Hyperparathyroidism

The parathyroid glands are tiny glands. Each one is about the size of a grain of rice. They are located in the neck, next to the thyroid gland but completely separate from it. They are responsible for keeping the amount of calcium in your blood in a normal range. Hyperparathyroidism is caused by one or more overactive parathyroid glands. Overactive parathyroid glands produce too much parathyroid hormone (PTH), which in turn stimulates increased levels of calcium in the bloodstream.

Illustration of the thyroid gland and its location showing the voicebox, thyroid gland, parathyroid glands, artery, vein, windpipe and laryngeal.

This excess calcium happens because the PTH causes calcium to be released from your bones. This loss of calcium from the bones can lead to osteoporosis, osteopenia, and bone fracture. As the blood containing this high calcium goes through the kidneys, the calcium may be filtered into the urine and lead to kidney stones.

Hyperparathyroidism is usually the result of a benign enlargement of a parathyroid gland that produces too much PTH. Most people with hyperparathyroidism have one abnormal gland. A small number of people may have two abnormal glands at the same time, and some people have all abnormal glands. Having four glands involved is rare, and it is usually a hereditary problem.