



## THYROTOXICOSIS

### “Thyroid support” supplements contain significant amounts of thyroid hormone

#### BACKGROUND

Dietary supplements, which by law have little or no regulation by the Food and Drug Administration, are widely used in the United States. Many of these supplements are used with the idea that they may provide energy or weight loss, although most claims in this regard are unproven. Since symptoms of hypothyroidism may include fatigue and weight gain, a number of supplements are marketed for the purpose of “thyroid support”, to maintain thyroid health and to help the thyroid to function better. As noted above, most of these claims are unproven and are not medically indicated. Prior studies have shown that some dietary supplements included thyroid hormones which could potentially cause symptoms of hyperthyroidism with their use. The present study examined the thyroid hormone content in some of the “thyroid support” supplements.

#### THE FULL ARTICLE TITLE

Kang G et al. Thyroxine and triiodothyronine content in commercially available thyroid health supplements. *Thyroid*. June 13, 2013 [Epub ahead of print].

#### SUMMARY OF THE STUDY

The thyroid hormone content was measured in 10 thyroid health supplements purchased from stores or through the internet. The label of five herbal supplements did not disclose any thyroid hormone content; the other five

indicated that they contained raw thyroid tissue or powder from a beef source. A total of 9/10 products contained triiodothyronine ( $T_3$ ) and 5 contained thyroxine ( $T_4$ ). A total of 4/5 with beef extract had  $T_3$  and 2 also had  $T_4$ . Only one did not contain either. All of the herbal capsules contained  $T_3$  and 2 contained  $T_4$ . The amounts of thyroid hormone in several of the products were sufficient to potentially cause elevated thyroid hormones in the blood and symptoms of hyperthyroidism. The herbal capsules also contained substantial amounts of iodine.

#### WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The majority of the dietary thyroid supplements tested contained clinically significant amounts of thyroid hormones. The use of these supplements could potentially increase thyroid function tests and thyrotoxicosis along with its risks for clinical symptoms, arrhythmias and bone loss.

— Glenn Braunstein, MD

#### ATA THYROID BROCHURE LINKS

Hyperthyroidism: <http://www.thyroid.org/what-is-hyperthyroidism>

Thyroid Disease and Complementary and Alternative Medicine (CAM): <http://www.thyroid.org/thyroid-disease-and-complementary-and-alternative-medicine-cam/>

#### ABBREVIATIONS & DEFINITIONS

**Thyroxine ( $T_4$ ):** the major hormone produced by the thyroid gland.  $T_4$  gets converted to the active hormone  $T_3$  in various tissues in the body.

**Triiodothyronine ( $T_3$ ):** the active thyroid hormone, usually produced from thyroxine.

**Thyrotoxicosis:** The signs and symptoms resulting from excessive amounts of thyroid hormones. The excessive thyroid hormones may come from the thyroid gland (hyperthyroidism), or from the ingestion of too much thyroxine or triiodothyronine.

*continued on next page*