

Research Suggests Increasing Vitamin D Exposure

by Allison Aubrey

Morning Edition, June 22, 2006 · Nutrition researchers are pushing for a big increase in the daily recommended dose of vitamin D. Dozens of recent studies suggest that deficiencies of the sunshine vitamin make people more vulnerable to everything from fractures to certain cancers and diabetes.

Dr. Ken Cooper is an early adopter of higher dose vitamin D. He directs The Cooper Institute, a Dallas-based nonprofit research organization, which studies vitamins and markets doses and combinations backed by science.

Sun Not Always a Sufficient Source

"We used to think that we got all the vitamin D we needed daily by exposure to the sun," says Cooper. But studies show 65 percent of Americans don't get enough. The sun's rays aren't strong enough in winter. And in the warmer months, many people wear sunscreen or cover up in work clothes.

Researchers say 10 to 15 minutes of sun exposure in the midday sun during the summer is adequate. But it can be tough to get in, says Dr. Beth Dawson Hughes, director of the Bone Metabolism Laboratory at Tufts University.

"I walked to and from the clinic with my hands and arms exposed. But it didn't take me 10 minutes," she says. "So I'd say I have not gotten my daily dose today."

D Helps More than Bones

Dawson-Hughes recommends vitamin D supplements to her patients. Studies going back to the 1980s have shown that a combination of D and calcium supplements can reduce the risk of bone fractures.

"Now we see that D affects muscle performance, muscle strength and the risk of falling," says Dawson-Hughes.

The key to effective vitamin D supplementation lies in taking adequate doses. Osteoporosis clinics usually take blood samples from patients to determine how much D is needed to restore optimal levels.

In some fracture and bone health studies, patients see benefits with supplements of 800 international units of vitamin D. This is double the amount currently recommended by the government-sponsored Food and Nutrition Board of the National Academy of Sciences. This group set the standards that many makers of supplements and multivitamins follow.

The benefits of vitamin D seem to extend far beyond bone health, says Dr. Walter Willett of the Harvard School of Public Health.

"I think at this time the case for raising the recommended level of D intake is very strong," says Willett. "There are many lines of evidence that people need more vitamin D."

Vitamin D and Cancer Prevention

Take, for instance, cancer prevention. A few decades ago, researchers found that colon cancer rates were higher in northern parts of the country where sunlight exposure is lowest.

From this lead, Willett's group at Harvard designed a study. They took blood samples from 30,000 healthy women to find out exactly how much D they had in their bodies. The researchers then followed the women for years to see which ones developed colon cancer.

"We found that women who had the lowest blood levels (of vitamin D) have double the risk of cancer over those who had the highest," Willett says.

The study doesn't prove that vitamin D protects against cancer. But two other lines of evidence help build the case. Lab researchers doing test-tube and animal studies have found that vitamin D reduces the rate of cell multiplication.

And recently, scientists have found that a genetic variation in the vitamin D receptor, which transmits signals from vitamin D to cells, is associated with risk of breast cancer.

The Case for Increasing D

There's also new work into understanding how vitamin D may affect the risk of multiple sclerosis, asthma and diabetes.

"We and many other researchers are seeing that individuals who have higher vitamin D levels have a lower risk of developing Type 2 diabetes," says Dawson-Hughes.

Researchers have many reasons to be excited by the accumulating evidence, yet many of their preliminary findings remain unproven.

Scientists do have new studies to show that high doses of vitamin D -- up to 4,000 international units per day -- are not toxic to the body. Some researchers hope to use this evidence to persuade the Food and Nutrition Board to increase the daily recommended level to 1,000 IUs per day for adults.

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