

## Continuous glucose monitors and imaging tests

This information is about what to do when you wear a [continuous glucose monitor](#) (CGM) and you need to have an imaging test.

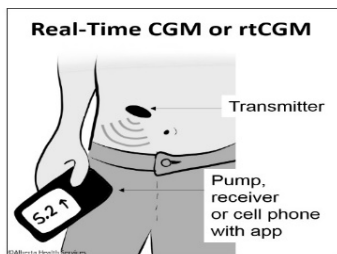
Examples of [imaging tests](#) include x-ray, ultrasound, CT (computed tomography) scan, and MRI (magnetic resonance imaging).

### What is a CGM?

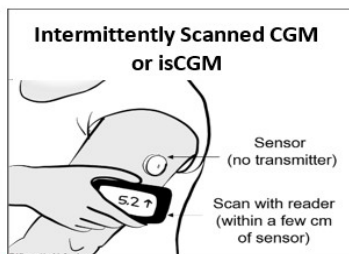
A CGM measures the amount of glucose (sugar) in the fluid between your skin cells, called interstitial fluid. A CGM has 2 parts: a sensor and a receiver. A receiver can be a separate device or a smartphone.

There are 2 types:

- real-time continuous glucose monitor (rtCGM)



- intermittently scanned continuous glucose monitor (isCGM)



### What is a CGM sensor?

A CGM sensor is the part of the device that you wear on your skin. It has a tiny needle that stays under your skin. The sensor reads the glucose level of your interstitial fluid and sends this information to a receiver.

### How do I know if I need to remove my CGM and sensor before an imaging test?

Call the Diagnostic Imaging booking department **before** your imaging test date and tell them you use a CGM. Ask if you need to remove your sensor for your imaging test.

Contact information for the department should be included with your appointment letter.

### My CGM user manual says to remove my sensor before my imaging test. Is this always true?

You may not always need to remove your sensor before an imaging test. It may be safe to leave your sensor in place during many types of imaging tests. Alberta Health Services Diagnostic Imaging staff are trained experts in radiation safety. They will tell you when it is safe to keep your sensor in place for your imaging test.

Alberta Health Services is working with Health Canada and CGM manufacturers to have them review and update the imaging test information in their user manuals.

### Which imaging tests allow me to leave my CGM sensor in place?

You can leave your sensor in place for the following imaging tests:

- Ultrasounds.
- Most x-rays.
- Most CT exams.
- Nuclear medicine exams (not involving CT).

However, **you might need to remove your sensor** for any imaging test **if the sensor gets in the way of the image.**

### Which imaging tests require that I remove my sensor?

You need to remove your sensor for the following imaging tests:

- Magnetic resonance imaging (MRI): The strong magnet could heat up your sensor or pull it out.
- X-ray or CT exams of the area where your sensor is placed: When your sensor is placed in the area being examined, the radiation could damage the sensor. (If your sensor is **not** placed in the area being examined, the radiation is not likely to affect your sensor and it can stay in place.)
- Radiofrequency: Radiofrequency is used with ultrasounds for ablation procedures (such as colposcopy, liver lesions, and heart arrhythmia treatments). The radio waves could heat up your sensor and cause pain.

### **I left my sensor in place for my imaging test. How do I know it's still reading accurately?**

When you leave your sensor in place for an imaging test, it is recommended that you do a finger-prick blood glucose test after your imaging test to make sure the sensor is reading accurately.

It is recommended to do a finger-prick glucose test any time your sensor reading does not display a glucose value or the reading does not match how you are feeling.

### **If I need to remove my sensor, can my imaging test be scheduled around the time I would normally replace it?**

Call the Diagnostic Imaging booking department before your test date. Tell them you use a CGM, and you would like to schedule your imaging test around the time you need to replace your sensor.

Staff will try to schedule your imaging test around the time that works for you, but this is not always possible.

### **The technologist recommends I remove my sensor for my radiofrequency procedure. Why doesn't my CGM user manual say this?**

The user manual says to remove your sensor for diathermy procedures, which use electric current. Radiofrequency is similar but uses radio waves. Radiofrequency is used with ultrasounds for ablation procedures (such as colposcopy, liver lesions, and heart arrhythmia treatments).

Both diathermy and radiofrequency create heat that can cause pain and damage your sensor.

Alberta Health Services has asked CGM manufacturers to include radiofrequency procedures in their user manuals.

### **I want to remove my sensor even though the technologist say I don't need to. May I remove it?**

Yes, you may remove your sensor for any imaging test if you choose to do so. Remember that you will need to provide your own replacement sensor.

### **Will Alberta Health Services replace my sensor if I need to remove it for an imaging test?**

No, Alberta Health Services will not replace your sensor if you need to remove it for an imaging test. You are responsible for replacing your sensor.

### Where can I learn about replacement sensors?

To learn more about replacement sensors, go to your CGM manufacturer's website or call the customer support phone number in your user manual.

### Where can I learn more about my CGM?

To learn more about continuous glucose monitoring and these devices when you're having a procedure, go to:

- [Continuous glucose monitoring](#)
- [Checking your blood glucose \(sugar\) level while you're in the hospital](#)

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