



## 常見甲狀腺毛病

<https://www.acma.org.nz/s/Thyroid-Issues.pdf>

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甲狀腺是什麼？

### What is Thyroid?

甲狀腺，形似蝴蝶，是位於頸前基部三分之一處，氣管的兩旁，屬於內分泌系統的器官。他也是人體最大的內分泌器官。一個成人的甲狀腺大約重15-20克，寬2cm，長1-2cm。

The thyroid gland is a small butterfly-shaped organ inside the neck, located in front of the trachea and below the larynx. It is the largest endocrine organ in our body. A normal adult thyroid gland weighs about 15-20g, measuring about 2cm wide and 1-2cm high.

甲狀腺的主要功能為利用血液中的碘製造兩種賀爾蒙，為甲狀腺素 (T3 & T4)。

The function of thyroid gland is to produce 2 thyroid hormones – thyroxine (T4) and triiodothyronine (T3), using iodine from bloodstream.

人體內的細胞由於甲狀腺素的刺激而產生新陳代謝作用，便產生了“熱”與“能”。甲狀腺素是人體成長中必不可少的激素。

Thyroid hormones are essential for the body to generate energy and heat, regulating all the body cells' metabolism and are very important for growth and development.

甲狀腺素的製造是由腦垂體前葉釋放的促甲狀腺激素 (TSH) 所調節。同時，促甲狀腺激素也會因為甲狀腺素多寡為影響。甲狀腺這種負回饋的機制，能隨時保持身體中甲狀腺素跟促甲狀腺激素的平衡。

The “master gland”, the pituitary gland, produces a hormone called Thyroid Stimulating Hormone (TSH) which will stimulate the thyroid glands to produce thyroid hormones. The thyroid hormones will in turn control the production of TSH so that there is a balance between the amount of TSH and T4/T3 production – this is called a feedback loop.

臨床上常見的甲狀腺疾病可分為：

- (a) 甲狀腺功能過高 (甲狀腺機能亢進/甲狀腺亢奮 Hyperthyroidism)
- (b) 甲狀腺功能過低症 (Hypothyroidism)
- (c) 甲狀腺腫大 (goitre)

The thyroid problems commonly encountered in clinical practice are:

- (a) overproduction of thyroid hormone (called hyperthyroidism),
- (b) underproduction of thyroid hormones (called hypothyroidism), and
- (c) goitre (thyroid gland enlargement).

甲狀腺癌比較少見，通常有外科醫師跟內分泌科醫師會診跟共同治療。

Thyroid cancer is uncommon and will need conjoined management between endocrinologist and surgeon.

## 甲狀腺機能亢進

### Hyperthyroidism

即甲狀腺功能過旺盛，不按身體的實際需要，大量分泌甲狀腺素。女性患者比男性患者多，發病年齡多在二十歲至四十歲間。甲狀腺機能亢進會造成細胞的新陳代謝過程過速的不正常生理現象。

Literally means overproduction of thyroid hormones from the thyroid gland. It more commonly affects women between the ages of 20 and 40, but men will also get affected. Hyperthyroidism will speed up the body's metabolism.

## 甲狀腺機能亢進症狀

### Symptoms of hyperthyroidism

肌肉無力，顫抖，心悸或心跳過快，疲倦，多食但體重減低消瘦，很怕熱，精神過敏，容易激動，緊張，拉肚子，月經不正常跟不孕。

Muscle weakness, trembling hands, rapid heart rate, fatigue, weight loss despite good appetite, heat intolerance, irritability, anxiety, diarrhoea/frequent bowel motion, menstrual irregularities and infertility.

## 甲狀腺機能亢進病因

### Causes of hyperthyroidism

瀰漫性毒性甲狀腺腫 (**Graves' Disease**) 是最常見的原因。這是一種自身免疫性疾病，因自我產生針對甲狀腺的自身抗體所造成甲狀腺功能旺盛。女性患者較多，也具有家族遺傳的傾向。有些病患在臨床表現上也會有眼睛凸出跟甲狀腺腫大的徵兆。

Graves' Disease is the commonest cause – it is an autoimmune disease whereby the body produces its own antibody against the thyroid gland, causing excessive thyroid hormone production. Female are affected more commonly, and it can run in family. Some patients with Graves' Disease also get bulging eyes and enlarged thyroid glands.

其他造成甲狀腺機能亢進的病因有：

Others causes of hyperthyroidism include:

- 甲狀腺結節 Thyroid nodule (toxic nodules)
- 過度攝取甲狀腺素 Taking too much thyroid hormone (as medication)
- 亞急性甲狀腺炎（因病毒引起的甲狀腺發炎） Subacute thyroiditis (viral infection causing thyroid gland inflammation)
- 產後甲狀腺炎 Postpartum thyroiditis

甲狀腺機能亢進治療方法

### Treatment of hyperthyroidism

- 服食抗甲狀腺藥物：目的是抑制甲狀腺素的分泌。**Carbimazole**是首先藥物，另外的選擇包括prophylthiouracil (PTU)。通常需要服用1-2年，由你的家庭醫師或內分泌科專科醫師決定。有時候停藥後，病症會再復發，這時就需要較長的藥物療程。

**Antithyroid drugs:** They decrease the amount of thyroid gland hormone production. The preferred drug is carbimazole, but prophylthiouracil (PTU) can also be used. They need to be taken up to one to two years duration, as decided by the endocrinologist/family doctor. Patients can relapse when antithyroid drug is stopped and some may need very prolonged treatment course.

