



2023 exceptional surveillance of thyroid disease: assessment and management (NICE guideline NG145)

Surveillance report

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Surveillance decision

We will update the [section on investigating suspected thyroid dysfunction in the NICE guideline on thyroid disease](#) to include a recommendation on the potential for biotin to interfere with the results of thyroid function tests.

The recommendation will be placed in the section on tests when thyroid dysfunction is suspected and be worded as follows: Ask adults, children and young people with suspected thyroid dysfunction about their biotin intake because a high consumption of biotin from dietary supplements may lead to falsely high or low test results.

Reason for the exceptional review

The [MHRA drug safety update in June 2023](#) highlighted a letter from the British Generic Manufacturers Association, which reported that biotin may interfere with thyroid immunoassays. These immunoassays are used in tests for the assessment of thyroid function and for therapeutic drug monitoring to manage dosage. Biotin is increasingly found in dietary supplements which are typically taken for hair, skin and nail health. This supplementary use of biotin may cause test results to be falsely increased or falsely decreased, leading to inappropriate patient management or misdiagnosis. The letter stated that patients should be routinely asked about biotin use before ordering thyroid function tests.

Methods

The exceptional surveillance process consisted of:

- Considering the new information that triggered the exceptional review.
- Considering whether the safety update would impact on the current [recommendations on thyroid disease](#) (NICE guideline NG145).
- Considering whether the safety update would impact on the current [recommendations on thyroid cancer](#) (NICE guideline NG230).

Information considered in this exceptional

surveillance review

The NICE guideline on thyroid disease recommends tests to measure thyroid-stimulating hormone (TSH), free thyroxine (FT4) and free tri-iodothyronine (FT3) when thyroid dysfunction is suspected ([recommendations 1.2.8 to 1.2.10](#)). Tests to measure TSH and FT4 are also recommended for the [follow-up and monitoring of primary hypothyroidism](#) and the [managing and monitoring subclinical hypothyroidism](#). To follow the directions in the drug safety update it is necessary to highlight the potential for biotin to impact on the results of these tests and recommend that people undergoing thyroid functions tests be asked about their use of biotin and biotin containing products.

[NICE's guideline on thyroid cancer](#) recommends the [use of thyroid function tests](#). A cross-reference to the NICE guideline on thyroid disease provides details on how the tests should be conducted. Following this cross-reference ([recommendation 1.2.2](#)) will result in the guideline user arriving at the new recommendation to consult patients on biotin use, so it will not be necessary to update the thyroid cancer recommendations.

Equalities

No equalities issues were identified during the surveillance process.

An equalities and health inequalities assessment was completed during this surveillance review. See [appendix A](#) for details.

Overall decision

NICE's guideline on thyroid disease will be updated to include a recommendation on the potential for biotin to interfere with the results of thyroid function tests.

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