

Biotin supplements caused misleading test results, almost led to unnecessary procedure

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Maya Styner, M.D., Associate Professor, University of North Carolina School of Medicine. Credit: UNC School of Medicine

A new case report in the *Journal of the Endocrine Society* documents how a patient's use of a common biotin supplement, also known as vitamin B7, caused her to have clinically misleading test results, which prompted numerous consultations and unnecessary radiographic and

laboratory testing.

The patient in the case report took a 5000 mcg dose of biotin daily. Biotin supplements in that dosage are commonly sold over-the-counter, without a prescription, in many grocery and drug stores for about \$8-\$20 a bottle. They are marketed as being good for healthy hair, skin and nails, but there is no scientific evidence to support this claim.

In this patient's case, "The negative clinical impact included weeks of psychological distress concerning the possibilities of hypercortisolemia or a testosterone-producing tumor. Most significantly, these abnormal [test results](#) nearly resulted in an unnecessary invasive procedure for a complex patient with a hypercoagulable state," the case report says. Hypercortisolemia is a condition involving a prolonged excess of cortisol—a steroid hormone—in blood.

Maya Styner, MD, associate professor of endocrinology and metabolism in the department of medicine, is the case report's corresponding author.

"The literature is lacking with regard to biotin interference with serum cortisol and testosterone immunoassays, as in our case-report," Styner said. "Patients are ingesting supplements in a higher frequency, and higher doses, and therefore this case is timely and relevant from both a clinical and basic-science perspective."

She added, "Our manuscript is a product of a collaboration between endocrinology, reproductive endocrinology/gynecology and clinical chemistry at UNC and at the Mayo Clinic. This collaboration enabled us to ascertain the underlying diagnosis and perform relevant research-based biotin quantification in our patient's sample."

More information: Heather M Stieglitz et al, Suspected Testosterone-Producing Tumor in a Patient Taking Biotin Supplements, *Journal of the*

Endocrine Society (2018). [DOI: 10.1210/js.2018-00069](https://doi.org/10.1210/js.2018-00069)

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