The Sunshine Vitamin
by the American Institute for Cancer Research

Vitamin D is unique among the nutrients the human body needs. It can come from food sources or be produced in the skin when exposed to ultraviolet light. The best food sources are fortified milk or cereal and high-fat fish, like salmon and mackerel.

The major function of this vitamin is to maintain normal blood levels of calcium. A vitamin D deficiency in children can cause rickets, a bone disorder. Among adults, a deficiency will worsen osteoporosis and lead to osteomalacia. Osteomalacia produces muscle weakness and bone pain.

In spring and summer, exposing only your face, hands and forearms without sunblock lotion to sunlight for 10 minutes, just two or three days a week can usually supply the amount of vitamin D you need.

Part of the evidence suggesting vitamin D protects against cancer is geographic. Breast, colon and prostate cancer rates are approximately twice as high among U.S. populations living in the North and Northeast as in the Southwest. The higher incidence of these cancers in the North and Northeast may be due to less sunlight during the year. With less sunlight, people's bodies would produce less vitamin D.

Vitamin D Tests in the Laboratory

In laboratory studies, the active form of vitamin D has turned out to be a potent substance to inhibit cell growth. When added to cultures of human breast, colon, lung and prostate cancer cells, it slowed their growth.

Research supported by the American Institute for Cancer Research (AICR) is trying to determine exactly how vitamin D. works. One breast cancer researcher is trying to determine which genes are affected by vitamin D. Another AICR grantee is examining how the active form of vitamin D slows the growth of prostate cancer cells and causes their death in cell cultures.

How Much Vitamin D Do You Need?

Studies show that many Americans fail to meet the vitamin D recommendations of the National Academy of Sciences. African Americans are particularly deficient, because dark skin forms vitamin D in response to sunlight more slowly. The elderly are also affected, especially those in institutions or homebound.

In spring and summer, exposing only your face, hands and forearms without sunblock lotion to sunlight for 10 minutes, just two or three days a week can usually supply the amount of vitamin D you need. Two eight-ounce glasses of milk also supply the 200 International Units (IU) recommended for adults under age 50.

After age 50, the recommended amount of vitamin D doubles, so older adults would need four glasses of milk, if that is their only source. After age 70, the recommended amount rises again to 600 IUs. A supplement may be advisable for some older adults. Consult with your doctor before you take a supplement or cod liver oil. The maximum safety limit for vitamin D is 2,000 IUs.

For general information on taking supplements, contact AICR to order a free copy of *The Facts on Supplements*. The phone number is 1- (800) 843-8114, extension 110.