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**Biotin interference in Beckman Access immunoassays**

Biotin doses of greater than 5 mg per day may result in interference with some of the Beckman Access immunoassays in use in the UHBW Bristol and Weston Clinical Biochemistry Laboratories. These assays are:

CA199

Free T3

Free T4

(Note that free T3 and Free T4 may be added by the laboratory on the basis of a TSH result)

Doses of 5mg or greater are only present in **over-the-counter high dose biotin supplements** (e.g. marketed for hair, skin or nail health) or in **prescribed high dose regimens** for treatment of a small number of inherited metabolic diseases or multiple sclerosis.  **Multivitamin tablets contain much lower amounts of biotin (typically 50 micrograms), and pose no risk of interference.**

Biotin is rapidly cleared from the blood through the kidneys (although this may take longer in renal failure) and after a single 10 mg dose falls to non-interfering levels by eight hours after ingestion. Patients who take more than 10 mg of biotin per day should stop taking it for 72 hours before the blood sample is taken and the laboratory should be alerted to the possibility of assay interference in the request clinical details.

**Summary**

Assays affected: CA199, thyroid hormones (free T3, free T4)

Biotin dose: <5 mg No action required

 5 – 10 mg Wait 8 hours before blood sampling

 >10 mg Stop treatment for 72 hours before blood sampling

 Inform the laboratory in the request clinical details