

NUTRITION



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- Two basic uses for **NUTRIENTS**:
 - **Energy**
 - **Use in structure/body processes**

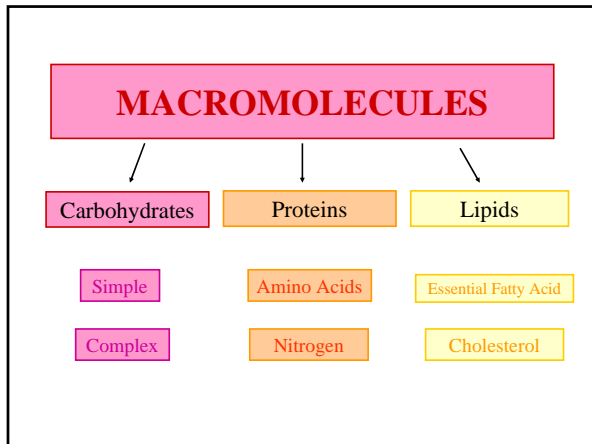
“Essential” Nutrients

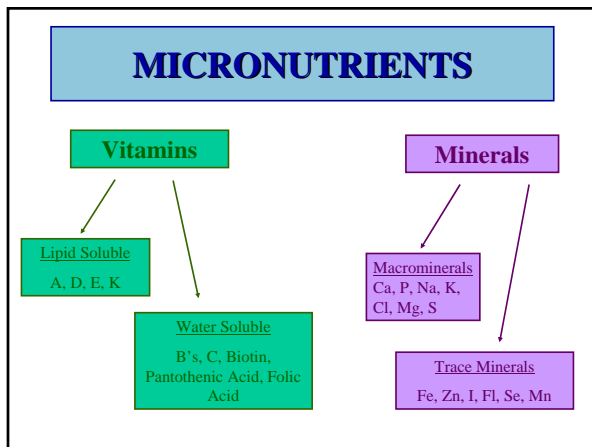
MACROMOLECULES

- Carbohydrates
- Proteins
- Lipids

MICRONUTRIENTS

- Vitamins
- Minerals





HOW DO YOU GET ALL THESE NUTRIENTS?

CARBOHYDRATES

Simple carbohydrates

Simple carbohydrates are found in foods such as fruits, milk, and vegetables.

Cake, candy, and other refined sugar products are simple sugars which also provide energy but lack vitamins, minerals, and fiber.



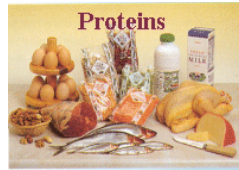
Complex carbohydrates

Complex carbohydrates provide vitamins, minerals, and fiber.

Foods such as breads, legumes, rice, pasta, and starchy vegetables contain complex carbohydrates.



PROTEINS



Complete vs. Incomplete

LIPIDS



Unsaturated



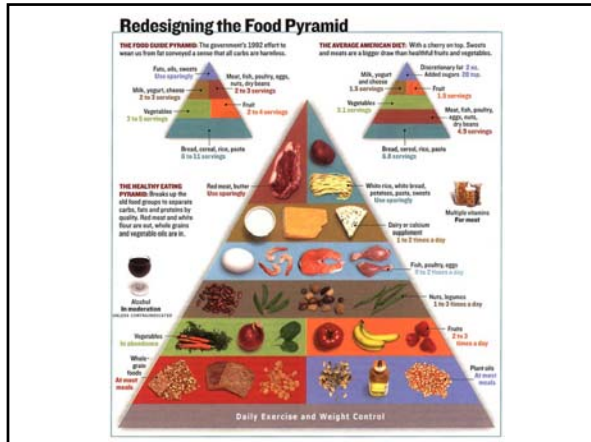
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Cholesterol



Linoleic & Linolenic Acids



Energy Balance & Metabolism

Energy Intake = (BMR + Activity) + Heat + "Storage"

Energy Intake:

Fats = 9 kcal/g

Carbs & proteins = 4 kcal/g

BMR:

Women = 0.9 kcal/kg/hr

Men = 1.0 kcal/kg/hr

Heat:

Thermogenesis

Storage:

Has mass

Activity:

Various depending on intensity

Body Mass Index (BMI)

- BMI = weight in kg / (height in m)²

BMI Categories:

- * Underweight = <18.5
- * Normal weight = 18.5-24.9
- * Overweight = 25-29.9
- * Obesity = BMI of 30 or greater

BMI is a reliable indicator of total body fat, which is related to the risk of disease and death.

- * It may overestimate body fat in athletes and others who have a muscular build.
- * It may underestimate body fat in older persons and others who have lost muscle mass.
