



ANTIOXIDANTS IN DIET

ANTIOXIDANTS = COMPOUNDS THAT INHIBIT OXIDATION

- Produced by each living plant cell.
- Shaping plant appearance and protective against negative factors.
- Responsible for attractiveness of food via color and taste, e.g. blueberries' tartness.
- Protect food from rotting and extend oil expiration date.
- May have a great impact on cancer prevention.
- Neutralize free radicals.

OXIDATIVE STRESS

The main task of antioxidants in the human body is to protect it against oxidative stress.



Oxidative stress is an imbalance between the production of free radicals and the ability of the body to counteract or detoxify their harmful effects through neutralization by antioxidants.

FREE RADICALS

Free radicals may be responsible for:

- weakened immune system
- damage to nervous cells and genetic material (cancer)
- cataract
- neurodegenerative diseases, e.g. Alzheimer's
- aging process

FACTORS THAT LEAD TO INCREASED PRODUCTION OF FREE RADICALS

- lack of vegetables and fruits in a diet
- drinking alcohol
- smoking cigarettes
- high-fat foods
- stress
- highly processed food with extended shelf life



Diet rich in antioxidants helps to neutralize the impact of free radicals in our body.

ANTIOXIDANTS - EXAMPLES

Vitamin A

- ✓ protects vision
- ✓ maintains cholesterol levels

- carrot
- pepper
- sweet potatoes

Vitamin C

- ✓ maintains immune system
- ✓ reduces the risk of cardiovascular disease

- kiwi
- blackcurrant
- parsley

flavonoids

- ✓ exhibit anti-inflammatory activity
- ✓ seal blood vessels

- buckwheat
- onion
- green tea

Vitamin E

- ✓ protects cardiovascular system
- ✓ strengthens cell membranes

- rapeseed oil
- nuts
- wheat germ oil

lycopene

- ✓ reduces the risk of cancer
- ✓ prevents atherosclerosis progression

- tomatoes
- rosehips
- watermelon

lutein

- ✓ protects vision
- ✓ improves skin elasticity

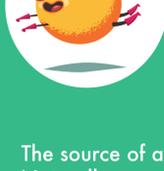
- kale
- spinach
- egg yolk

selenium

- ✓ supports thyroid function
- ✓ protects red blood cells and mucosal barriers

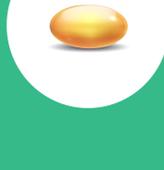
- fish
- dairy
- meat
- cereals

DID YOU KNOW?



Some foods are called "superfoods" because they are rich in antioxidants, e.g. pecan nuts, artichokes, cranberry.

The source of antioxidants matters. Naturally occurring vitamin E exists in a few forms, but in dietary supplements we can usually find just one - alpha-tocopherol.



Some antioxidants are responsible for the bright color of cherry, while other for berries acerb taste.