Supplement profile

Chromium—the insulin helper

Brenna Jacks, ND

Essential minerals must be obtained from the diet because our bodies cannot produce them. One of these essentials—chromium—has the important function of working closely with insulin to direct glucose into the cells.

Chromium is lost in the process of refining foods. For example, when sugar cane is refined into white sugar, 93 percent of the chromium is lost. Because our soils are depleted of chromium and because we consume more processed foods than other countries, North Americans are generally deficient in chromium levels, which can lead to many health problems.

What is the connection between our current chromium levels and the incidence of diabetes, high cholesterol, high blood pressure, and obesity? It may all relate to chromium deficiency, which leads to poor insulin utilization and metabolism.

Role in weight loss

Chromium can change the way our bodies use insulin; however, this does not always translate to lower numbers on the scale. The glucose tolerance factor (GTF) interacts with insulin and regulates how much glucose (sugar) enters a cell. GTF encourages energy production (burns calories) and may also curb feelings of hunger.

Chromium is a supportive tool to use in combination with a well-balanced diet and regular exercise.

There is no such thing as a magic pill for weight loss, but many people try chromium as a weight loss plan and are discouraged when they don’t reach their desired results. The link between chromium supplementation and weight loss is frequently discussed because someone who is overweight is often at high risk of becoming insulin resistant and therefore is treated with chromium to help regulate blood sugar. Supplementing with chromium provides the best results for weight loss in individuals who have an actual mineral deficiency.

Role in blood sugar control

Chromium allows insulin to be used more efficiently in the body by acting as a regulator and a blood sugar balancer. It is, therefore, beneficial for
people with hypoglycemia, glucose intolerance, and diabetes. In those with high blood glucose, chromium affects insulin to remove sugar from the blood properly. In those with low blood glucose, chromium normalizes insulin function and allows glucose levels to return to normal quickly after a high sugar intake.

In 1997 a study was conducted of people who had adult onset diabetes. One group was given 200 micrograms (mcg) of chromium per day and the other group was given 1,000 mcg of chromium per day. All the participants had their blood glucose and insulin levels retested after two and four months. The researchers showed that the group given 200 mcg per day lowered their fasting insulin levels, but their blood glucose levels failed to improve. The group that took 1,000 mcg per day experienced a drop in glucose and insulin levels to near normal after four months.

**Dosages**

For healthy adults, a dose of at least 200 mcg per day is required. For those with diabetes, the need ranges from 200 to 1,000 mcg per day. The forms of chromium which are suitable include chromium polynicotinate, chromium picolinate, and chromium-enriched yeast.

If you have type 2 diabetes, chromium is usually supplemented in high doses. However, if your diabetes is currently controlled by medication, monitor your blood glucose levels closely as you slowly build up your chromium supplements. It is often recommended to increase chromium intake by 200 mcg per week until you reach 1,000 mcg. It is essential to work closely with your physician to monitor your medication. This will help prevent over-medication as well as minimize the risk of a low blood sugar episode.

**How to get it naturally**

Brewer’s yeast is a rich source of organic chromium complexes. In food, chromium is found in broccoli (22 mcg in 1 cup), onions (24.8 mcg in 1 cup), turkey (10.4 mcg in 3 ounces), as well as in smaller amounts in meats, seafood, and cheese.

The amounts of chromium found in food are relatively low; therefore, supplementation is often required.

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