

NUTRIENTS

macro

carbohydrates
fats
protein
water

micro

vitamins
minerals

- energy source
- heal & build tissue
- sustain growth
- transport oxygen
- regulate body functions

Hunger

- ↳ body is looking for food
- ↳ stomach grumbles

Appetite

- ↳ craving

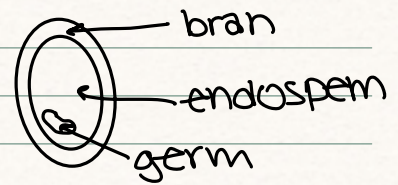
Nutrient-Dense vs Empty Calories

CARBOHYDRATES

- > 1g of carbs = 4 calories
- > 55-65% of daily calories
- ✓ preferred source of energy
 - ↳ spares break down of protein for energy
 - ↳ fiber - aids in digestion
- ✓ simple sugars:
 - fructose (fruit)
 - lactose (milk)
 - sucrose (sugarcane)
- ✓ added sugars
 - ↳ limit 6-10% of total calories or less (candy, soft drinks, coke, cookies, etc.)
 - ↳ 25g females & 38g males
- ✓ complex:
 - starches
 - ↳ must be broken down to simple sugars to be used
 - ↳ whole grains, legumes, beans, peas, tubers

> body converts all carbs into glucose
> unused glucose is stored in the liver & muscles

whole grain



↳ converted to glycogen
↳ reconvered into glucose when needed
↳ becomes fat after 12-24 hrs

✓ glycemic index (response)
↳ classifying food by how much they raise blood sugar

FIBER

> indigestible complex carbohydrate (not energy)
> tough, stringy part of plant foods

✓ 20-35g daily
↳ digestive health
↳ regular bowel movements

> functional fiber - added to foods

> celiac disease: inability to digest gluten.
↳ diarrhea, fatigue, abdominal discomfort, unable to absorb vitamins & minerals

> foods high in fiber
↳ RDA 20-35gs (daily)
↳ beans, peas

FATS

> 1 g = 9 cal

> 20-30% of total cal

> energy, insulates, growth, cushions, transport fat soluble vitamins, healthy skin, insulate

✓ fat formula

• daily calories $\times 0.20$ = calories from fat per day
 $\div 9$ for grams

✓ saturated fat & trans fats

↳ must be limited (<10%)

↳ better option is monosaturated/poly

✓ saturated

• thicker

• solid/firm at room temp

• sources: whole dairy, meat, tropical oils

• all carbons are full

↳ improves consistency, longer shelf life, does not pick up flavors of fried food

✓ trans fats (banned since 2018)

• result of hydrogenation

↳ forcing hydrogen onto mono/poly-unsaturated fats

↳ extends shelf life, improves consistency

✓ lactose intolerance

• inability to digest the sugar lactose in dairy.

✓ homogenized

↳ smooths texture of milk/juice

✓ monosaturated

• liquid at room temp

↳ olive, canola, peanut oils

✓ polyunsaturated

• liquid at room temp

↳ safflower, sunflower, corn, sesame, cottonseed

Healthy fats
Less of these
to avoid

CHOLESTEROL

- > only found in animal sources
- > produced in the liver
- > 300 mg daily
- > HDL → high density lipoproteins
- > LDL → low " "
- > VLDL - very low " "
- > blood cholesterol ≤ 200
- > ratio of total to HDL should be 4-1

WATER

- > vital to every body function
- > transports nutrients & carries out waste
- > lubricates joints
- > digestion
- > maintain normal body temp
- avg 64oz per day
 - varies
- > avoid caffeinated products the increase urine production.

VITAMINS

- water soluble
- B & C
- fat soluble
- ADEK
- follow DV (daily value)
 - ↳ too much can lead up in body

MINERALS

- not produced
 - ↳ must be consumed
- calcium - helps to form bones & teeth, aids in blood clotting, assists muscle & nerves.
- sources
 - ↳ dairy, fortified juices, green leafy vegetables

- Iron - needed for carrying oxygen in red blood cells, aids in energy use, supports immune system.

- Sources - meat, organ meats, spinach, poultry, beans, fortified grains

- Sodium ≤ 2300 mg

- fortified - nutrients added that weren't there originally

- enriched foods - vitamins and minerals that were lost during processing & put it back