Chromium Picolinate Supplementation and Resistive Training by Older Men:Effects on Iron-status and Hematological Indexes 1-3

Wayne W. Campbell, John L. Beard, Lyndon J. Joseph, Stephanie L. Davey, and William J. Evans; Donald W. Reynolds Department of Geriatrics, University of Arkansas for Medical Sciences, Little Rock, AR; Noll Physiological Research Center and the Department of Nutrition, Pennsylvania State University, University Park, PA.

OBJECTIVES:
High dose chromium supplementation has been thought to adversely affect iron levels in the body. This study examined the effects of chromium supplementation on a wide variety of blood indexes and indexes of iron status in 18 men aged 56-69 years who participated in a strength training program. Randomly, 9 men were assigned to a chromium supplement group and 9 men were assigned to a placebo group. Two times per week they each strength trained on 5 Keiser machines, performing 3 sets of 8-12 repetitions at 80% of their one repetition maximum.

RESULTS:
Strength training decreased total-iron-binding capacity and increased transferrin saturation. Chromium supplementation did not influence these results. The indexes of iron status were unchanged. In this study high-dose chromium supplementation for 12 weeks did not influence a wide range of blood related indexes or indexes of iron metabolism or status in older men.

SUMMARY:
These data showed that strength training by older men changed some indexes of iron but did not result in changes in a wide range of blood indexes. There were some changes suggested in iron transport, but these changes were not significantly affected by chromium supplementation. Chromium supplementation at the level used in this study, does not appear to compromise iron status or predispose the subjects to iron deficiency anemia.

KEISER PIECES USED:
Leg extension, leg curl, leg press, chest press, upper back machines.

Published in American Journal of Clinical Nutrition, 3897-2, p. 945, October, 1997.