

## **Low chromium levels may raise heart attack risk**

Low body levels of chromium, a mineral involved in carbohydrate and fat metabolism, are associated with an increased risk of heart attack, according to a new report. However, the value and safety of chromium supplementation remains to be determined.

Chromium deficiency leads to blood sugar problems that cannot be controlled with insulin, researchers explain in the American Journal of Epidemiology, but the association of chromium intake with heart-related outcomes is largely unknown.

Dr. Eliseo Guallar from the Welch Center for Prevention, Epidemiology, and Clinical Research in Baltimore, and colleagues measured chromium levels in 684 men who survived a heart attack and in a similar number of men who'd never experienced one. Chromium was measured in toenail clippings because this provides a better indication of levels on a long-term basis compared with measurement of blood levels.

Chromium levels were lower among older individuals, declining about 9 percent with each decade increase of age, the investigators report. Levels were also lower in those with high blood pressure.

Chromium levels were also 13-percent lower in heart attack patients than in comparison subjects, the researchers note. Further analysis showed that subjects with the highest levels were 35-percent less likely to have a heart attack than those with the lowest levels.

"Although there are no national survey data on chromium intakes, a study of self-selected diets of US adults indicated that the chromium intake of a substantial proportion of subjects may be well below" the levels that are considered adequate, the researchers point out.

However, "considerably more evidence" is needed to substantiate claims that chromium supplementation will improve sugar control, weight loss, exercise capacity, and longevity, the team says, "as well as to show the long-term safety of chromium supplementation in humans."

SOURCE: American Journal of Epidemiology, July 15, 2005.