



## DIETARY SUPPLEMENT FACT SHEET

<http://chppm-www.apgea.army.mil/dhpw/Wellness.aspx>

### Vanadium

**Also known as:** Vanadyl Sulfate, Vanadate, vanadium salts or vandate compounds

**Historical Perspective:** Vanadium is a naturally occurring metallic element. It has not yet been determined if vanadium is essential in human nutrition. Estimates of need for the human body range from 10 to 30 micrograms per day, while the average American diet provides between 10 and 60 micrograms per day from foods such as shellfish, mushrooms, parsley, dill seed and wine.

**Common Uses:** At this time, vanadium does not have any prescribed use in medicine or disease prevention. As a dietary supplement it has been marketed to improve blood sugar control, and increase muscular strength, as well as osteoporosis treatment. Because vanadium has shown to be deposited in the bone of mice, some have suggested that it may be helpful for osteoporosis. Bodybuilders take vanadium in the hopes that it will increase muscle bulk and strength due to insulin's anabolic role.

**Potential Side Effects:** Excess vanadium consumption is associated with a green tongue. Metals accumulating in bone are not a known source of strength for the bone or treatment for osteoporosis. Adverse events reported to the FDA include Grand mal seizure, elevated and "roller coaster" blood glucose levels, and death.

**Food-Drug-Supplement Interactions:** Vanadium may have blood-thinning effects and therefore should not be taken with anticoagulant drugs.

**Contraindications to use:** Vanadium can lower blood sugar and therefore blood sugars should be carefully monitored for someone who takes vanadium with an oral hypoglycemic agent or insulin.

**Research Data on Safety and Efficacy:** Vanadium can be a relatively toxic element. Research does not support claims that vanadium promotes increased muscle mass or strength and development. Results in a small study showed good results for use in persons with type 2 diabetes.

**Bottom-Line:** Vanadium demonstrates the potential for an insulin alternative in the future, but its use is highly discouraged at this time. Improvements in insulin sensitivity without the use of medication are best achieved through daily physical activity, which will sensitize the muscles to glucose absorption. Vanadium is not beneficial in increasing muscle mass or strength.

#### Resources:

1. <http://vm.cfsan.fda.gov> The Food and Drug Administration's Center for Food Safety and Applied Nutrition.
2. The Health Professional's Guide to Popular Dietary Supplements, 2<sup>nd</sup> Edition. Allison Sarubin Fragakis. MS, RD, The American Dietetic Association. 2003.
3. PDR for Nutritional Supplements. Physician's Desk Reference. 2001.
4. [www.tnp.com](http://www.tnp.com) The Natural Pharmacist.