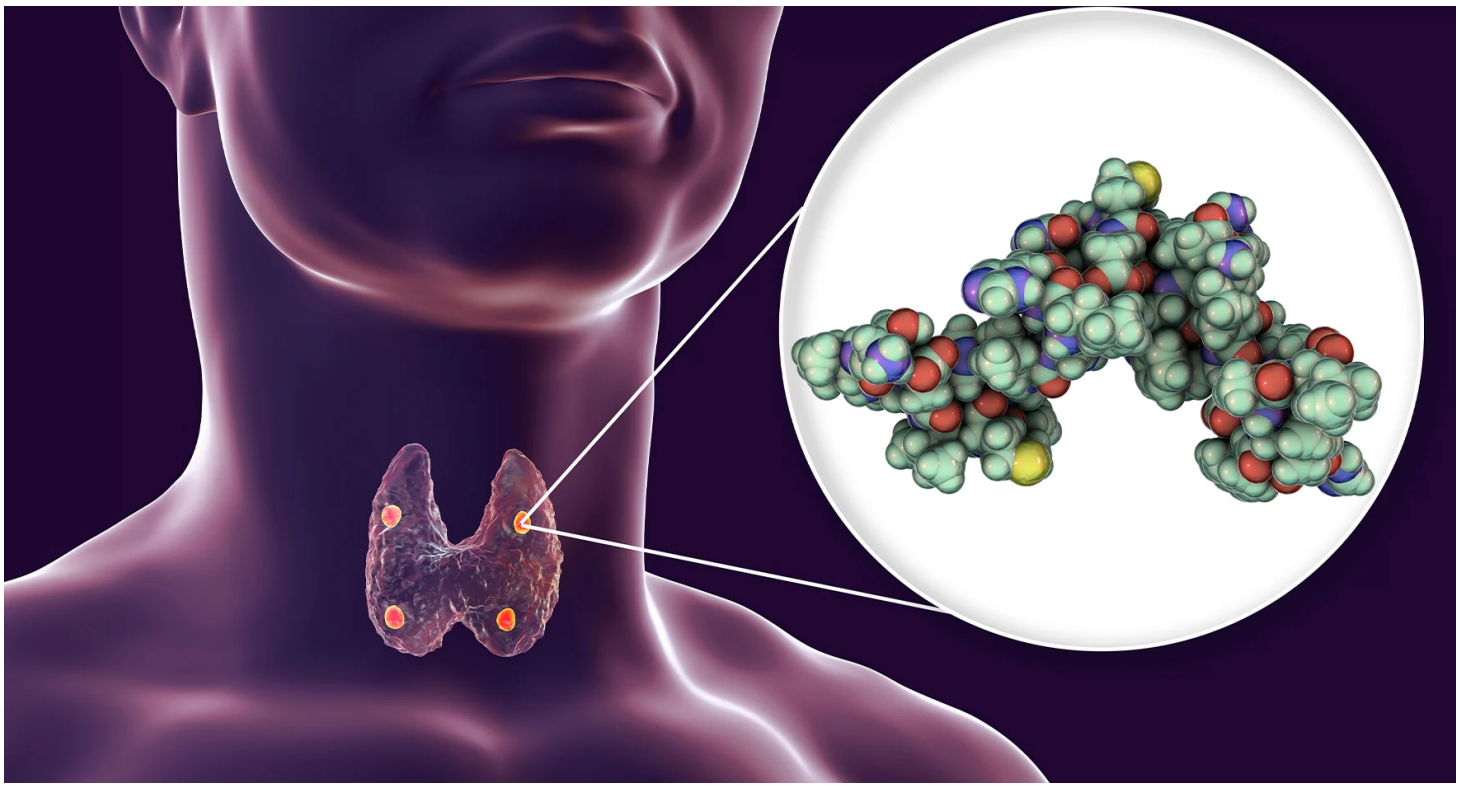

PATIENT RESOURCES

Hypoparathyroidism

January 23, 2022

Hypoparathyroidism is a rare condition in which your body produces abnormally low levels of **parathyroid hormone (PTH)**, made by the parathyroid glands. PTH regulates calcium and phosphorus. When blood calcium falls too low, PTH brings it back to normal by moving calcium from the bones, kidneys, and intestines into the blood.

Endocrine Connection

Parathyroid glands are four pea-sized glands located in your neck that make parathyroid hormone (PTH). They play an important role in bone development and control the amount of calcium in the blood. You can get hypoparathyroidism when you have too little PTH.

Calcium: A mineral stored in the bones, used to build and maintain bone strength. It is the most abundant mineral, found in every part of the body. It helps muscles contract, helps nerves and the brain work properly, and helps regulate your heart rhythm and blood pressure.

Phosphorus: A mineral found in all cells but stored mostly in your bones. It helps the body use food for energy. It also helps your kidneys, muscles, heart, and nerves work properly.

Vitamin D: A hormone that helps the body absorb calcium from food and helps keep blood calcium levels in the normal range.

▸ **Diagnosis**

Your doctor will do a blood test to check levels of calcium, phosphorus, magnesium, and PTH. You also might have a urine test to show how much calcium you are losing in your urine.

Hypoparathyroidism can happen if your parathyroid glands get damaged during surgery on your thyroid gland, throat, or neck. Sometimes one or more parathyroid glands are removed if they're making too much PTH. It also can be hereditary (runs in families). Other causes include:

- Autoimmune disease (when your body's defense system attacks your own cells)
- Radiation therapy to your head or neck (e.g. as part of therapy for cancer)
- Low levels of magnesium (a mineral) in the blood
- Damage of parathyroid glands due to inflammatory disorders (e.g. Sarcoidosis, Amyloidosis)
- Mineral buildup (copper or iron)
- Transiently due to severe illness

▸ **Symptoms and Risk Factors**

Common symptoms include:

- Muscle spasms, cramps, and/or pain in your legs, feet, stomach, or face
- Weakness
- Hair loss
- Dry hair and dry skin
- Tingling in your fingers, toes, and lips
- Pain with menstrual periods
- Headaches
- Memory problems
- Depression

When children have hypoparathyroidism, they might grow poorly, have tooth problems such as delayed tooth development or a lot of cavities, and have slow mental development.

In adults, hypoparathyroidism can lead to kidney problems (such as kidney stones, kidney failure), heart problems, and calcium deposits in the brain. Calcium in the brain can cause tremors, slowed movement, balance problems, and seizures.

Hypoparathyroidism can be linked to other health problems, such as cataracts, Addison disease (problems with your adrenal glands), and pernicious anemia (low vitamin B12 levels).

Calcium requirements increase in pregnancy to meet the needs of the developing baby, mainly during the 3rd trimester. Hypoparathyroidism during pregnancy can increase the risk of preterm labor or miscarriage in the mother and respiratory distress (difficulty to breath) in the baby.

▸ Treatment and Therapies

Depending on the cause of your hypoparathyroidism, you may need to take supplements, such as calcium and vitamin D supplements to keep your blood calcium levels normal, for the rest of your life. PTH replacement therapy is also available in injectable form. Your doctor may prescribe PTH therapy if calcium level in the blood does not normalize or you continue having symptoms, despite taking large doses of calcium and vitamin D supplements. Injecting PTH may decrease the need to take too many calcium and vitamin D supplements. A doctor might also prescribe diuretics (water pills) to prevent too much calcium from leaving your body in your urine and will check your blood levels regularly.

During pregnancy a doctor will closely monitor your calcium, phosphorous,