

# Thyroid and Weight

## WHAT IS THE THYROID GLAND?

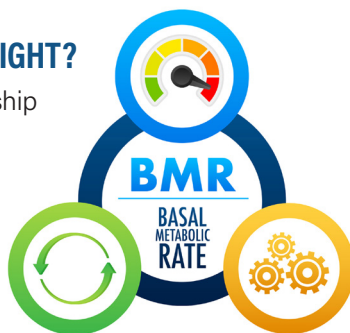
The thyroid gland is a butterfly-shaped gland located in the lower front of the neck. The job of the thyroid gland is to make thyroid hormones. Thyroid hormones are released into the blood and carried to every tissue in the body. Thyroid hormones help the body use energy, stay warm and keep the brain, heart, muscles, and other organs working. In children, thyroid hormone is necessary for normal growth.

## WHAT IS THE RELATIONSHIP BETWEEN THYROID AND WEIGHT?

There is a complicated relationship between thyroid disease, body weight and metabolism. Metabolism is the process of turning food into energy. It can be measured by how much energy the body uses over time. At rest, this is known as the Basal Metabolic Rate (BMR).

BMR affects energy balance, which is the relationship between calories eaten and calories used by the body. When the BMR is high, more calories are burned, which could lead to weight loss. When the BMR is low, less calories are burned, which could lead to weight gain.

In thyroid disorders, high thyroid hormone levels raise BMR and low levels decrease BMR. However, BMR does not tell the whole story about weight and thyroid. There are many other hormones, proteins, and chemicals that also factor into weight changes.



## HYPERTHYROIDISM

### WHAT IS THE RELATIONSHIP BETWEEN HYPERTHYROIDISM AND WEIGHT?

Since patients with hyperthyroidism may burn more calories than usual (see [Hyperthyroidism brochure](#)), they may have some weight loss. The amount of weight loss depends on how overactive the thyroid is. On the other hand, since hyperthyroidism also raises appetite, some patients may actually gain weight, depending on how much more they eat.

### WHY DO I GAIN WEIGHT WHEN HYPERTHYROIDISM IS TREATED?

Since hyperthyroidism is not normal, any weight loss that happened because of extra thyroid hormone is reversed when the thyroid levels return to normal. Weight gain can even occur

when patients did not lose weight because they may have gotten used to eating more from the increased appetite during hyperthyroidism.

## HYPOTHYROIDISM

### WHAT IS THE RELATIONSHIP BETWEEN HYPOTHYROIDISM AND WEIGHT?

Since patients with hypothyroidism may burn less calories than usual (see [Hypothyroidism brochure](#)), an underactive thyroid may cause some weight gain. There may be more weight gain with more severe hypothyroidism, however the weight change in hypothyroidism is usually much less dramatic than in hyperthyroidism. Most of the weight gained is actually due to retaining salt and water. For most patients, about 5-10 pounds of weight gain may be related to the thyroid, depending on the severity of the hypothyroidism, but individuals may differ.

### HOW DOES TREATMENT OF HYPOTHYROIDISM AFFECT WEIGHT?

Treatment of hypothyroidism returns body weight to what it was before the hypothyroidism started. If the symptoms of hypothyroidism besides weight gain are improved with treatment, it is unlikely that the weight gain was only due to the thyroid. Once hypothyroidism has been treated and thyroid levels are normal, the ability to gain or lose weight is the same as in patients who do not have thyroid problems.

### CAN THYROID HORMONE BE USED TO HELP ME LOSE WEIGHT?

Thyroid hormones have been used for weight loss in the past. However, taking extra thyroid hormone also raises the risk of serious side effects, such as:

- Insomnia
- Palpitations
- Anxiety
- Loss of muscle mass
- Loss of bone mass
- Heart rhythm problems, which can lead to increased risk of stroke



Furthermore, once the excess thyroid hormone is stopped, any weight loss is usually regained.



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