

High Calcium in the Blood (Hypercalcemia)

What is high blood calcium?

High blood calcium means there is too much calcium in your blood. This problem is also called **hypercalcemia**. Almost all of the calcium in your body is in your bones and teeth. Only a small amount of calcium is supposed to be in your blood.

A normal level of blood calcium is 8.6 to 10.0 mg/dL (milligrams per deciliter). At The James, lab levels of ionized calcium of 4.6 to 5.3 mg/dL are normal. Other labs outside of The James may have different normal values. This can depend on the equipment the lab used. If your lab work is done outside of The James, ask the lab about their normal values for blood calcium and ionized calcium. You should call your doctor if your blood calcium is above 10.0 mg/dL or your ionized calcium is above 5.3 mg/dL.

What problems are caused by high blood calcium?

High calcium in your blood can cause the following problems:

- Slows down your nervous system
- Weakness in your muscles
- Slow digestion in your stomach and bowels
- Your kidneys to form stones
- Your bones to become weak and possibly break

This handout is for informational purposes only. Talk with your doctor or health care team if you have any questions about your care.

Why does blood calcium become too high?

There are many causes for high blood calcium. Some of the most common reasons include the following:

- Cancer cells are in your bones. If cancer takes up more room inside your bones, calcium is pushed out of your bones into the blood.
- A type of cancer of the blood cells (Multiple Myeloma).
- Not being active. For example, if you are sick and have to stay in bed for a long time.
- A disease of your immune system that causes an increased activity of Vitamin D (Sarcoidosis).
- A rare disease of your bone (Paget's disease).
- Over-active parathyroid glands. There are 4 parathyroid glands, 2 on each side of your neck. These glands help to control how much calcium your body needs.
- A disease of your adrenal gland (Addison's disease). Adrenal glands sit on top of your kidneys and control hormones like steroids.
- Kidney disease, also called renal disease.
- Some medicines (thiazides, lithium).
- Taking very large amounts of vitamins A, D, or calcium.

How will I feel if my blood calcium is too high?

High blood calcium affects everyone differently. Some people have warning signs, while other people have none. High calcium in the blood usually builds up slowly over days and sometimes even weeks.

You may have one or more of these signs. Family members or friends may notice symptoms before you do.

If you have any of these signs, call your doctor or nurse:

- Weak muscles or not being able to get in and out of a chair or bathtub
- Feeling worn out, tired, and sleepy
- Heaviness in your legs or not being able to move your leg (paralysis)
- Lack of appetite

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- Nausea and vomiting
- Weight loss
- Constipation
- Increased urination
- Signs of dehydration, including severe thirst
- Pain deep in your bones
- Pain in your abdomen, lower back, or sides
- Headaches
- Changes in vision
- Loss of interest in work, decreased attention span, loss of memory or confusion. Your family and friends may notice behavior that is not normal for you.
- Irregular heart beats
- High blood pressure

How can I prevent high blood calcium?

- Change your position in bed often. Move at least every 2 hours during the day and at least 1 time during the night. If you need help from other people to change your position, they should handle you very gently to avoid injury or breaking a bone.
- Get out of bed and sit in a chair as much as possible.
- Walk as much as possible. Get help if you are weak.
- Unless your doctor tells you otherwise, drink 12 to 16 cups non-caffeinated of fluids each day to stay hydrated.
- Take the medicine your doctor has ordered for you, such as Etidronate (brand name Didronil) or Calcitonin (an injection).