



Chromium Picolinate: Safe at a Wide Range of Intakes

Background:

On May 8, 2003, the Food Standards Agency (FSA) in the United Kingdom (UK) issued a consumer advisory suggesting that chromium picolinate should be banned from use in food supplements because of a purported potential to cause cancer. The FSA based their concerns on a new report by the UK Expert Group on Vitamins and Minerals (UK EVM). This report found chromium itself to be safe at high intakes, based on human and animal studies with chromium picolinate. Their reservations about the safety of the picolinate form of chromium were based on the effects of this ingredient observed in some *in vitro* systems and in studies with insects and microorganisms. Based on these concerns, the UK FSA has advised the public not to use supplements containing chromium picolinate.

Statement from John Hathcock, Ph.D., Scientific & International Affairs, CRN:

Approximately 30 human clinical trials, supported by a large body of animal studies, demonstrate the safety of chromium picolinate at supplemental intakes up to 1,000 micrograms of chromium. In the U.S., the Institute of Medicine (IOM) reviewed all available scientific literature on chromium, including all studies on chromium picolinate, and did not find any basis to set an Upper Limit (UL) for chromium in any of its nutritional forms. This means that there were no substantive concerns about the safety of chromium at any of the levels or in any of the chemical forms used in the studies reviewed, including studies using chromium picolinate.

CRN's review of the literature, as cited in the CRN publication *Vitamin and Mineral Safety*, indicates that there are no observed adverse effects from intake of chromium as chromium picolinate, or any other nutritional form of chromium, at intakes up to 1000 micrograms of chromium per day.

The UK EVM reached the wrong conclusion by giving too much weight to *in vitro*, insect, and microorganism studies, by not following through to all the implications of the animal studies they relied upon, and by ignoring the large body of human research which demonstrates the safety of supplemental chromium, as chromium picolinate, up to 1,000 micrograms of chromium per day. Inexplicably, the UK EVM concluded that there is a wide margin of safety for chromium, but not for chromium picolinate, although this conclusion was based on a study of animals treated with chromium picolinate or chromium chloride, with both forms showing the same lack of toxicity at very high doses. The conclusion that the data do not apply to chromium picolinate defies both good scientific procedures and logic.

Because the UK EVM's conclusion on chromium picolinate is not in agreement with the preponderance of scientific evidence, the UK FSA's advice to the public to avoid this ingredient is completely unjustified.