

Hypothyroidism

Definition

A condition in which the thyroid gland fails to produce enough thyroid hormone.
(Myxoedema)

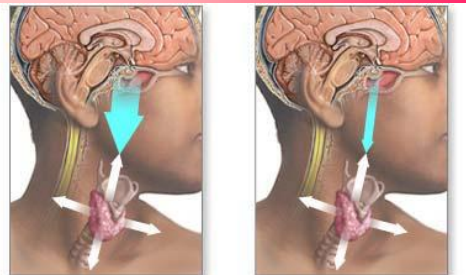
1° & 2° Hypothyroidism

Primary

A condition in which the thyroid gland fails to produce enough thyroid hormone.

Secondary

A condition of decreased activity of the thyroid gland, caused by failure of the pituitary gland.



Primary hypothyroidism:
thyroid can't produce
amount of hormones
pituitary calls for

Secondary hypothyroidism:
thyroid isn't being
stimulated by pituitary
to produce hormones

1° Causes & Risks

- Dietary iodine insufficiency
- Hashimoto's disease (auto immune thyroiditis + goitre, women over 60)
- Iatrogenic
 - Thyroidectomy
 - Drugs (lithium, phenylbutazone (NSAID's))
 - Radiation, radioactive iodine

- Risk factors include
 - age (older than age 50),
 - female
 - obesity
 - thyroid surgery
 - X-ray or radiation treatments to the neck.
- The incidence is about 9 out of 1000 people.
- Can occur with or without goitre



2° Causes & Risks

- The causes of secondary hypothyroidism are failure of the pituitary gland to secrete TSH or failure of the hypothalamus.
- The body's normal rate of functioning slows causing mental and physical sluggishness.
- The symptoms may vary from mild to severe, with the most severe form called Myxoedema.
- Risk factors include being over 50 years old, being female, and having a history of pituitary or hypothalamic dysfunction

Prevention

- Primary hypothyroidism is preventable by supplemental iodine in areas where iodine in the food supply is low.
- Otherwise, the condition is not preventable.
- 1° & 2° - Awareness of risk may allow early diagnosis and treatment

Early symptoms

- weakness
- fatigue
- cold intolerance
- constipation
- weight gain
- depression
- joint or muscle pain
- thin, brittle fingernails
- thin, brittle hair
- pale colour

Late symptoms

- slow speech
- dry flaky skin
- thickening of the skin
- puffy face, hands and feet
- decreased taste and smell
- thinning of eyebrows
- hoarseness
- menstrual disorders

Signs and Tests

- Physical examination may reveal
 - a small gland or goitre.
 - pale, yellow and dry skin,
 - thin, brittle hair,
 - loss of the edges of the eyebrows
 - firm swelling of the arms and legs
 - Slow reflex recovery.
 - slow heart rate,
 - low blood pressure
 - low temperature
- TFT'S – low levels of T3/4 – Increased TSH

Treatment

- Restore thyroid hormone to normal levels using Thyroxine
- The lowest dose effective in relieving symptoms is given.
- Life-long therapy is needed
- Careful monitoring for signs of hyperthyroidism

- Myxoedema coma is treated by intravenous thyroid replacement and steroid therapy.
- Supportive therapy of oxygen, assisted ventilation, fluid replacement, and intensive care nursing may be indicated
- A high-fibre, low-calorie diet and moderate activity will help relieve constipation and promote weight loss in appropriate cases

Prognosis

- With early treatment, return to the normal state is usual.
- However, relapses will occur if the medication is not continued.
- Myxoedema coma can result in death.

Complications

- Myxoedema coma, the most severe form of hypothyroidism
 - decreased breathing,
 - low blood pressure,
 - low blood sugar,
 - below normal temperature
- Other complications include:
 - heart disease
 - increased risk of infection
 - infertility
 - miscarriage in pregnant women
 - pituitary tumours



