

Doctor wants to put vitamin D to work in the workplace

An Abbott Northwestern doctor wants corporate America to snap to attention, saying low levels of the inexpensive vitamin are costing billions of dollars in lost productivity and preventable health costs.

By Jackie Crosby (<http://www.startribune.com/jackie-crosby/10644706/>) Star Tribune |

FEBRUARY 11, 2012 — 10:37PM

Dr. Greg Plotnikoff has spent more than a decade evangelizing about the health benefits of vitamin D to his medical colleagues across the globe.

Now the Allina Health doctor is turning to corporate America, hoping his message will have new resonance amid soaring medical costs and a fragile economic recovery.

Because vitamin D is believed to be effective at treating or preventing such conditions as low-back pain, allergies, migraines, high blood pressure and depression, Plotnikoff argues that the inexpensive pills can play a key role in reducing "presenteeism," where employees show up for work but don't get much done. Some studies say the problem costs U.S. employers more than \$150 billion a year.

In a soon-to-be published study, Plotnikoff, an internist and pediatrician, argues that companies can save \$112 to \$370 per employee per year in preventable illness and improved productivity simply by encouraging workers to boost their vitamin D.

"Vitamin D may represent the single most cost-effective medical intervention we have today," he said.

Vitamin D has long been considered essential to helping the body absorb calcium, which is important for strong bones. But Plotnikoff and other researchers have argued in recent years that higher doses could also help protect against cancer, heart disease, diabetes, osteoporosis, mental illnesses and autoimmune diseases, such as multiple sclerosis.

Not everyone is convinced. A report by the Institute of Medicine in November 2010 noted mixed results in more than 1,000 published studies. But the group said the possible health benefits warrant further investigation.

Boston's Dr. Ravi Thadhani, who is researching the role of vitamin D in heart and kidney disease, said "it's very attractive" to hang medical hopes on vitamin D. But robust scientific evidence isn't there yet.

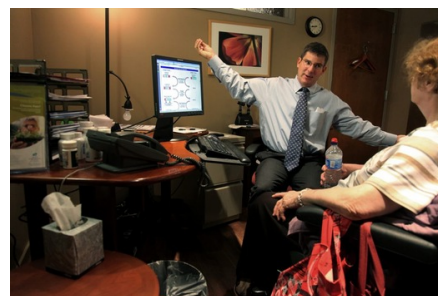
"Only now are rigorous studies going on to formally test whether any of this is actually true," said Thadhani, an associate professor of medicine at the Harvard Medical School and director of Clinical Research and Nephrology at Massachusetts General Hospital. "Over the next few years, we'll finally and formally test this potential link, and we'll have a much better understanding of where we may have benefit and where clearly there is no benefit."

Plotnikoff hopes his study will take the discussion in a new direction. Businesses, he said, "just want to know what works and what doesn't."

The study in the March issue of the *Journal of Occupational and Environmental Medicine* was based on data from more than 10,600 workers at Minneapolis-based Allina Health, which operates the Center for Health Care Innovation and the Penny George Institute for Health and Healing, which Plotnikoff leads.

He coauthored the report with fellow Allina researcher Jeffery Dusek and Michael Finch of the University of Minnesota Carlson School of Management.

Vitamin D is known as the sunlight vitamin -- about 10 minutes of sun exposure a day produces sufficient amounts. It also is found in fish, eggs, fortified milk and cod liver oil. Elderly, obese and dark-skinned people, as well as those who live in northern climates,



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ELIZABETH FLORES, STAR TRIBUNE

Dr. Greg Plotnikoff discussed patient Bernice Koniar's, 66, current medical status and the treatment needed for her condition at the...

such as Minnesota, often don't get enough of the vitamin, especially in the winter.

Vitamin D, which is more accurately described a hormone, is as important to the body as estrogen and testosterone, and regulates at least 2,000 genes, Plotnikoff said. Vitamin D receptors reside in brain and muscle cells, bone marrow and the immune system.

Plotnikoff said he remains amazed at the pushback from the medical community some 14 years after studies in respected medical journals first began looking at vitamin D's impact on health.

He draws from years of clinical practice in which he saw patients crippled by unexplained pain and weakness quickly regain health and energy after being treated with vitamin D.

"We have no problem ordering a \$1,500 MRI or a \$90,000 course of Avastin for cancer," he said. "Why wait 10 years for randomized controlled trial ... when you can measure, replenish and see right away if it makes a difference?"

Wider testing

Plotnikoff isn't advocating that companies start requiring workers to pop vitamin D. But he's hoping they will make it easier for workers to get tested. A blood test, which insurers typically don't include in free preventive health screenings, can cost from \$50 to \$170.

"So many companies say, 'Let's get a cholesterol test or a blood pressure level,'" Plotnikoff said. "That's fine. But it's 20 or 30 years down the road. Vitamin D is something you can replenish and have a return on investment in a couple of months."

Allina's research was conducted between January and February 2010 during its wellness campaign. Allina offered employees \$50 to take part. Participants filled out a health risk appraisal form and a questionnaire that measured work limitations caused by physical or emotional problems. Employees willing to have blood drawn received another \$25 in a gift card.

About 60 percent of the participants -- mostly white women, with an average age of 44 -- had low vitamin D levels, by international standards. About 30 percent were very low, and about 6 percent were profoundly low.

"We were stunned that so many health-care employees were so low," Plotnikoff said.

'Feeling much better'

Todd Dunphy, a substance abuse counselor at Allina's Unity Hospital in Fridley, was stunned too. He got tested almost as a lark, thinking he'd show off.

"I take multi-vitamins, I exercise a half-hour a day, six days a week, I eat really healthy -- fruits and vegetables, meat and potatoes, no fast food," said Dunphy, 59. But his levels were low.

"I started taking vitamin D pills right away," he said. "Within three or four days, I was feeling much better."

Plotnikoff is in the midst of a follow-up study to compare vitamin D levels, health and productivity at Allina in the year since workers were tested. And he'll keep extolling the vitamin's virtues.

"My hope is that businesses will see this as an opportunity to save money and promote health at the same time," he said.

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