

# Vertebral Augmentation

## Instructions for patients and families

Read this booklet to learn:

- what vertebral augmentation is
- what happens on the day of the procedure
- instructions to follow when you go home
- what problems to look out for
- information about your follow-up visit

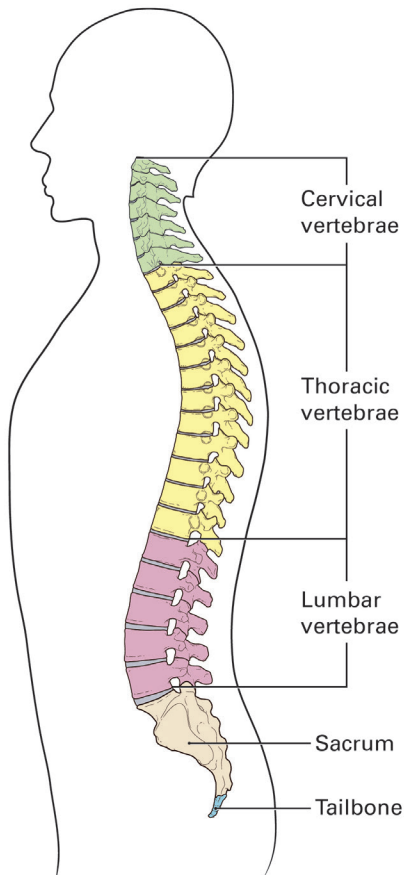
### Your vertebral augmentation is a:

- Vertebroplasty
- Kyphoplasty
- Sacroplasty



## Parts of the spine

Pelvic fractures are common in patients with osteoporosis.



**Your fracture(s) is at**

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**Most spine fractures are caused by either osteoporosis or cancer, and this may or may not involve a fall.**

## What is osteoporosis?

Osteoporosis is a common disease where the bones become weak and less dense. Although it's normal for people to lose bone mass with age, there are things that can make bone loss worse, such as:

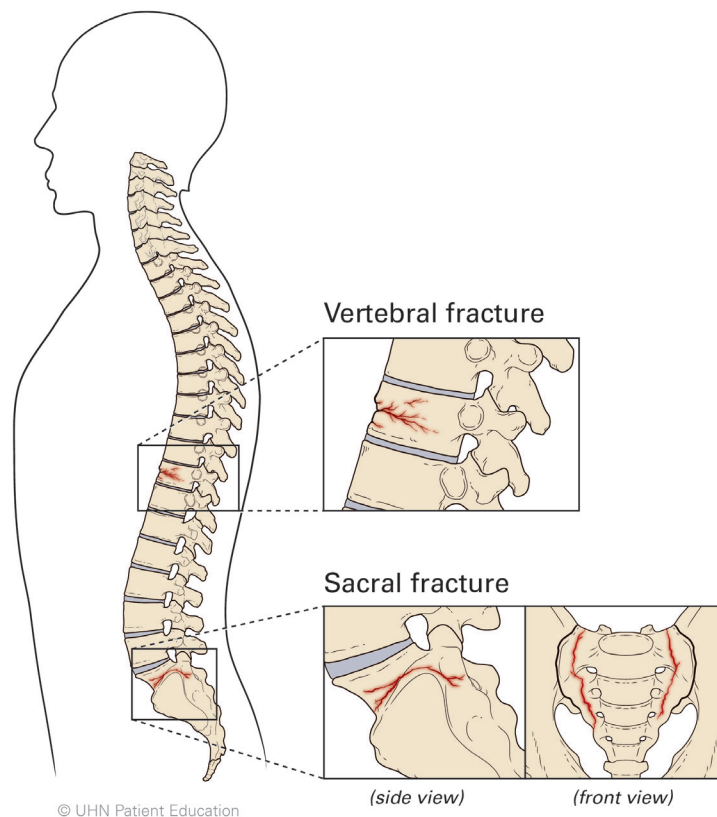
- smoking
- not moving or exercising enough
- taking certain medications like steroids

When bones are weak they are more likely to break. Breaking a bone can happen suddenly or because of a very minor fall or slip.

