

# Abstract

Am J Clin Nutr. 1993 Feb;57(2 Suppl):271S-275S.

## **Selenium deficiency mitigates hypothyroxinemia in iodine-deficient subjects.**

Vanderpas JB, Contempré B, Duale NL, Deckx H, Bebe N, Longombé AO, Thilly CH, Diplock AT, Dumont JE.

Cemubac Medical Team, Public Health School, Free University of Brussels, Belgium.

**BACKGROUND:** Studies were performed to assess the role of combined selenium and iodine deficiency in the etiology of endemic myxedematous cretinism in a population in Zaire.

**RESULTS AND DISCUSSION:** One effect of selenium deficiency may be to lower glutathione peroxidase activity in the thyroid gland, thus allowing hydrogen peroxide produced during thyroid hormone synthesis to be cytotoxic. In selenium-and-iodine-deficient humans, selenium supplementation may aggravate hypothyroidism by stimulating thyroxine metabolism by the selenoenzyme type I iodothyronine 5'-deiodinase.

**CONCLUSION:** Selenium supplementation is thus not indicated without iodine or thyroid hormone supplementation in cases of combined selenium and iodine deficiencies.

PMID: 8427203

FREE FULL TEXT

