



Biotin Interference for Certain Laboratory Tests

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Recent discussions have appeared in the press about biotin interfering with some laboratory testing. This is due to an FDA notification that was released in late 2017 indicating that certain immunoassays employing biotin-streptavidin conjugates can give either falsely elevated or falsely lower testing results, depending on the assay and the manufacturer. This phenomenon has mainly been described for individuals taking high doses of biotin (100 mg/3x per day) for research treatment of multiple sclerosis. This is in comparison to the U.S. recommended dietary allowance of 30 mcg/day, a 10,000-fold lower amount. However, biotin supplementation is often supplied at 1, 5 and 10 mg to be taken daily by consumers.

Not all laboratory manufacturer's immunoassays are equally impacted by biotin. All immunoassays used at WellSpan are supplied by Beckman Coulter. The only immunoassays from this manufacturer that have been described to have appreciable interference from biotin are thyroglobulin, Total T3 and free T4. Comments describing possible biotin interference have accompanied these test results in the EMR since May 2017. However, there have recently been questions concerning what to do if interference is suspected for these laboratory tests.

First, be aware that interference by biotin for these tests is a rarity. However, if your patient is taking biotin supplements and you suspect that thyroglobulin, Total T3 or free T4 results are erroneous, please feel free to contact Stephen Manzella, PhD at smazella@wellspan.org with questions.

Secondly, if biotin interference is suspected, the patient should be instructed to discontinue biotin administration at least 24 hrs prior to having their blood recollected. This will allow for adequate wash out of biotin in patients without renal insufficiency.