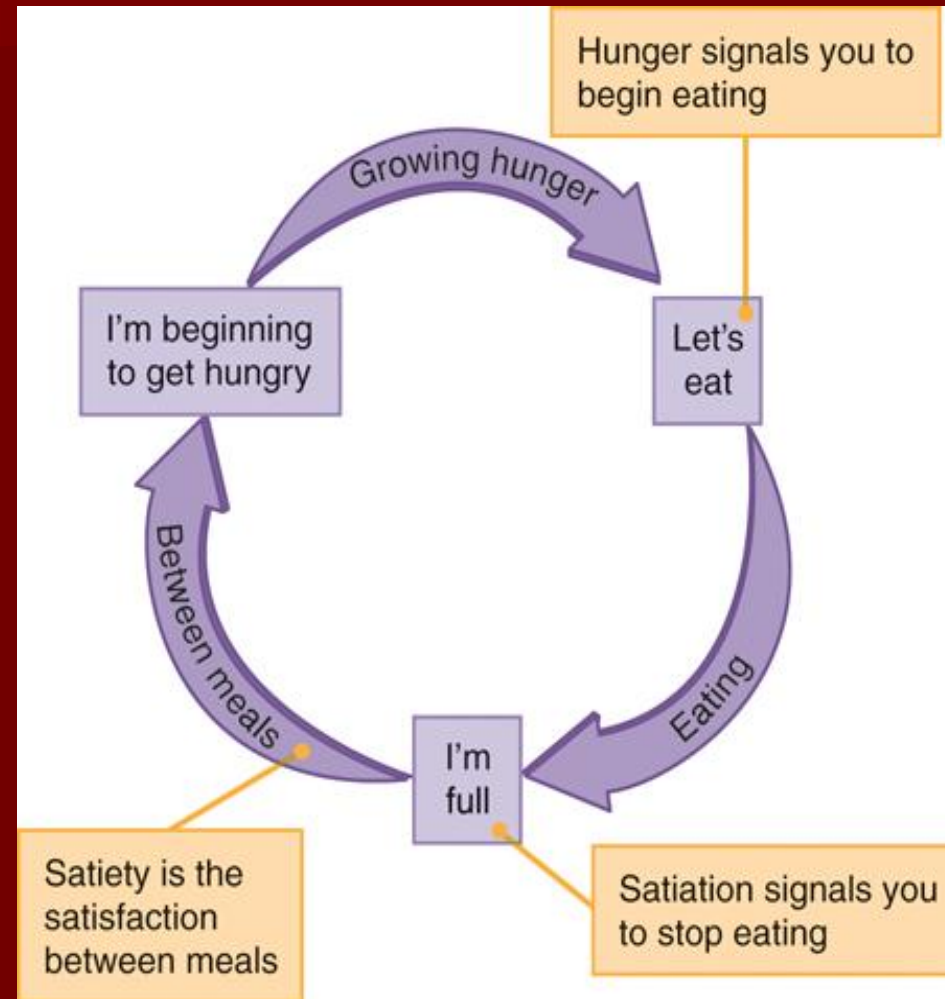
- ❖ Prolonged adherence may cause endocrine problems
- ❖ May lead to deficiencies in essential fatty acids & decrease absorption of fat-soluble vitamins

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.

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2 Sensory influences

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



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.

1 Hunger and Appetite

2 Seek food and start meal

5 Satiety: Several hours of other activities

4 Satiation: End meal

3 Keep eating



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.

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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...