What Is Causing My High Calcium Levels?

Your body's organs need a specific level of calcium to function properly. Some of us do not get enough, so we take calcium supplements, drink an extra glass of milk a day, or eat calcium-rich foods. But too much calcium can also be harmful and affect the function of your muscles, bones, heart, and brain.

You have probably heard about the thyroid gland, which produces hormones that control important functions in the body, such as heart rate, weight, and body temperature. There are also four pea-sized glands called the parathyroid glands that are located just behind the thyroid. These glands are essential in regulating calcium levels throughout your body. Calcium is an important mineral—it is essential for strong bones, teeth, and muscle function.

Sometimes one of the parathyroid glands develops an abnormal growth or tumor, a condition called hyperpara-thyroidism. The abnormal gland gives off too much parathyroid hormone and calcium levels become too high. About 90 percent of patients with high calcium levels in their blood have some form of primary hyperparathyroidism.

It is estimated that 3 in every 1,000 people have hyperpara-thyroidism. The condition is

Mike Yao, MD, (center) Associate Professor of Otolaryngology, at Mount Sinai's Head and Neck Institute and Center for Thyroid and Parathyroid Diseases, monitors an ultrasound screening for thyroid disease.

almost three times as common in women as men and affects as many as 21 in every 1,000 postmenopausal women.

Identify Symptoms Early

"The effects of high calcium levels can dramatically decrease your quality of life," says Mike Yao, MD, Associate Professor of Otolaryngology, at Mount Sinai's Head and Neck Institute and Center for Thyroid and Parathyroid Diseases. "For example, elevated calcium levels can worsen the quality of sleep and increase anxiety, depression, fatigue, and bone pain. High calcium levels can also decrease concentration, learning, and memory."

A simple blood test to check your parathyroid and calcium levels will confirm a diagnosis.

Only hyperparathyroidism will cause the calcium and parathyroid blood levels to be elevated at the same time.

Surgery is the Best Option

Fortunately, high calcium due to hyperparathyroidism is easily treatable with minor surgery to remove the abnormal gland. In 85 percent of cases, only one gland is abnormal. This short, outpatient procedure is completed in less than an hour through an inch-long incision in the neck. If there is more than one abnormal gland, all of them are removed through the same incision.

"Typically, the surgery is not very painful. More than half of patients do not take any pain medication and most

return to work within a week," explains Dr. Yao.

Surgery is the only treatment for primary hyperparathyroidism. There is no medication that eliminates the condition. When patients are reluctant to undergo surgery some endocrinologists will prescribe cinacalcet—a calcium reducer—to lower the calcium level in patients with hyperparathyroidism.

Dr. Yao advises against taking calcium reducers. "Cinacalcet causes existing problems to worsen. The drug needs to be taken forever to maintain the lower calcium level, and makes patients susceptible to bone loss and osteoporosis. For primary hyperparathyroidism, it may be safer to do nothing than to take cinacalcet," he says.

We Can Help

Feeling unusually tired or anxious? Ask your doctor to check your calcium levels. If your levels are 10 or higher, make an appointment for an evaluation.

**Center for Thyroid and Parathyroid Diseases
The Mount Sinai Hospital**
Hess Center for Science and Medicine
1470 Madison Avenue between Madison and Fifth Avenues
New York, NY 10029
212-241-9410