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ORGANIC LIVING Bý **Robert Rodale**

************ EAT WISELY TO CONSERVE CHROMIUM

The trace element chromium may seem like a rather strange thing to be eating, instead of plating auto bumpers with. But nutritional scientists are gaining new respect for chromium every day. They are discovering that chromium protects against heart disease and diabetes. Unfortunately they are also discovering that Americans are lower on the chromium totem pole than any other people on earth.

I first became interested in chromium about 10 years ago, when Dr. Henry A. Schroeder of the Dartmouth Medical School reported that rats given extra chromium with their food lived longer and avoided buildups of fatty deposits in their arteries. Somehow those rats became immune to the rise in cholesterol levels that normally accompanies advancing age.

Almost simultaneously, scientist Isabel H. Tipton discovered that there were startling differences in tissue chromium levels of people from different parts of the world. Almost all infants start out life with roughly equal body stores of chromium, but from there on levels constantly decline as chromium is excreted through the urine. Only average values from the New York or Chicago area," Dr. Middle Easterners and Orientals retain high chromium levels all their lives.

The typical American diet can cause a person to lose 11 milligrams of chromium in 30 years. Since we all start out with about 6 milligrams, you can see where that leaves us.

Premature babies, of which more than 200,000 are born each year in the U.S., start life with even less chromium, because they aren't in the mother's womb long enough to accumulate an adequate reserve. Many are extremely prone to cholesterol, problems, according to Dr. K. Michael Hambidge, pediatrician at the University of Colorado Medical Center.

What happens to the mother while her baby is building up chromium in her womb? She suffers. Dr. Hambidge found that as many as 71 percent of mothers tested during their last month of pregnancy had low levels of chromium.

The implications of long-term chromium depletion are grave indeed. Dr. Tipton found that almost no chromium at all could be detected in the aortas of Americans dying of coronary artery disease. But chromium could almost always be found in the aortas of Americans dying accidentally.

Researchers have also learned that without chromium. the body's insulin-making mechanism is disrupted. That can lead to diabetes, a disease that is dramatically on the upswing in the U.S.



Why are Americans losing their chromium reserves so rapidly? Dr. Schroeder believes that our diet of highlyprocessed foods has much to do with it. He has found that refined white sugar and refined white flour have a great deal of their chromium removed: Whole grain flour, on the other hand, is a good source of chromium, and natural forms of sugar such as molasses also contain reasonable amounts. , When those findings appeared, they had a strong impact on my eating habits. I suddenly looked at white flour and sugar

in an entirely new light. The reason why they were called "health wreckers" became abundantly clear, and I found new incentive to start baking some of my own bread and making whole-meal coin pones.

Too many people, though, still eat a diet calculated to create a chromium deficiency. "The most efficient and the fastest way to develop atherosclerosis," says Dr. Schroeder in his new book. "The Trace Elements and Man" (Devin-Adair), "is to drink much coffee all day with three or four spoonfuls of sugar and cream; use marmalades and jams on breakfast toast, with sugar thickly spread with cream on processed breakfast foods; eat a couple of ham sandwiches for lunch on white bread, followed by a slab of pie; and for dinner, take large portions of pork with rich gravies, deepfried potatoes, and a lemon meringue pie for dessert, followed by a sticky sweet liqueur or two. Such a diet will almost surely result in an elevated serum cholesterol, a depletion of chromium, and atherosclerosis."

There is also evidence that chromium decline follows a regional pattern. "The average chromium concentration in liver from Dallas, for example, is less than one-tenth of the Walter Mertz told the American Association for the Advancement of Science a few years ago.

Since that time, trace element analysis using human hair samples has become a much more exact science. In fact, you can have a lock of your own hair analyzed for chromium content by this simple and painless method. For more details, write to Chromium Testing, The Soil and Health Foundation, 33 East Minor Street, Emmaus, Pennsylvania 18049.

If you're concerned about conserving your own chromium reserves, you might start by avoiding refined foods like white flour and sugar. Eat whole grains and naturally-sweet foods such as fruit instead.

Not all chromium is alike. When searching for good sources, we have to be aware that some foods may be rather high in chromium, but in a form which is not readily absorbed by our bodies.

Foods containing high-value chromium include brewer's yeast, mushrooms, and pepper. How much brewer's yeast would you need to consume each day to get an adequate supply of chromium? According to Dr. Schroeder, 0.2 milligrams of chromium is the mark to shoot at. To get that much all from brewer's yeast, you would have to eat a quarter of a pound a day, which is impractical. So remember that you also get some chromium from other foods, particularly whole grains, liver, cheese and wheat germ.

Someday scientists may succeed in developing a concentrated chromium food supplement. In the meantime, we'll just have to watch what we eat. XXX

"Make It With Natural Foods" is a 48-page guidebook that can put you on the road to better eating. For a copy, send fifty cents to Robert Rodale, Organic Living, in care of this newspaper. Please be sure to ask for the booklet by name, and allow at least three weeks for delivery. (Note: Nutritionists and other medical scientists may or may not agree with the assertions made by Mr. Rodale. The views expressed herein are those of the columnist and do not necessarily reflect the opinions of this newspaper.) (c) 1974 by The Chicago Tribune. World Rights Reserved.



In the British Museum is a pink-tinted glass about the size of an orange that Dr. Dee, Queen Elizabeth's astrologer claimed would show the viewer his friends in distant lands!





