

IS CHROMIUM A DIABETES CURE? TREATMENT OF TYPE 2?



Chromium May Be Your Cure To Lower Blood Sugar

Humans need chromium, in the form of chromium+3, for proper health. However, most people get all the daily chromium they need from a normal, well-balanced diet.

Nutritionists have learned over the past century that certain substances, such as vitamins and minerals, are essential to normal functioning and health. These substances are not made in the body, so they must come from foods. (The British Navy discovered this connection in the 1700s, when they observed that sailors on long sea voyages often developed a condition called scurvy. Adding citrus fruits such as limes to the sailors' diets prevented the condition. This is how English sailors first came to be known as "Limeys.") Since chromium is present in all foods, and is especially high in certain plants, few people are deficient in dietary chromium.

The Federal government establishes guidelines for "Essential, Safe and Adequate Daily Dietary Intake" or ESADDI (formerly called the Recommended Daily Allowance or RDA) of an essential vitamin or mineral. For chromium, the recommended ESADDI level is 50-200 micrograms per day of chromium. Chromium is a standard component of most multi-vitamin/multi-mineral pills and food supplements. Chromium is also present in all foods and is especially high in certain plants. U.S. Department of Agriculture scientists recently suggested, based on their own studies, that certain people such as the elderly, diabetics, and others with blood sugar (glucose) regulation problems can benefit from even higher levels of chromium, perhaps as high as 500-800 micrograms per day, which would normally require a supplement tablet. More controversial is whether the general public needs more chromium than they get from their diet. Several manufacturers of over-the-counter chromium supplements have claimed that high doses of chromium are beneficial for dieting and bodybuilding, but the majority of controlled, independent studies to date fail to show any benefit from chromium supplementation for normal individuals. On the other hand, there is currently no evidence that taking chromium supplements is necessarily bad for you, since chromium+3 is not very toxic even at relatively high doses.

How does chromium act as a nutrient?

The best known nutritional effect of chromium is that it appears to assist insulin in regulating blood sugar (glucose) levels. Insulin is a small protein hormone that is released into the blood when blood glucose levels get too high. Insulin then binds to a receptor on the outside of cells, causing them to absorb more glucose from blood, returning blood glucose levels to normal. If glucose levels fall too low, other signals in the body prompt cells to release glucose to the blood. This "seesaw" glucose regulation is disrupted in people with diabetes, usually due to a lack of insulin production or a failure of cells to properly respond to insulin. Chromium appears to enhance the effects of insulin once insulin binds to its receptor.

Human bodies do not appear to store or absorb chromium+3 very well, taking up only 1 or 2 percent of the total chromium available in the intestines from food. But humans do have a way to take up more chromium when it is needed - the lower the body's level of chromium, the more efficiently it is taken up from the intestines. Chromium+3 does not easily cross cell membranes, and it appears to interact with cells only when needed, which suggests that it is stored in a form the body can rapidly mobilize, either in blood or nearby where blood can easily draw on it.

IS CHROMIUM A DIABETES CURE? TREATMENT OF TYPE 2?



The form of chromium associated with enhancing insulin's effect is a complex of several chromium+3 atoms bound together with amino acids. The response of cells to insulin is much greater in the presence of this LMWCr complex (also called chromodulin). The complex appears to be different from the storage form of chromium in the blood, which is not yet well defined.

Recently, Dartmouth toxicologist Joshua Hamilton and his colleagues discovered that chromium also affects the other side of the "seesaw" that controls blood glucose levels, increasing cell signals that offset the effects of insulin. This appears to be through interaction with another as yet unknown protein receptor on the surface of cells. The mechanism for this effect and the identity of this new receptor are intriguing research questions that remain to be answered. There may also be other uses of chromium by the body that remain to be discovered.

NEXT, The potential need in a Diabetic situation

Chromium in the Prevention and Control of Diabetes

Reference: Anderson, R.A., "Chromium in the Prevention and Control of Diabetes," Diabetes Metabolism, 2000, 26(1), pages 22-27. Summary: The following information is available at Pub Med.

Chromium is an essential nutrient involved in the metabolism of glucose, insulin and blood lipids. Suboptimal dietary intake of chromium is associated with increased risk factors associated with diabetes and cardiovascular diseases. Within the past five years, chromium has been shown to improve glucose and related variables in subjects with glucose intolerance and type 1, type 2, gestational and steroid-induced diabetes. Severe neuropathy and glucose intolerance of a patient on total parenteral nutrition, who was receiving currently recommended levels of chromium, were reversed by additional supplemental chromium. Chromium increases insulin binding to cells, insulin receptor number and activates insulin receptor kinase leading to increased insulin sensitivity. Additional studies are urgently needed to elucidate the mechanism of action of chromium and its role in the prevention and control of diabetes.

Chromium nicotinate of polynicotinate ChromeMate®

ChromeMate® (generically called chromium nicotinate, chromium polynicotinate or niacin-bound chromium) is a patented oxygen-coordinated niacin-bound chromium complex that plays an important role in proper insulin function, maintenance of healthy blood sugar and cholesterol levels, normal energy production, and promotion of healthy body weight.* Protected by three U.S. Patents, four international patents and other world-wide patents pending, ChromeMate® is the only niacin-bound chromium supplement with proven biological activity. Please note that ChromeMate® is also an essential trace mineral required for normal insulin function.*

How does ChromeMate® work?

Chromium is at the heart of a biologically active complex called Glucose Tolerance Factor or "GTF", which is responsible for potentiating (increasing) the action of insulin in the body. Insulin is a vital hormone responsible for transporting glucose inside cells and maintaining proper blood sugar and blood lipid (cholesterol) levels in the body. Chromium helps insulin metabolize fat, turn protein into muscle and convert sugar into energy. In fact, chromium-activated insulin increases the amount of blood sugar available for energy production nearly twenty-fold.

ProvenResultsHealth supports a system of lifestyle that makes your goals possible.

IS CHROMIUM A DIABETES CURE? TREATMENT OF TYPE 2?



About Proven Results Health (Diab-X) <http://www.provenresultshealth.com>

Helping diabetics and pre-diabetics get to healthier lives (in 90 Days). Find results 3 Times faster than exercise and diet alone. Key ingredients in Diab-X help by promoting healthy body weight BMI, normal blood sugar levels, proper insulin function, healthy cholesterol, and normal blood pressure. Strong clinical research backs this breakthrough product. Diabetics can actually read 200 supporting studies on this site.

Visit ProvenResultsHealth to learn how Diab-X might improve your life.

These widely distributed articles on Chromium For Diabetics speak to the extreme importance of bio-availability, purity and clinical dosage. Check out these other articles in The Chromium Story:



Best-selling wellness author recommends Chromium supplementation for diabetics

Who should take chromium (Diab-X™)?

Are you pre-diabetic or diabetic? OK, then you already know the value of Chromium

Georgetown University study documents weight loss benefits of Niacin-bound Chromium (NBC) brings more hope for diabetics

Warning! The diabetic supplement you take today may go right through you into the city's sewer system tomorrow

Chromium: Survey of 7,000 diabetics finds supplements improve health

Natural ingredients documented by leading medical institutions to promote weight loss, lower blood sugar levels in diabetics

Bioavailability, purity and clinical dosage – The story from the scientists