

Macronutrients

Proteins

Carbohydrates

Fats

Macro nutrients

What is fat?

It's a combination of glycerin and fatty acids

1 g of fat = 9 kcal – $\overset{\parallel}{\mathsf{C}}$ – chain of carbons, hydrogens – 🖔 – chain of carbons, hydrogens 🖱 – chain of carbons, hydrogens glycerol 3 fatty acids

What does fat do for us?

- Provide energy
- Carry fat-soluble nutrients (essential fat acids and vitamins A, E, D, K)
- Maintain proper body temperature
- Protect our body
- Provide materials for cell membranes
- Help to build the brain
- Act as raw materials for hormones, bile, healthy hair and skin







Classification

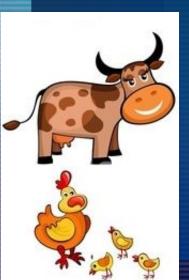
- Fat acids Saturated



- Animal fats
- •liquid exclantori!s









Types of Fats

Types of Fats Undesirable Desirable Fats Polyunsaturated Monounsaturated Saturated fats Trans fats fats Fats Butter, hydrogenated Omega-3 fatty Coconut, full fat vegetable oils acids dairy Omega-6 fatty acids

Trans fats

- Trans fats, also known as partially hydrogenated oils), are unsaturated fats that are uncommon in nature but became commonly produced industrially from vegetable fats for use in margarine, snack food, packaged baked goods and frying fast food starting in the 1950s.
- Cheaper
- Stored for a long period







Trans fats

On 16 June 2015,

Trans Fat 29 Cholesterol 30mg Total Carbohydrate 319 the FDA finalized Sodium 660mg Dietary Fiber Og its determination that trans fats SUGBIS 59 are not generally protein 59 recognized as safe, and set a three-year time limit for their removal from all processed foods.

Total Fat 1

Saturated Fat 59

«Street light» of fat usefulness



Better to exclude:

Transfats

Limit:

Saturated fats Omega 6

Increase:

Omega 3 Omega 9

Transfats

- Margarine
- Butter with plant additives
- Cookies, candies
- Refines oils
- Mayonnaise
- Dried crust
- Fried potato
- Well fried food















Oil Production

Plant oil

Hot extraction

Extraction (solvent)

Non-refined fresh oil

Refined oil

Brocken

Cold extraction

Saved

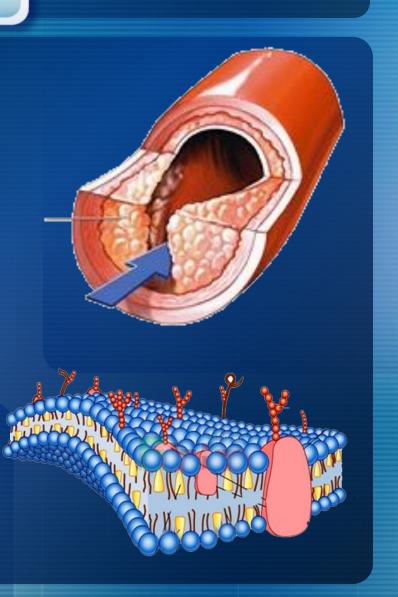
- Valuable fat acids
 - Vitamins
 - Minerals

Transfats. Influence

 Are very sticky and stay on the walls of vessels

Break the balance between good and bad cholesterol

 Disturb the absorption of nutrients into the cell



Saturated fats

- Are found in animal products (exception – palm oil)
- Transforms into energy
- Excesses plug the vessels and are accumulated into fat











Omega-6

- Essential fat acid
 (extra virgin oils) –
 building material
- Activate inflammations
- Excesses provoke tumors, autoimmune diseases









Omega-3

Flax, hempseed, rape oil

- Seeds, grains
- Nuts
- Sea fish

Fish oil in capsules



How can Omega 3 be produced?

