



The Thyroid and Low Thyroid Function (Hypothyroidism)

What is The Thyroid Gland / what is its function?

The thyroid gland is an important part of the endocrine system and is situated in the throat.

The main function of the thyroid gland is to govern the metabolism, which is the level of activity within every cell of the body. Every muscle, organ and cell in the body depends upon the thyroid gland to achieve & maintain optimum function.

Hypothyroidism is the condition whereby the thyroid gland is under functioning, this in turn slows down the metabolism and function of every cell in the body.

What are the signs & symptoms of low thyroid function?

- Increase in weight
- Difficulty losing weight
- Excessive fatigue
- Mentally sluggish (Poor memory, concentration, confusion)
- Irritability
- Cold intolerance
- Cold hands & feet
- Constipation
- Depression
- Coarse dry skin & / or hair
- Hair loss - frontal
- Poor eyebrow growth (<outer 1/3)
- Weak brittle nails & vertical ridges on nails
- Headaches
- Adult Acne
- Recurrent colds & flu
- Slow recovery from colds & infections
- Water retention / oedema
- Low libido
- Premenstrual syndrome
- Menstrual cramps
- Heavy periods or very light periods
- Irregular periods
- Diminished sweating
- Insomnia
- Poor blood sugar control
- Anaemia / low ferritin levels
- Low white cell count
- Loss of appetite
- Anxiety
- Raised cholesterol
- High or low blood pressure
- Palpitations
- Chilblains
- Slow wound healing
- Frequency passing urine
- Having to pass urine during the night
- Poor night vision
- Swelling under eyes
- Swelling of eyelids
- Tinnitus & hearing loss
- Recurrent sinus infections
- Eczema / Psoriasis
- Puffy Face
- Swelling in throat (Goitre)
- Difficulty swallowing
- Hoarseness / throat pain
- Swollen tongue, can be with teeth indentions around edge of tongue
- Slow reflexes
- Slow heart rate / pulse
- Slow growth in children

Other Conditions which may be associated with low thyroid function

- Allergies
- Candida
- Arthritis
- Cancer
- Chronic Fatigue Syndrome
- Coronary Artery Disease
- Fibrocystic Breasts
- Cystic Ovaries
- Diabetes
- Endometriosis
- Infertility
- Gout
- Hypertension
- Hypotension
- Mental Disorders
- Multiple Sclerosis
- Obesity
- Psoriasis
- Repeated Miscarriage
- Fibromyalgia
- Arthritis
- Atherosclerosis

History of illnesses / events which may increase your risk of low thyroid function

- Glandular Fever
- Family history of thyroid disorders
- Neck injury such as whiplash
- Anorexia
- Hepatitis
- General Anaesthetic within last 2 years

Reasons why the thyroid hormones may not be not working properly in your body

Often the problem when people are suffering with low thyroid function is not that they are not producing enough thyroxine, but that they are not able to convert it to its active form (this is a bit like Type II Diabetes when people are producing insulin, but they can't get it into their cells). This is known as poor T3 conversion.

Causes of Poor T4 → T3 Conversion

- Ageing
- Alcohol
- Gluten Sensitivity
- Chemotherapy
- Cigarette Smoking
- High intake of cruciferous vegetables (Broccoli, Cauliflower, Cabbages)
- Diabetes
- Fasting
- Fluoride
- Elevated Iron Levels
- Growth Hormone Deficiency
- Haemachromatosis
- Lead
- Low Adrenal State
- Mercury
- Pesticides
- Soy foods
- Stress
- Surgery
- Radiation

Nutritional Deficiencies

- Iodine
- Iron
- Zinc
- Selenium
- Vitamin A
- Vitamin B2
- Vitamin B6
- Vitamin B12

Medications

- Beta Blockers
- Birth Control Pills
- Oestrogen
- Iodinated Contrast Agents
- Lithium
- Phenytoin
- Theophylline

What are Autoimmune Thyroid Disorders?

The immune system is our bodies defence against infection. When our bodies are attacked by bacteria, viruses etc, the immune system goes into hyper-drive to fight the infection. In some people the immune system becomes dysfunctional and the body starts to fight itself and attacks its own tissues. This is known as an autoimmune disorder. Graves Disease and Hashimoto's Disease are examples of auto immune disorders which affect the thyroid causing inflammation and ultimately destruction of the thyroid gland. Whilst initially autoimmune thyroid disorders can cause hyperthyroidism (excess thyroid function), in the long term they often result in hypothyroidism due to destruction of thyroid tissue.

Assessing Thyroid Function

Diagnosing low thyroid function is not always straight forward. Commonly Doctors only test Thyroid Stimulating Hormone (**TSH**) and low thyroid function is ruled out if this test is normal. However there are other blood tests which look at thyroid function and should be included for a comprehensive look at the efficiency of the thyroid gland. These include **Free T4**, **Free T3**, **Thyroid antibodies** and **Reverse T3**.

Whilst it is important to check thyroid function with blood tests, these are not always conclusive. The reason for this is that there is quite a wide normal range; this does not say what is normal for you. i.e. when healthy you may be nearer the top of the normal range, and when tested feeling unwell, you could be at the lower end of the normal range, this being too low for you, but still "normal" according to your results.

Another very effective way of looking at Thyroid function is the Barnes Auxiliary Basal Temperature Test. The thyroid is responsible for the metabolic rate, therefore the amount of heat generated within the body. Persistently low body temperatures < 36.4 °C are indicative of low thyroid function.

See link on main page for The Barnes Axilliary Temperature Test.

Assessing your Thyroid Function should also include a comprehensive look at your symptoms, history and a physical examination.

NB It is important that you are properly supervised by a suitably qualified professional whilst trying to support a low thyroid condition. Any information given here does not replace advice given to you by your Doctor. If you have serious concerns about your health, you should always seek medical advice from your Doctor.