



6 Basic Nutrients

What is essential to healthy
bodily function?



What are the 6 basic nutrients?

- Carbohydrates (50% of calories a day)
- Proteins (20% of calories a day)
- Fats (30% of calories a day)
- Vitamins
- Minerals
- Water

* Extra calories from fats, carbohydrates and proteins will lead to excess fat storage in the body. Vitamins, Minerals and water do not have calories.



Carbohydrates

4 Calories per gram

Simple **Carbohydrates Or
"Sugars "**

Complex : **Starch and
Fiber**

- Provide quick energy and then you crash
- Chemically complex, made of 3 or more sugars linked together

Functions- The body converts carbohydrates to fuel called glucose. Fuel that is not used right away is stored in the muscles as glycogen, and then as fat.

Sources- bread, cereal, rice, pasta, fruits, juice, vegetables, sugar



Protein

4 Calories per gram

Proteins are broken into Amino acids

There are 9 essential amino acids not made by the body that must come from food

- Complete - Animal and dairy sources (all 9 amino acids)
- Incomplete- Plant sources (less than 9 amino acids)
- Functions- Helps build and maintain body tissues (protein is also needed to make hormones, brain chemicals & enzymes)

Sources- meat, fish, poultry, seeds, nuts, dry beans, soy, milk products, eggs



Fats

9 calories per gram

- Saturated- comes from animals not plants
 - Solid at room temperature
- Unsaturated- comes from plants
 - Liquid at room temperature
- Cholesterol- Found in animal sources of fat and narrows arteries

Functions- energy, fat-soluble vitamins, some hormones, cushions body organs, insulation

Sources- butter, margarine, oils, salad dressings, meat, chicken (skin), most desserts, cheese, ice cream, most fast foods/junk foods



Vitamins & Minerals

- 0 Calories
- Vitamins:
- Water soluble vitamins are B's and C, and dissolve into the watery parts of foods and beverages.
- Fat soluble vitamins are A,D,E,K and dissolve into fatty parts of foods/beverages.
- Minerals
- are inorganic substances/rocks. We need trace amounts of: Iron, Copper and Iodine. Other important minerals are: Calcium, Sodium and Chloride
- Functions- Vitamins/minerals play a vital role in regulating and assisting in many body processes.
Sources- most unprocessed foods have some vitamins or minerals in them. Many processed foods fortify vitamin/minerals.



Water

- No calories
- Your body uses 10 cups a day.
- Drink 6-8, eight ounce glasses per day
- Functions- carries nutrients and wastes through our bloodstream, lubricates joints, aides digestion, absorption and elimination of food, perspiration
- Sources- water, all beverages, fruits/vegetables.



Calorie

- 1. A calorie is a measure of energy contained in food/beverages.
- 2. Carbohydrates and proteins have 4 calories a gram, fat has 9 calories per gram. A tablespoon of Crisco has 12 fat grams = 108 Calories.
- 3. Vitamins, minerals and water have no calories, and by themselves cannot provide energy.
- 4. To gain one pound, you must consume an extra 3500 calories over what your body needs per day. To lose one pound, you have to burn off 3500 calories. Aerobic exercise burns off about 100 calories every 10 minutes. It is unsafe to lose more than 2 lbs a week. It is unsafe to eat less than 1200 per day (1200 for an adult).



Body Mass Index & Metabolism

5. Body mass index is calculated by the relationship between your height and weight. In most people, it is similar to your body composition (% fat)

6. Your metabolism (the ability of your body to burn calories) Functions more efficiently when you eat several meals a day. Do not skip breakfast, because it “breaks the fast” from the Previous night and helps to fire up your metabolism. If you consume less than 1200 calories, your body responds by slowing down your metabolism. Increasing muscle mass will increase your metabolism, because a pound of fat burns only 3 calories, but a pound of muscle burns between 30 and 50 calories a day to maintain itself.