Chromium

What does it do? Chromium is an essential trace mineral that helps the body maintain normal blood sugar levels. In addition to its well-studied effects in diabetes, preliminary research has found that chromium supplementation also improves glucose tolerance in people with Turner’s syndrome—a disease linked with glucose intolerance.1

Chromium may also play a role in increasing HDL (the “good” cholesterol),2 yet lowering overall cholesterol levels.3

Chromium, in a form called chromium picolinate, has been studied for its potential role in altering body composition. Preliminary research in animals4 and humans5 6 suggested that chromium picolinate increases fat loss and lean muscle tissue gain. Though some follow-up research in people has not confirmed chromium picolinate to have a significant effect in altering body composition,7 double blind research has reported reduction in body fat8 and body weight9 in people given 400 mcg of chromium picolinate per day for three months.

Where is it found? The best source of chromium is true brewer’s yeast. Nutritional yeast and torula yeast do not contain significant amounts and are not substitutes. Chromium is also found in grains and cereals, although it is lacking when these foods are refined. Stainless steel scrapings from pots and pans provide much of the
chromium in many people’s diets. Some brands of beer contain significant amounts.

**Who is likely to be deficient?** Most people eat less than the U.S. National Academy of Science’s recommended range of 50–200 mcg per day. The high incidence of adult-onset diabetes suggests to many doctors of nutritional medicine that most people should be supplementing small amounts of chromium.

**How much is usually taken?** A daily intake of 200 mcg is recommended by many doctors of nutritional medicine.

**Are there any side effects or interactions?** In supplemental doses (typically 50–300 mcg per day), chromium has not been linked consistently with human toxicity. One study suggested that chromium in very high concentrations in a test tube could cause chromosomal mutations in ovarian cells of hamsters.10 11 This risk, however, has not been demonstrated in humans.12 There is one report of severe illness (including liver and kidney damage) occurring in an individual who was taking 1,000 mcg of chromium per day.13 However, chromium supplementation was not proven to be the cause of these problems.

Two single, unrelated cases of toxicity have been reported. A case of kidney failure appeared after taking 600 mcg per day for six weeks,14 and a case of anemia, liver dysfunction, and other problems appeared after four to five months of 1,200–24,000 mcg chromium picolinate per
day. Whether these problems were caused by chromium picolinate or, if so, whether other forms of chromium might have the same effects at these high amounts remains unclear. No one should take more than 300 mcg per day of chromium without the supervision of a nutritionally oriented doctor.

Preliminary research has found that vitamin C increases the absorption of chromium.

References: