

## THYROID DISORDERS

# Thyroid function tests

## A Quick Guide

Thyroid function tests are currently the most accurate way to diagnose and manage thyroid disorders. Your doctor will interpret the blood test results, together with your symptoms and how you feel, to reach a diagnosis to manage your treatment.

### The most common thyroid function tests

- TSH - Thyroid Stimulating Hormone
- FT4 - Free T4 (the active part of thyroxine)
- FT3 - Free T3 (the active part of triiodothyronine)

### Other blood tests

- Thyroid antibodies - to check the cause and severity of the thyroid disorder
- Thyroglobulin and calcitonin - to monitor people with thyroid cancer

### Typical reference ranges for normal thyroids

Test	From	To	Units
TSH	0.4	4.5	mU/L (milliunits per litre)
FT4	9.0	25.0	pmol/L (picomoles per litre)
FT3	3.5	7.8	pmol/L (picomoles per litre)

*These ranges are only a guide. The reference range for FT4 in particular does currently vary between methods and so any 'typical' reference range quoted will be subject to method and local interpretation.*

### Test results outside the reference range

- A **high** TSH level with a **low** FT4 level: **Hypothyroidism** (under-active thyroid)
- A **low** TSH level with a **high** FT4 level and a **high** FT3 level: **Hyperthyroidism** (over-active thyroid)
- Abnormal TSH levels together with normal FT4 levels indicate you may be at risk of developing a thyroid disorder
- A low TSH level together with a low FT4 level can indicate a disorder of the pituitary gland

## Management of thyroid disorders

- If you have a diagnosed thyroid disorder, thyroid function tests will
  - check that your treatment is working
  - help to fine-tune your treatment

## Other points

- Treatment aims to get your TSH levels back within the reference range
- Ask your doctor for a blood test if you have symptoms of a thyroid disorder
- You should have an annual blood test if you have had previous treatment for an overactive thyroid
- If you have a diagnosed thyroid disorder you should have a blood test
  - once a year, or more often if your doctor advises
  - in early pregnancy or if you are planning a pregnancy

It is well recognised that thyroid problems often run in families and if family members are unwell they should be encouraged to discuss with their own GP whether thyroid testing is warranted.

*This Quick Guide is one in a series about thyroid disorders. Quick Guides may be obtained from the British Thyroid Foundation's office and website.*

*A leaflet containing comprehensive information about **thyroid function tests** is available through membership of the British Thyroid Foundation. For a membership pack please telephone, or write to our postal address:*



## The British Thyroid Foundation

2nd Floor, 3 Devonshire Place, Harrogate HG1 4AA

Tel: 01423 709707 or 709448

Website: [www.btf-thyroid.org](http://www.btf-thyroid.org)

## Registered Charity Number 1006391

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The British Association of Endocrine and Thyroid Surgeons – the representative body of British Surgeons who have a specialist interest in surgery of the endocrine glands (thyroid, parathyroid and adrenal)

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First issued: February 2008. Revised: August 2011

Our literature is reviewed every two years and revised if necessary.

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