

Vitamin Summary

| | Chemical Name | R.D.A. for 15-18 year olds | Symptoms Of Lack of Vitamin | Symptoms/Danger Of Overdose |
|-----------------------|---|--|--|---|
| A Vitamin A | Retinol | M-1,000 R.E. F-800 R.E. | Night blindness, rough skin, drying of eyes, poor bone and tooth enamel growth. | Blurred vision, loss of appetite, headaches, skin rash, hair loss and injury to brain and nervous system. |
| B Vitamins | B1—Thiamin B2—Riboflavin Niacin (There are other B vitamins) | M 1.4 mg. F 1.1 mg. M 1.7 mg. F 1.3 mg. M 18 mg. F 14 mg. | Beriberi, mental confusion, leg cramps. Skin disorders, cracks at corners of mouth. Sensitivity of eyes to light. Pellagra, skin disorders, irritability, mental confusion. | None known. None known. Liver and ulcer disorders. |
| C Vitamin C | Ascorbic Acid | 60 mg. | Scurvy: bleeding gums, wounds do not heal, loose teeth, weight loss. | Possible scurvy symptoms when megadoses stop. Kidney bladder disorder. Tendency for blood to clot. May cause vitamin B ₁₂ deficiency. |
| D Vitamin D | Calciferol * | 10 Micrograms | Rickets in children—stunted bone growth. In adults—softening of bones, fractures, muscle spasms. | Excess calcium deposits. Deafness, high cholesterol and blood pressure levels. |
| E Vitamin E | Alphatocopherol | M 10 mg. F 8 mg. | None known in humans. | None known. |
| K Vitamin K | Menaquinone Phylloquinone | 50-100 Micrograms | Bleeding in infants, loss of calcium from bones in adults (rare). | Jaundice in babies. |

Needed for good vision, skin, strong bones, and wound healing.
Found in yellow, orange, and green vegetables; yellow fruits; and in the fat of animal products like fish, milk, eggs, and liver.

Needed for using protein, fat, carbohydrates; for keeping eyes, skin, and mouth healthy; for development work of the brain; and for the nervous system.
Found in many foods such as whole grain and enriched cereals and breads, meats and beans.

Needed for wound healing; for development of blood vessels, bones, teeth, and other tissues; and for minerals to be used by the body.
Found in food like citrus fruits, melons, leafy green vegetables, broccoli, cabbage, and spinach.

Needed for using calcium and phosphorous to build strong bones and teeth. It's a vitamin your skin produces when getting sunshine.
Found in fatty fish, liver, eggs, butter; added to most milk.

Helps preserve the cell tissues.
It is found in a wide variety of foods, and most people get enough.
Vegetable oils and whole grain cereals are especially rich sources.

Needed for normal blood clotting.
Found in dark green leafy vegetables; peas, cauliflower, and in whole grains.
It's also made in our bodies.

Phytochemicals

NAME: _____

DATE: _____

| Phytochemicals | Where to find them | What they can do* |
|---|---|---|
| Carotenoids such as beta-carotene and lycopene | Orange and yellow vegetables such as carrots, sweet potatoes, winter squash, tomatoes, citrus, melons, and cruciferous vegetables | Contain anti-oxidants which may block damage to cell DNA. May help cut cancer risk and reduce the accumulation of plaque in arteries. |
| Indoles Isothiocyanates | Cruciferous vegetables such as broccoli, cabbage, kale, | Block cancer causing substances BEFORE they can damage cells. Suppress tumor growth. |
| Flavonoids (Includes hundreds of individual chemicals.) | Most fruits and vegetables. Citrus, apples, grapes, onions, tea, berries, peppers, wine. | Anti-oxidants that block cancer causing agents. May slow enzymes that cause cancers to spread from original site. Protects collagen. May lessen symptoms of allergy, asthma, and arthritis. |
| Capsaicin | Hot peppers | May protect DNA from carcinogens. Acts as an antioxidant. Anti-inflammatory. Scientists are studying how capsaicin might lessen the pain of arthritis. |

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| Allium compounds. The distinctive smell IS the phytochemical. | Garlic, onions, scallions, leeks, shallots, and chives. | May help block the reproduction of tumor cells. May also help protect against heart disease and stroke by interfering with the formation of blood clots and reducing cholesterol. Use these for their flavor as part of a low-fat diet. |
| Isoflavones | Soybeans, dried beans, tofu, soy milk | Blocks estrogen from feeding cancer cells in breast and ovarian cancer. May help prevent colon cancer. |
| Coumarins | Citrus fruits, whole grains, soybeans, cruciferous vegetables, squash, melons, green tea, flax seeds. | Helps cells dispose of carcinogens. A blood thinner that might prevent clotting. |
| Ellagic acid | Strawberries, grapes, apples, cranberries, and blackberries. Nuts, especially walnuts. | An antioxidant. May reduce the damage caused by cancer causing agents. |
| | | Many effects are based on laboratory studies done on animals. |