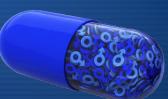
- From fish carcass (brown– «technical»)
- From fish liver (yellow ballast substances)
 - From fish muscles (extra class)

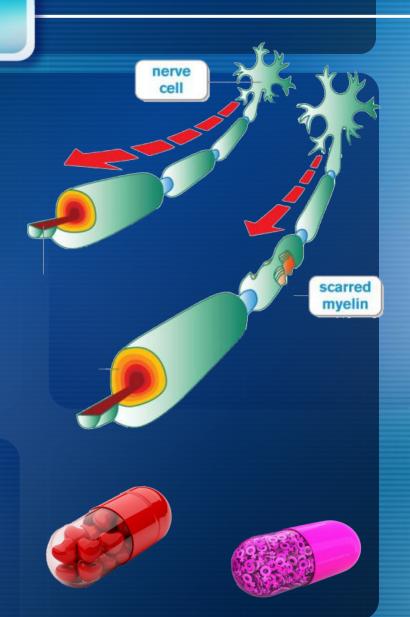




Omega-3. INFLUENCE

- Cell membranes (brains, nerves)
- Clean vessels from plagues (heart)
- Anti-inflammation effect (hormonal balance)
- Increase insulin sensitiveness





Omega-9. INFLUENCE

- Doesn't influence on hormonal balance
- Cleans vessels
- Doesn't oxidize while cooking food





Omega-3 vs Omega-6

NATURAL BALANCE OMEGA-3 AND OMEGA-6 1:4 Misbalance in modern nutrition

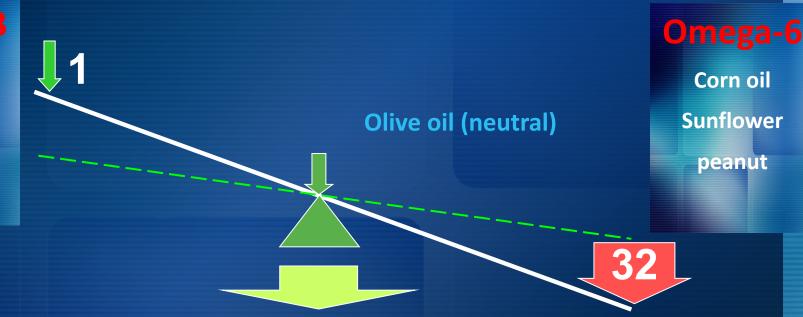
Omega-3

Flax oil

Fat fish

walnut

Brasilian nut

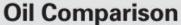


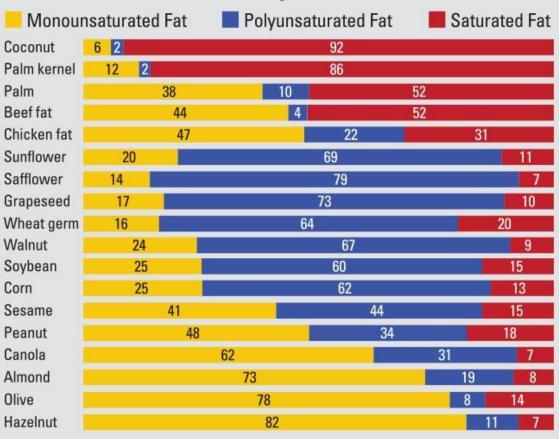
Corn oil

Sunflower

peanut

Oil comparison





Balance of Fats

Fat acid Omega 3 should be in balance:

- ✓ 50% plant (oils, nuts, grains)
- √ 50% animal (sea fish, fish oil)



Herbalifeline



Omega-3 acids help to decrease the risk of cardio-vascular diseases

THE COMPLEX OF POLIUNSATURATED FAT ACIDS

- Concentrate of fish oil «Extra class» -Omega-3 (contains 20 types of sea lipids)
- Contains valuable antioxidants- vitamin E and selenium
- ✓ Valuable plant oils

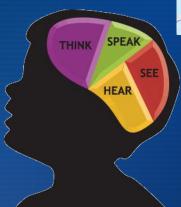
Strengthening of effect

- Vitamin E (tocopherol)
 Antioxidant, prevent fats from oxidizing, protects vitamin A and amino-acids.
- SeleniumAntioxidant, supports immune system
- Peppermint oil
- Thyme oil
- Clove oil

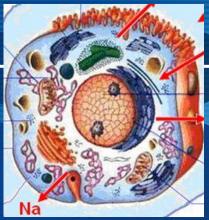
- •Omega-3
- Vitamin E
- Selenium Se

Functions of Omega-3

- Builds and renews cell membranes
- Stimulates mental development in childhood
- Activates brain work
 Human brain consist
 of fat tissues in 60%
- Dissolves plaques on the walls of vessels
- Reduces inflammations
- Prevents stresses











Day norm of Omega-3

- To normalize cholesterol and strengthen health generally: 1-1,5 g.
- To increase muscles: 3 g.
- To lose weight: 4 g.

1 capsule of Herbalifeline contains

- Poliunsaturated fat acids = 0,236 g;
- 29,09 g per 100 g
- 3 capsules ≈ 1 g
- up to 12 capsules ≈ 4 g



