



## *The Medical* **Bulletin**

### Investigation Corner

#### **Biotin: Good for Hair and Nails, Bad for Thyroid Lab Tests**

A sizeable proportion of people use cosmetic products containing enough biotin to interfere with several laboratory measurements, including those of thyroid function, new research finds.

The clinical takeaway, two endocrinologists told Medscape Medical News during the American Association of Clinical Endocrinology (AACE) Annual Meeting 2022, is that if an asymptomatic patient's thyroid test comes back suggesting hyperthyroidism, ask if they've been using hair, skin, or nail products containing biotin.

If they have, advise them to stop taking the supplement for a week and then re-measure their thyroid hormone levels. Chances are, they'll normalize.

The new study conducted in a rural Michigan family medicine clinic is only the second to examine the prevalence of use of products containing high-dose biotin (vitamin B7), which interferes with a variety of biotin-based laboratory immunoassays.

In 2017, and again in 2019, the US Food and Drug Administration issued warnings about biotin interference causing falsely low troponin readings leading to missed diagnosis of myocardial infarction.

Biotin interference can also result in falsely elevated triiodothyronine and thyroxine, and falsely low thyroid stimulating hormone, mimicking results seen in hyperthyroid. It's very important that we ask our patients about biotin

"I tell my patients, if it's helping you and it's growing your hair and nails and you look great, by all means, you can take it. You just have to stop it a week before you get your labs done, just to be safe,"

Indeed, although some guidelines — including guidance from the American Association for Clinical Chemistry — suggest stopping biotin 3 days in advance of lab work, "that's not enough. It's easier for patients to remember a week."

Rosenfeld also pointed out that women aren't the only ones taking biotin for beauty. "Biotin products are marketed to men for beard thickening...There are preparations for hair, skin, and [for] nails for men and women.

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