

The BSPED is one of the affiliated speciality groups of the Royal College of Paediatrics and Child Health.

The society aims to improve the care of children and young people with endocrine disorders or diabetes mellitus, by bringing together professionals from a range of disciplines.

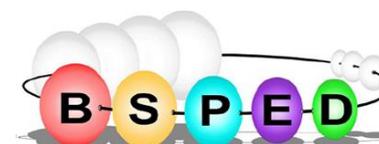
This leaflet has been written by members of the BSPED & reviewed by the Clinical Committee. It is designed to give you some general information about your child's condition and treatment. Your child's doctor or specialist nurse will be able to answer any further questions you have about your child.

Date of first issue: 01/02/2018

Review date: 01/02/2022

For more information, contact:

BSPED Office  
Bioscientifica  
Starling House  
1600 Bristol Parkway North  
Bristol  
BS34 8YU  
T: + 44 (0) 1454 642258  
E: [bsped@endocrinology.org](mailto:bsped@endocrinology.org)



**British Society for  
Paediatric Endocrinology  
and Diabetes**

## Hypothyroidism (underactive thyroid gland)

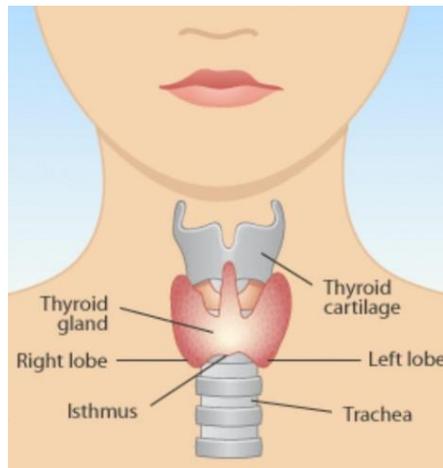
### Information for patients, parents and carers



## What is a hormone?

Hormones are chemical messengers. They are made in glands and travel round the body in the bloodstream. Hormones affect how other organs in the body work.

## Hypothyroidism (underactive thyroid gland) in childhood



Hypothyroidism occurs when the thyroid gland is no longer able to make enough amounts of thyroid hormone (thyroxine).

## What is the thyroid gland?

The thyroid gland is shaped like a butterfly and found in the neck at

the front of the windpipe just below the Adam's apple. It produces a hormone called thyroxine.

Thyroxine controls the rate at which all the organs and systems in the body work.

If the thyroid gland doesn't make enough thyroxine then everything in the body slows down. This is called hypothyroidism (or an underactive thyroid gland).

## Why does it happen?

The body's immune system 'attacks' the cells in the thyroid gland as though they are foreign cells. This destroys the thyroid gland so it cannot make enough thyroxine. Sometimes the thyroid gland becomes swollen and can be seen and felt in the neck. This swelling is called a goitre.

## How does it affect a child?

The right amount of thyroxine is needed for children to grow normally. Growth will slow down when there is not enough.

The other effects that may be seen are because all the systems in the body slow down. Hair and nails grow more slowly and the skin and hair can become dry. The child may become constipated. The heart rate may become slower than usual. The child may feel more tired than their friends and they may find it harder to concentrate and learn at

school.

It can take several years for the gland to be destroyed, and the levels of thyroxine fall slowly over this time. This means the changes in the body also happen slowly and it can take a long time for the condition to be recognised.

## How is it confirmed?

Hypothyroidism can be confirmed by a blood test.

## How often does this happen?

About 1 child in every 3,500 will develop hypothyroidism.

About the same number are born with hypothyroidism. This is one of the conditions tested for in the newborn screening programme (the heel prick test that is done by the midwife at about 5 days of age).

This is a different condition. More information about this can be found at [www.gov.uk/government/publications/congenital-hypothyroidism-cht-confirmed-description-in-brief](http://www.gov.uk/government/publications/congenital-hypothyroidism-cht-confirmed-description-in-brief)

## How is it treated?

Hypothyroidism is simple to treat by giving the child the thyroid

hormone they are unable to make. This is usually given as tablets of thyroxine. The amount needed depends on the child's size. They will need more as they get older.

The tablets should be taken every day. Missing a dose sometimes will not cause any problems, but missing more often may mean the thyroid hormone levels fall to below normal. This may cause some of the effects talked about before and also makes it more difficult for the doctors to work out how much treatment is right for your child.

## How long will this treatment be needed?

It is likely that the child will need to continue thyroxine treatment for the rest of their life. In rare cases the thyroid gland is not completely destroyed and may recover. Your clinic doctor or nurse will be able to give you more information about your child.

## Are there any long-term problems?

Where children have had hypothyroidism for a long time, the change in their energy levels when they are started on treatment can be dramatic. Sometimes this can lead to poor behaviour and performance at school. This usually settles over time.

Otherwise there should not be any long-term problems. Treatment is simply giving the child back the hormone that they can no longer make. They should make a complete return to full health and be able

to take part in all their activities.

## **Suggested sites for further information**

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

[www.thyroid.org](http://www.thyroid.org)

[www.eurospe.org](http://www.eurospe.org)

[www.speg.scot.nhs.uk](http://www.speg.scot.nhs.uk)

[www.apeg.org.au](http://www.apeg.org.au)