



WVUMedicine
UNIVERSITY HEALTHCARE
LAB ALERT

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Test Name: Free T3

Biotin supplements may interfere with free T3 assay

Beckman Coulter has determined that high levels of biotin may interfere with the biotin-streptavidin assay design for free T3 (fT3). Beckman has only recently added the fT3 assay to a previously released list of affected tests, which includes the free T4 (fT4) assay that we alerted on 5/30/17. Aside from fT3 and fT4, other assays currently performed at BMC and JMC are reportedly unaffected.

Serum samples may contain higher biotin levels than is typical of a healthy population when a patient undergoes biotin therapy and/or ingests supplements with high levels of biotin.

The fT3 result in patients taking biotin supplementation may be **falsely elevated**.

If thyroid testing is to be performed, question patients on biotin use. Biotin may be ingested as a labeled biotin supplement or may be found more subtly in combination supplements for skin, hair and nails, or in some multivitamin products. Discontinuation of biotin-containing supplements for at least 48 hours prior to phlebotomy should eliminate the interference.

At this time all elevated fT3 results will be reported with the following comment: *“Excess biotin is an interfering substance for this assay and may result in falsely elevated free T3 results. It is recommended that patients discontinue biotin-containing supplements at least 48 hours prior to thyroid function testing.”*

Elevated fT4 results will continue to be reported with a similar comment.

*If you have any questions call BMC at 304-264-1212, option # 7 or JMC at 304-728-1759.

Effective Date: May 1, 2019