- **β-受體阻滯藥物：**目的為控制因甲狀腺素亢進的徵狀，例如手顫抖和心跳過速，但這並不會抑制甲狀腺素的分泌。

**Beta-blockers:** Aimed to control the troubling symptoms of hyperthyroidism such as trembling hands and rapid heartbeat, but do not block thyroid hormone production

- 放射碘：用放射性碘藥物，以破壞過旺盛的甲狀腺功能，而降低甲狀腺素的分泌。這是一種非常有效的治療方式，但有時會造長甲狀腺機能過低而以後需要長期補充甲狀腺素。

**Radioactive Iodine (RAI):** RAI is a medically formulated iodine which is tagged with radioactive substances aiming at destroying thyroid gland cells and this will eventually reduce the thyroid hormone production from the gland. RAI is extremely efficient in controlling hyperthyroidism, but can cause permanent hypothyroidism due to the gland destruction. This will need permanent thyroid hormone replacement.

- 手術治療（甲狀腺切除）：這也是一種永久性的治療方法，但比較不建議的治療方式。切除會伴隨著可能把副甲狀腺切除的風險或者是傷到控制聲帶的神經。通常手術治療保留給那些因甲狀腺腫大造成呼吸道壓縮或吞嚥困難，或當藥物治療跟放射碘無法成功控制病情。

**Surgery (Thyroid gland removal/Thyroidectomy):** This is another permanent solution but is often the least preferred option. Surgery is associated with risks, including removal of parathyroid glands and also damage to the nerves controlling vocal cords. Surgery is recommended when there is significantly enlarged gland causing compression to breathing and/or swallowing, or when antithyroid drug/RAI is not working/preferred.

如果沒有適當治療，甲狀腺機能亢進可能會造成心律不整，心臟衰竭跟骨質酥鬆症。

If left untreated, hyperthyroidism can cause atrial fibrillation, heart failure and osteoporosis.

## 甲狀腺功能過低症

### Hypothyroidism

甲狀腺功能過低症（甲狀腺素的分泌不足）會造成新陳代謝緩慢。

Hypothyroidism (underactive thyroid gland) will slow down metabolism in many ways.

甲狀腺功能過低症狀包括：

#### The symptoms include the following:

終日疲乏，行動遲緩，憂鬱，便秘，怕冷，體重上昇，皮膚頭髮乾燥，月經不調。嚴重的患者可能會出現黏液性水腫症，昏迷，體溫過低，也有可能造成死亡。

Fatigue, sluggishness, depression, constipation, cold intolerance, weight gain, dry skin and hair, menstrual irregularities. In severe cases myxoedema coma and hypothermia can occur, and this can be fatal.

甲狀腺功能過低症病因

### Causes of hypothyroidism

橋本氏甲狀腺炎是最常見的病因。這是一種自身免疫性疾病，因自我產生針對甲狀腺的自身抗體而造成甲狀腺破壞。女性患者較多，也具有家族遺傳。

Hashimoto's disease is the commonest cause of hypothyroidism. It is an autoimmune condition when the body produce antibody which attack the thyroid gland, causing chronic damage to the gland. It occurs more commonly in women and tends to run in family too.

其他甲狀腺功能過低的原因有：

Other causes of hypothyroidism include

- 亞急性甲狀腺炎或產後甲狀腺炎 Subacute or postpartum thyroiditis
- 一些藥物例如Amiodarone Certain drugs such as amiodarone
- 腦垂體前葉功能過低所造成的促甲狀腺激素分泌不足 Underactive pituitary gland with underproduction of TSH
- 甲狀腺功能過高症之患者，接受手術治療或藥物治療，因過度毀壞甲狀腺，使其功能減弱或不足。  
Following treatment with antithyroid drug or radioactive iodine
- 先天性甲狀腺功能過低，這是在嬰幼兒時期的定時檢查項目之一。提早治療可以預防生長發育遲緩。  
Congenital hypothyroidism – which will be routinely tested at birth, and it needs early treatment to prevent growth and mental retardation

甲狀腺功能過低會隨這年齡增長而增加患病機率，所以年長者需要定時檢查甲狀腺功能。

Hypothyroidism is more common as we age. Therefore routine and regular screening for hypothyroidism in elderly is important

## 甲狀腺功能過低治療

### **Treatment of hypothyroidism**

大部份甲狀腺功能過低患者需要接受甲狀腺素的補充。通常一天計量為50-150mcg。病患需要定期的血液檢查跟家庭醫師諮詢。

Most people with hypothyroidism need T4 treatment for the rest of their lives. Usual dose of T4 is about 50-150mcg daily. Patients need to liaise closely with their doctors, and having routine blood test for medication dose adjustment.

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