What are the Health benefits of Vanadium?

For the proper functioning of our body, we require various nutritional supplements in the form of vitamins, proteins, carbohydrates, fats and minerals. Most of these supplements are provided to the body through the food we eat. Vanadium with an atomic number 23, is a trace mineral that is present in many foods. Although scientists believe that our body may require Vanadium in very small quantities, its effects are not yet well studied and therefore not very clear. It seems to be of more importance to ocean life than land life. It is a well known fact that high Vanadium doses can be harmful to us. Experiments using this mineral have been carried out only on animals and rarely on humans and hence it is not prescribed to treat any ailment or disease.

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What are the characteristics of Vanadium?
Vanadium is a bright, white, soft and ductile element, and is mostly found in vanadinite and carnotite. It is known for its high structural strength and is prominently used in high speed tools used for rust resistance, as a catalyst, as an agent in bonding titanium-steel, for making surgical instruments, as a color fixer, dyes and ceramics, and as a carbon stabilizer. Spanish mineralogist Andres Manuel del Rio discovered this mineral in 1801 in Mexico City. It was rediscovered by Swedish scientist, Nils Sefstrom in 1830 and in 1867 was isolated by Henry Enfield Roscoe. In the periodic table it is placed in the 3 to 12 group of transition metals and is a good conductor of heat and electricity.

What are the sources of Vanadium?
Vanadium is found in several forms in nature, such as, Vanadate and vandal sulfate. The food sources that contain this mineral are shellfish, black pepper, mushrooms, dill weed, parsley, grain, wine, beer, artificially sweetened drinks and grain products. We can get Vanadium in our diet by eating buckwheat, soya beans, eggs and apples.

What are the health benefits of Vanadium?
Studies carried out on animals and humans in small measure indicate that Vanadium can be beneficial in lowering the blood sugar levels by improving insulin sensitivity in patients suffering from Type II diabetes. One of the studies carried out on diabetes patients revealed that this mineral completely eliminated the entire LDL cholesterol in them. But the dosages used in this case were much above the tolerable limit which is considered unsafe. Vanadium is also used for increasing stamina or physical strength. It is said to be effective in the treatment of water retention, cancer and some other conditions. On an average, to take advantage of Vanadium without getting any side effects, an adult should not take more than 1.8mg of this mineral through diet. Our regular diet can provide anything between 6 to 18 mg of Vanadium. Some of the side effects caused by Vanadium are diarrhea, vomiting, stomach pain, gas, lowering of WBC’s, anemia, and high cholesterol.

Does Vanadium have any Side effects?
The pentoxide form of Vanadium is more toxic than the elemental vanadium. High amounts of Vanadium if inhaled, causes chronic bronchitis and irritation of lungs, throat, eyes and nasal cavities, greenish black tongue, rapid heart beat. It also upsets the stomach and intestines, damages the nervous system, bleeds the kidneys and liver along with nosebleeds. Weakening of nerves which results in paralysis and trembling. Fatigue, dizziness and headaches are other effects of high doses of Vanadium.
What are the precautions for Vanadium?
Since this mineral can be toxic it should be taken only under the supervision of expert medical practitioner. People with any health problem or less white blood cell (HIV) count should refrain from taking Vanadium or else they will be at risk of low blood sugar problem. Patients suffering from kidney ailments should not use Vanadium as overdose of this mineral is known to damage the kidney.

What are the drug interactions for Vanadium?
Vanadium has been found to interact with antiplatelet drugs or anticoagulant/blood thinning drugs. Patients on medications like Warfarin (Coumadin), Clopidogrel (Plavix), aspirin, or heparin, should not take Vanadium.

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Note: Ball size equates to contained metal (tonnes x grade)
23 V Vanadium