

The [Dakota Diabetes Coalition](#) is proud to offer a regular column on diabetes and related concerns every other Friday.

	<p>Dr. Eric Johnson is a family practice doctor in Grand Forks with a special interest in diabetes -- and a special knack for writing. As a member of the Dakota Diabetes Coalition, he has generously made himself available to answer questions through our listserv. If you have comments, or questions for Dr. Johnson to address in future columns, please contact gailhand@q.com Visit the Coalition's website! http://www.ndhealth.gov/diabetescoalition/</p>
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Vitamin D deficiency widespread

Vitamin D linked to Diabetes and Cardiovascular Disease

Q. I have diabetes. Should I take a Vitamin D supplement?

A. Let me say unequivocally, "maybe.". Let's look at the evidence.

Vitamin D deficiency, thought to be more widespread than previously appreciated, may play a role in the development of diabetes and cardiovascular disease. Vitamin D's role in calcium absorption and metabolism is well understood. There is some thought that vitamin D deficiency may be increasing as a result of increased precautions to sun exposure, and the increased number of elderly people who may have limited sun exposure. As sun exposure is critical for vitamin D metabolism and its action, relying on dietary sources alone may not be enough. A recent study

showed that even a significant percentage of infants may be vitamin D deficient.

Osteopenia, osteoporosis, and increasing fracture risk are all associated with vitamin D deficiency. Two recent poster presentations at the American Academy of Clinical Endocrinologists showed that **up to 50% of type 2 diabetes patients have significant vitamin D deficiency**. Additionally, there was some suggestion that those with poorer diabetes control, as measured by A1C, may have more significant vitamin D deficiencies.

One of these studies was conducted in Tennessee, where patients may have more sun exposure than those in more northern climates, but the rate of vitamin D deficiency was still very high. Only 11% of those patients had adequate levels of vitamin D.

A recent meta-analysis found sufficient evidence to link vitamin D and calcium status to the development of type 2 diabetes, but many of the studies analyzed were small, and they were not prospective trials. However, it was noted that **vitamin D supplementation may improve postprandial glycemia and insulin response**.

Interestingly, another recent study showed that the use of atorvastatin (Lipitor) can increase vitamin D levels, which may account for some of atorvastatin's beneficial cardiovascular effect separate from its positive effect on lipid profiles. **Vitamin D is thought to have a beneficial role in certain inflammatory responses in the body, which also may reduce cardiovascular risk.**

Clinically, this all adds up to a big "maybe" as far as benefit from vitamin D in relationship to diabetes and cardiovascular disease management. None of these studies goes so far as to recommend routine vitamin D screening for at-risk diabetes populations; however, vitamin D deficiency is probably far more widespread than previously realized, and **supplementation for most individuals is easy and safe.**