

Vitamin and Mineral Supplements

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Vitamin and Mineral Supplements

- Many people take dietary supplements for dietary insurance and health insurance.
- Some take multi-nutrient/vitamin pills daily.
- Others take large doses of single nutrients. (Vitamin C, vitamin E, beta-carotene, iron, and calcium)
- Self-prescribed supplementation is not advised.
- A valid nutrition assessment by professionals determines the need for supplements.
 - Even if warranted, still preferred to improve food choices and eating habits
- There are many arguments for and against supplements.

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Arguments for Supplements

- Correct Overt Deficiencies
 - Generally physician prescribed; therapeutic dose 2-10 times RDA; supplement now acting as a drug
- Support Increased Nutrient Needs
 - Iron for women during menstruation; folate during pregnancy; infants whether breastfed or receiving formula
- Improve Nutrition Status
 - i.e. elderly, vegetarians
- Improve the Body's Defenses in case of addiction, extensive illness, injury, or stress
- Reduce Disease Risks

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Arguments for Supplements

- Who Needs Supplements?
 - People with nutritional deficiencies
 - People with low energy intake – less than 1600 kcalories per day
 - Vegans and those with atrophic gastritis need vitamin B₁₂
 - People with lactose intolerance, milk allergies, or inadequate intake of dairy foods

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Arguments for Supplements

- Who Needs Supplements?
 - People in certain stages of the life cycle
 - Infants need iron and fluoride
 - Women of childbearing age need folate
 - Pregnant women need folate and iron
 - Elderly need vitamins B₁₂ and D
 - People with diseases, infections, or injuries, and those who have had surgery that affects nutrient digestion, absorption or metabolism
 - People with inadequate milk intakes, limited sun exposure, or heavily pigmented skin - Vitamin D
 - People taking medications that interfere with the body's use of specific nutrients

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Arguments against Supplements

- Toxicity
- Life-Threatening Misinformation
- Unknown Needs
- False Sense of Security

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Arguments against Supplements

- Other Invalid Reasons:
 - Belief that food supply and soil contain inadequate nutrients
 - Belief that supplements provide energy
 - Belief that supplements enhance athletic performance or lean body mass without physical work or faster than work alone
 - Belief that supplements will help a person cope with stress
 - Belief that supplements can prevent, treat or cure conditions

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- Bioavailability and Antagonistic Actions

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Bioavailability and Antagonistic Actions:

- Body absorbs nutrients best from foods
- When taken in pure, concentrated form, nutrients likely to interfere with one another's absorption or absorption of nutrients in foods eaten at same time:
 - Zinc interferes with copper and calcium
 - Iron interferes with zinc
 - Calcium interferes with magnesium and iron
 - Magnesium interferes with calcium and iron
 - Vitamin A can interfere with Vitamin E over long term
 - Vitamin E antagonizes Vitamin K
- If diet inadequate – improve diet to get needed nutrients from food
 - If necessary a multivitamin-mineral supplement that supplies between 50 and 150 percent of the Daily Value for each of the nutrients.

Selection of Supplements

- What form do you want?
- What vitamins and minerals do you need?
 - Do not exceed Tolerable Upper Intake Levels.
 - Be careful about greater than 10 mg of iron.

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Selection of Supplements

- Are there misleading claims?
 - Ignore organic or natural claims.
 - Avoid products that make high potency claims.
 - Watch fake preparations.
 - Be aware of marketing ploys.
 - Be aware of preparations that contain alcohol.
 - Be aware of the latest nutrition buzzwords.
 - Internet information is not closely regulated.
- What about the cost?
 - Local or store brands may be just as good as nationally advertised brands.

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Regulation of Supplements

- Nutritional labeling for supplements is required.
- Labels may make nutrient claims according to specified criteria.
- Labels may claim that lack of a nutrient can cause a deficiency disease and include the prevalence of that disease.
- Labels may make health claims that are supported by significant scientific agreement.

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