Comparison of acute absorption of various types of chromium supplement complexes. Robert DiSilvestro, Emily Dy. Human Nutrition, The Ohio State University, 345 Campbell Hall, 1787 Neil Ave, Columbus, OH 43210. Chromium supplements have become popular for a number of applications. However, there is still some uncertainty concerning the relative absorption of different chromium complexes. The most widely used complexes are picolinate, chloride (used in multivitamin-mineral supplements), and nicotinate based complexes (sometimes called glucose tolerance factor complexes). In the present study, a single dose of chromium (200 µg) as different complexes was given to young adult women, followed by a 24 h urine collection. A crossover design was used with random order of the specific type of supplements. A washout period of up to 2 weeks took place between supplementations. Chromium picolinate give a considerably higher mean value than either of two nicotinate based preparations or chromium chloride. Chromium chloride produced a much lower mean urinary chromium value than the other preparations. This study suggests that chromium picolinate is better absorbed than other chromium complexes used for supplement purposes. (Research supported by a grant from Nutrition 21 Inc.)

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