

Thyroid Gland

The thyroid gland is a large endocrine gland that is located in the neck. It releases T3 and T4 hormones, which help the body regulate metabolism. T3 and T4 stand for triiodothyronine (T3) and thyroxine (T4). In addition, the thyroid gland has a blood calcium sensor that helps it detect when blood calcium levels are elevated, to which it responds. The thyroid gland releases calcitonin, which builds bone, resulting in an absorption of calcium from the blood stream. Osteoblasts are the cells responsible for bone formation.



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Characteristics

TSH Stimulates T3 and T4 Release

[Tissue-boxes](#) [Growing Teapot \(3\)](#) [Tree and Tea-cup \(4\)](#) [Fork](#)

Thyroid-stimulating hormone stimulates the thyroid into producing triiodothyronine (T3) and thyroxine (T4). Both hormones regulate metabolic rate and affect the growth and function rate of other cells and systems in the body.

Metabolism Regulation

[Metal-ball](#)

Both T3 and T4 are the primary hormones involved in regulating body metabolism.

Blood Calcium Sensor

[Calcium Sensor-camera](#)

The thyroid gland senses blood calcium levels and releases hormones to reduce blood calcium levels when they are elevated.

Calcitonin Release

[Cow-throne Released](#)

The thyroid gland also releases calcitonin, which builds bone and absorbs excess calcium from the blood. This is triggered by high blood calcium levels.

Blood Calcium Decreases

[Cow pulled from Blood-Road](#)

Blood calcium decreases because it is used to build bone, specifically by osteoblasts.

Bone Building

[Cows building Bone-Fence](#)

Calcitonin results in building of bone by uptaking excess calcium in the blood.