

Memorandum

May 14, 2018

To: Clients

From: Belinda Newton, MT (ASCP)

RE: Biotin Interference in Certain Immunoassays

Hendrick Regional Laboratory is providing this memorandum to communicate supplemental information about the potential for biotin interference in certain immunoassay methods. Over-the-counter (OTC) biotin supplement use has increased due to purported nutritional and health benefits. High dose biotin therapies have historically been recommended for rare inborn errors of metabolism and mitochondrial energy disorders. More recently, high dose biotin therapy has shown encouraging results for treating progressive multiple sclerosis. This increased use of biotin has the potential to affect streptavidin-biotin based clinical/laboratory assay methods.

Biotin is a water-soluble B-complex vitamin. It does not interfere with laboratory tests when taken at levels found naturally in food and multivitamins or at amounts near the Institute of Medicine's adequate intake determination of 30 mcg/day. Biotin interference can start as low as 100 ng/ml but more commonly does not interfere until levels of 500 ng/ml or greater. Biotin interference is different with each method and can suppress a result or increase a result.

The risk of biotin interference extends to assays critical to internal medicine such as tests for anemia, malignancies, autoimmune, infectious diseases and cardiac damage. It is very important to consider test results and the patient's clinical presentation and other laboratory results including the importance of collecting a complete patient history including OTC medications.

Biotin interference tables can be found on the Hendrick Regional Laboratory website at <http://ehendrick.org/lab/lab-client-communication.aspx>

It is not advisable to use these tables to extrapolate a result using the % bias.