

# Hypothyroidism



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**Hypothyroidism:** a clinical state resulting from underproduction of the thyroid hormones thyroxine (T4) and triiodothyronine (T3). Most cases are due to primary hypothyroidism, a failure of the thyroid gland to produce thyroid hormones.

## Causes:

- Iodine deficiency
- Autoimmune - Hashimoto's thyroiditis
- Overdose of antithyroid drugs

## General Signs & symptoms:

- Fatigue, cold intolerance, constipation, muscle weakness, headache, weight gain, hair loss, menstrual abnormalities, goiter (abnormal enlargement of the thyroid gland)

## Musculoskeletal manifestations:

- Myalgia (muscle ache)
- Joint stiffness and arthralgia typically at the shoulder & hip joints
- Swelling of the DIPJ and PIPJ of the hands & feet
- Predisposition to frozen shoulder, Dupuytren's contracture & trigger finger

## Neurological manifestations:

- Impaired concentration
- Poor memory
- Peripheral neuropathy
- Carpal tunnel syndrome
- Reduced deep tendon reflexes

## Cardio-respiratory manifestations:

- Shortness of breath
- Pleural effusion (excess of fluid in the pleural cavity)
- Pericardial effusion (excess of fluid in the pericardial cavity)
- Bradycardia
- Dilated cardiomyopathy
- Hypertension



## Diagnosis:

- Blood test - elevated TSH & reduced free serum T4
- Elevated antithyroid peroxidase antibodies - suggests autoimmune thyroiditis
- Anaemia
- Elevated fasting blood glucose
- Elevated serum cholesterol

## Treatment:

- Synthetic T4 (levothyroxine) replacement therapy

## Want to learn more?

With AcePhysio the learning journey doesn't stop here! Take a look at our further reading recommendations below to gain a deeper understanding on how Hypothyroidism influences clinical Physiotherapy:

1. American Association of Clinical Endocrinologists; American Thyroid Association. Clinical practice guidelines for hypothyroidism in adults: cosponsored by the American Association of Clinical Endocrinologists and the American Thyroid Association. *Endocr Pract.* 2012 Nov-Dec;18(6):988-1028.
2. Ruggie JB, Bougatsos C, Chou R. Screening and treatment of thyroid dysfunction: an evidence review for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2015 Jan 6;162(1):35-45.
3. Cakir M, Samanci N, Balci N, Balci MK. Musculoskeletal manifestations in patients with thyroid disease. *Clin Endocrinol (Oxf).* 2003 Aug;59(2):162-7.