



Critique by Ken Perrott, PhD., of Recent Hypothyroid Study

The paper following is from a critique by New Zealand chemist, Ken Perrott of the recent hypothyroidism study being promoted by fluoridation opponents: [*Impact of Drinking Water Fluoride on Human Thyroid Hormones: A Case-Control Study*](#). Scientific Reports, 8(1), 2674.

I. No effect of drinking water fluoride on hypothyroidism

The study investigated two groups (“cases” – which had hypothyroidism and “controls” – which did not have hypothyroidism) and two drinking water fluoride concentration ranges (0 – 0.29 mg/L and 0.3 – 0.5 mg/L). To quote the findings:

“The frequency distribution of hypothyroidism based on the different levels of fluoride in drinking water was not significant for the cases ($P = 0.13$) and controls ($P = 0.21$) in YGA.”

And:

“At a concentration of below 0.5 mg/L, however, it [fluoride] is not an important factor for hypothyroidism in YGA.”

YGA is the “Yazd Greater Area . . . located in the Yazd province of Iran, which uses groundwater as the primary water source.”

So, no association found between hypothyroidism and drinking water fluoride. [AFS bold highlight]

II. Thyroid hormones

The TSH levels for the control group was in the normal range (yellow area) and the difference (although statistically significant, $p=0.001$) was extremely small. The levels for the hypothyroidism cases were outside the normal range – probably as a result of hypothyroidism.

III. Other Risk Modifying Factors

While hypothyroidism prevalence was not significantly related to fluoride concentration the study reported that it was related to gender, family history of thyroid disease, water consumption, exercise, diabetes, and hypertension.

The authors note that *“patients with hypothyroidism . . . have a higher consumption of drinking water.”* **So this association probably means increased water consumption is a result of hypothyroidism and not a cause of it.** [AFS bold highlight]

IV. Conclusion

[This paper] cannot honestly be used to claim fluoridation causes hypothyroidism – as anti-fluoride campaigners will do. However, activists will dredge out quotes from this paper which will be used to give an impression of results actually not present in the paper (fluoridation causing hypothyroidism). So a paper which actually doesn’t support anti-fluoride claims – but can easily be misrepresented to fool the uncritical reader.

—Anti-fluoride activists misrepresent another thyroid study

Ken Perrott, PhD

<https://openparachute.wordpress.com/2018/02/14/anti-fluoride-activists-misrepresent-another-thyroid-study/>