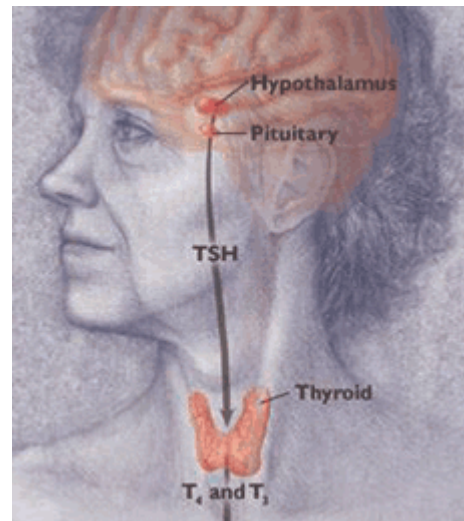


Fluoride and Thyroid Function

“Fluoride exposure in humans is associated with elevated TSH concentrations, increased goiter prevalence, and altered T4 and T3 concentrations; similar effects on T4 and T3 are reported in experimental animals.” P 218

“In humans, effects on thyroid function were associated with fluoride exposures of 0.05-0.13 mg/kg/day when iodine intake was adequate and 0.01-0.03 mg/kg/day when iodine intake was inadequate.” P 218

“The recent decline in iodine intake in the United States could contribute to increased toxicity of fluoride for some individuals.” P 218



“Intake of nutrients such as calcium and iodine often is not reported in studies of fluoride effects. The effects of fluoride on thyroid function, for instance, might depend on whether iodine intake is low, adequate, or high, or whether dietary selenium is adequate.” National Research Council 2006 Report on Fluoride in Drinking Water P 222

In 1946 the Atomic Energy Commission (Department of Pharmacology & Toxicology) - headed by Harold Carpenter Hodge, who was also head of the International Association for Dental Research (IADR) - acknowledges the German findings from 1930-1970 that all fluoride compounds - organic or inorganic - inhibit thyroid hormone activity, and declares this issue a research priority. No further research into this issue is conducted, however.

Fluoride-Thyroid-Iodine Antagonism: Mechanisms of Action

- Fluoride interferes with iodine uptake
- Fluoride is a universal G-Protein activators/inhibitors
- Fluoride is a TSH [thyroid stimulating hormone] analogue.
- Fluoride inhibits thyroid hormone transport
- Fluorides mimic the action of TRH i.e. by causing elevated prolactin levels in the pituitary (Yuan et al, 1991).
- Fluoride interferes with Deiodinases [enzymes necessary to “deiodinate” or remove iodine from thyroid hormones]
- Fluoride causes thyroid cancer?

Evidence suggests that thyroid cancer rates increase in areas of water fluoridation. Kinlen 1974 shows an increase in **thyroid cancer** of 18 to 19 per cent in fluoridated areas as compared to nonfluoridated ones. Orgiazzi 1976 demonstrates that fluoride more actively stimulates adenylate cyclase in cold thyroid nodules than in normal thyroid tissue.