

THYROID PROBLEMS

Have you heard of subclinical hypothyroidism? It is the most common thyroid finding in persons with Williams syndrome. What is it and how often does it need to be treated? First, let's step back and highlight how the thyroid gland works.

As you see in the drawing, the thyroid gland is located in the neck. It makes several thyroid hormone products (T3, T4) which we'll call "thyroid hormone". Master glands in the brain, such as the pituitary, send signals (TSH) to the thyroid gland instructing it to make "thyroid hormone". The level of this hormone is carefully regulated as it plays a vital role supporting the body's growth and metabolism.

If the gland produces excess "thyroid hormone", this is called hyperthyroidism (also referred to as an over-active thyroid). If the thyroid gland produces too little, this is called hypothyroidism (or under-active thyroid). The tendency toward under-active thyroid (hypothyroidism) is seen quite often in WS.

Based on responses provided to the Registry's Health Survey by several hundred families, like you, concerns about thyroid function have been raised in one-quarter (25%) of individuals with WS in the Registry. Though the Registry is unable to pinpoint the exact cause of thyroid concerns, studies suggest the most common problem is subclinical hypothyroidism, either now or in the past. Finally, back to our initial questions – **what is subclinical hypothyroidism?**

As shown in the Figure, a person has subclinical hypothyroidism when s/he has an elevated TSH level but a normal T4 level. In other words, the TSH signal is revved-up but the gland makes a normal amount of "thyroid hormone" in response. This combination does not automatically require treatment with thyroid hormone pills. The need to treat is best determined by an endocrinologist based on a person's age, well-being, and laboratory results. In contrast, when a person has revved-up TSH but their gland fails to make enough "thyroid hormone", this is actual hypothyroidism and almost always needs treatment.

Check out more information about Thyroid problems here:

http://www.thyroid.ca/know_the_facts.php or <https://www.verywell.com/thyroid-disease-2616554>

Consider joining the Registry! If you're already a member log in to the Registry to share or update information about your family member with WS: www.williams-syndrome.org/registry-families. Numbers like these become very powerful when more families answer the Registry's Health Survey. Please help the Registry grow to better serve you and support research efforts!

