

BLOOD SUGAR

WHAT IS IT?

HOW DO I CONTROL IT?

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Blood sugar is the glucose carried in our blood stream. Glucose is a major source of energy for most cells of the body. Some cells (for example, brain and red blood cells), are almost totally dependent on blood glucose as a source of energy. The brain, in fact, requires that glucose concentrations in the blood remain within a certain range in order to function normally. Most dietary carbohydrates eventually end up as glucose in the blood. Excess glucose is converted to glycogen for storage by the liver and skeletal muscles after meals. Glycogen is gradually broken down to glucose and released into the blood by the liver between meals. Our bodies function best at a certain level of sugar in the bloodstream. If the amount of sugar in our blood runs too high or too low (abnormal glucose metabolism), then we typically feel bad and can develop major complications. Millions of people are suffering from consistently high levels of blood sugar (abnormal glucose metabolism). Sixteen million Americans are known to suffer from consistently high blood sugar yet many are not aware of it. African Americans, Hispanics and Native Americans have historically been at even higher risk of developing high blood sugar issues during their lifetime. High blood sugar has potential long term complications that can affect the kidneys, eyes, heart, blood vessels and nerves.

HOW DO I CONTROL IT?

The first thing to understand is what controls your blood sugar levels. The high incidence of blood sugar issues in certain groups such as the Pima Indians appears to be a relatively recent development that followed a change in the type of food intake (from relatively little food to plenty of food). With this came the development of obesity within their culture which results in blood sugar problems developing in those that are genetically predisposed. This "urbanization phenomenon" has been most carefully studied in non white populations, but is probably ethnically and racially non specific. In other words, obesity tends to promote diabetes in those genetically predisposed regardless of where you live and what your racial background is.

One factor to consider is that any treatment of abnormal glucose metabolism, or blood sugar problems almost always has a nutritional component. Doctors ask their patients to change their diets to avoid foods that aggravate symptoms. In many cases this is all that is necessary to correct the blood sugar problems that some people experience.

This nutritional approach has been tested and shown effective many times over the past decades. Blood sugar problems have been shown easy to prevent, easy to cure and treat in laboratory animals. Since 1958, it has been known that supplemental Chromium will prevent and treat certain blood sugar problems. Just ask any health food store owner! Walter Mertz (the Director of the U.S.D.A. field services) published the facts associated with chromium and a common blood sugar disease in the Federation Proceeding. Additional, in 1985, the medical school at the

University of Vancouver, BC, Canada stated that "vanadium will replace insulin..." in a very common type of abnormal glucose metabolism.

Chromium

Chromium, a naturally occurring mineral, activates phosphoglucosonetase and other enzymes and is tightly associated with GTF (glucose tolerance factor - a combination of chromium III, dinicotinic acid and glutithione). The reported plasma (blood) levels of chromium in humans over the past 20 years ranged from 0.075 to 13 ng/ml. Very little inorganic chromium is stored in the human body and foods such as colas, apple juice, grape juice, honey, and sugar (all forms) increase the natural loss of chromium by 300% for 12 hours after eating the food! We get about 0.25 to 0.5 ug of usable chromium from our foods each day, but the RDA for chromium is 50 to 200 ug per day. This means we are loosing every day! This is supported by the following chart outlining average blood levels of chromium in humans over the past 50 years.

CHROMIUM LEVEL		
Mean Chromium Blood Levels (u/l)		
YEAR	Amount	%DECLINE
1948	28-1000	0
1971	13	53.6%
1972	10	64.3%
1973	4.7 - 5.1	82.1%
1974	0.73 - 1.6	95.8%
1978	0.16	99.4%
1980	0.43	98.5%
1985	0.13	99.5%

The above figures were published in RARE EARTHS FORBIDDEN CURES by Dr. Joel Wallach and Dr. Ma Lan

Vanadium

Vanadium is also a naturally occurring mineral which has been shown to influence blood sugar metabolism. Vanadium was shown to be an essential trace mineral in 1971. According to Dr. Wallach and Dr. Ma Lan, vanadium stimulates glucose (blood sugar) oxidation and transport in fat cells and glycogen synthesis in liver and muscle, and inhibits liver production of glucose from fat and absorption of glucose from the gut. Vanadium enhances the stimulating effect of insulin on DNA synthesis. Vanadium appears to function like insulin by altering cell membrane function for ion transport processes, therefore vanadium has a very beneficial effect for humans with glucose tolerance problems by making the cell membrane insulin receptors more sensitive to insulin. Vanadium also inhibits cholesterol synthesis; this is followed by decreased plasma levels of cholesterol and reduced aortic cholesterol. Additionally, vanadium has known anti carcinogenic properties. According to Dr. Wallach and Dr. Ma Lan, clinical diseases associated with vanadium deficiency include: slow growth, increased infant mortality, infertility, elevated cholesterol,

elevated triglycerides, hypoglycemia, hyperinsulinemia (narcolepsy), diabetes, cardiovascular disease and obesity.

Blood sugar problems can and are affected by proper diet and proper nutrition. Please do not confuse the issue between diet and nutrition. In a perfect world one would be the other, but in today's world you must supplement to get all your essential nutrition. Our foods just do not have what they used to have and what is there from the farm is often taken out by our processing. You need all 90 essential nutrients, of which chromium and vanadium are only two. A very important two none the less.

Reference website: <http://www.colloidal-minerals-plus.com/bloodsugar.html>