

### Location

The parathyroid glands are four, very small glands found in the neck behind the thyroid gland. Each gland is about 3-4 mm in size.

### Functions/Roles

The main role of the parathyroid glands is to produce hormones that regulate calcium levels in the blood. Calcium is critical for bone development, bone strength and density, muscle contractions, kidney and heart function. Calcium is also needed by the brain to help nerve cells communicate with each other.



### Hormones produced by the parathyroid glands

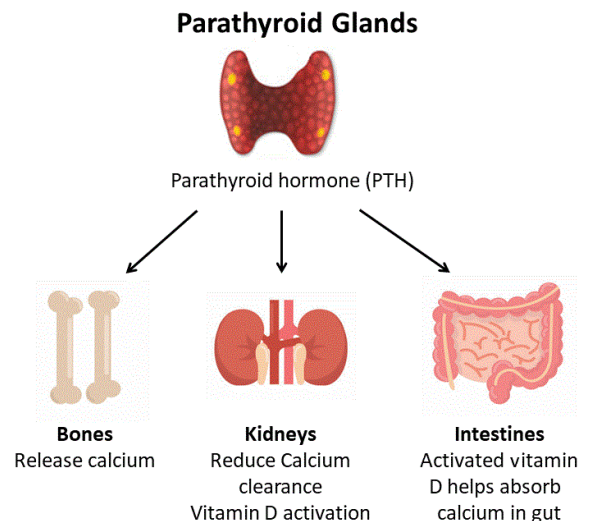
**Parathyroid hormone (PTH)** signals to the bones to release calcium. PTH also signals the kidneys to reduce the amount of calcium that passes into urine. In the kidneys, PTH also plays an important role in the activation of Vitamin D, which helps calcium be absorbed in the gut.

### Keeping parathyroid hormones in balance

The parathyroid glands self-monitor the levels of calcium in the blood. When calcium levels drop too low, the parathyroid glands make more PTH. If calcium levels get too high, the parathyroid glands make less PTH. This keeps calcium levels in the blood within a tight range.

### Common problems and conditions of the parathyroid glands

Primary hyperparathyroidism  
Hypoparathyroidism  
Hypercalcaemia



For more information on the endocrine system, visit [www.hormonesaustralia.org.au](http://www.hormonesaustralia.org.au)

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