EFFECT OF SELENIUM SUPPLEMENTS ON THE SELENIUM LEVELS AND GLUTATHIONE PERoxidase ACTIVITY OF RESIDENTS IN A SELENIUM-DEFICIENT AREA OF BEIJING, PEOPLE'S REPUBLIC OF CHINA.


For this study fifteen adults from a Keshan Disease area of Hebei Province were selected for selenium supplementation. The adults were divided into 3 groups of 5 men and 2 women each. Group 1 received a placebo while Groups 2 and 3 received 100 mg and 200 mg daily, respectively. Plasma glutathione peroxidase (GSH-Px) and RBC GSH-Px were measured on days 0, 15 and 30 of the supplementation period. All measured Se and GSH-Px values were lower in residents of Beijing than in residents of Texas. In Group 2 Plasma Se and Plasma GSH-Px, RBC Se and RBC GSH-Px increased moderately (4-40%) over the thirty day period. Group 1 Plasma Se, Plasma GSH-Px, RBC Se and RBC GSH-Px increased less (2-10%) over the thirty day period. All measured Se parameters were lower in control residents than in residents of California. The data suggest that a daily supplement of more than 50 mg Se/day may be needed by people in a Keshan Disease area to increase Se and GSH-Px to levels found in residents of Beijing. (Supported by the USDA Grant No. 59-485-1-1-671-0 and the Shell Oil Corporation.)
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