

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

MACROMOLECULES


Carbohydrates	Proteins	Lipids
Simple	Complete	Essential Fatty Acid
Complex	Incomplete	Cholesterol
Fiber		Saturated
		Unsaturated

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

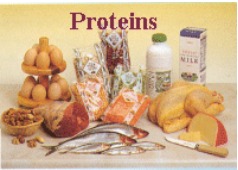
Complex carbohydrates provide vitamins, minerals, and fiber

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




PROTEINS






Complete vs. Incomplete


LIPIDS




Unsaturated




Saturated



Cholesterol



Linoleic & Linolenic Acids



MICRONUTRIENTS

Vitamins

Lipid Soluble

A, D, E, K

Water Soluble

B's, C, Biotin,
Pantothenic Acid, Folic
Acid

Minerals


Macrominerals

Ca, P, Na, K,
Cl, Mg, S

Trace Minerals

Fe, Zn, I, Fl, Se, Mn

Redesigning the Food Pyramid



THE FOOD GUIDE PYRAMID: The government's 1980 effort to steer us from fat saturated a source that all carbs are harmful.

THE AVERAGE AMERICAN DIET: With a cherry on top, Sweets and meats are a bigger draw than beneficial fruits and vegetables.

THE HEALTHY EATING PYRAMID: Breaks up the old food groups to separate carbs, fats and proteins by quality. Red meat and white flour are out, whole grains and vegetables are in.

Alcohol Moderation: Limit consumption to 1 to 2 drinks a day.

Daily Exercise and Weight Control:

ENERGY BALANCE

$$\text{Energy Intake} = (\text{BMR} + \text{Activity}) + \text{Heat} + \text{Storage}$$

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:

Weight

Activity:

Various depending on intensity