- If you break part of the bone in the back, this is called a **vertebral fracture**.
- If you break part of the bone in the pelvis, this is called a **sacral fracture**.

These fractures can make standing, walking and sitting painful. Sometimes moving can become so painful that only lying in bed brings relief.

Unlike a wrist or ankle fracture, we cannot put a cast on your broken spine. Rest and strong pain medicines can help, but many spine fractures do not get better this way.



## What is vertebral augmentation?

Vertebral augmentation is a procedure that treats your spine fracture. The surgeon uses fluoroscopic or computed tomographic (CT) imaging to inject bone cement inside the bone.

**There are 3 types of vertebral augmentation procedures.**

### 1. Vertebroplasty

A needle is used to put bone cement into the vertebral body (the fracture). This procedure helps support your spine and reduce your pain.

### 2. Kyphoplasty

A small balloon is inserted through the needle into the vertebral body that lifts the area in your bone that has collapsed so your doctor can fill it with cement. This procedure also helps support the bone and bring it back to the right position.

### 3. Sacroplasty

Bone needles are placed into parts of the sacrum that are fractured to stabilize the sacrum. Stabilizing the fracture decreases pain and allows the fracture to heal more quickly.

## **What are the benefits of vertebral augmentation?**

- Your doctor only uses a small cut and a needle to do the procedure. This means you can recover more quickly than if you had open back surgery.
- You can return home the day you have the procedure.
- You may feel much less back pain right away.
- You may need to take less pain medicine.
- You may feel better able to do your daily activities.

## **Are there any risks?**

### **A low risk of bruising**

- Bruising can happen if you take blood thinner medicine or you took blood thinners in the past. It is not life threatening.
- The bruising may cause you some discomfort and your skin colour to change. This lasts for a few days.

### **A low risk of bone cement leaking**

The amount of cement injected into the bone is very small (often less than 3 to 4 millilitres). The cement is liquid when it is being injected into the bone. The cement takes about 5 minutes to harden. Once it hardens it cannot leak any more.

- In about 6 to 10 people out of 100, the liquid cement leaks through the broken bone to the outside of the bone or to a vein and causes no harm.
- If the liquid cement leaks to a vein, there is a small chance that it can travel to the lungs. Only 1 out of 1000 people will have any symptoms.
- In about 1 out of 1000 patients, the cement leaks beside a nerve which irritates but does not damage the nerve. You may feel pain, but it gets better on its own over 1 or 2 days.
- The bruising may cause you some discomfort and your skin colour to change. This lasts for a few days.

## A low risk of infection

Like any medical procedure, there is always a risk of infection. In these procedures, the risk of infection is very low.

The procedure must be postponed if you already have an infection that needs to be treated first.



Important!

**Vertebral augmentation doesn't prevent new fractures or the same bones from breaking again in the future. The chance that you will have new fractures depends on how serious your osteoporosis is and not on the procedure.**

## How do I prepare?

### Before the procedure

- You will have seen a neuroradiologist (x-ray doctor) or neurosurgeon (spine surgeon). The specialist will talk to you about your x-rays or MRI (special kind of x-ray) pictures and about the procedure.
- Ask any questions about the risks and benefits of having a vertebral augmentation and together decide which type is best.
- If you decide to have the procedure, the neuroradiologist will ask you to sign a consent form. Signing this form means you agree to have the procedure.
- **Tell the doctor if you are taking blood thinning medicines.** You may need to stop taking them.
- The office staff will schedule a Pre-admission visit for you. They will give you instructions for the day of the procedure.

## Pre-admission visit

During this visit you will:

- go to the Pre-admission office for your blood tests
- meet with your anesthetist

An anesthetist is a doctor who will give you medicine so you will be relaxed and feel no pain during the procedure. The anesthetist and nurse will also talk to you about your medical history. You can ask questions or let them know if you have any concerns at this time.

Important!

**Don't eat or drink after midnight before your procedure. You must take your regular medicine with sips of water. If you have diabetes or you are taking blood thinners, you will receive separate instructions.**

## Day of procedure

Take the Main elevator to the Day Surgery Unit on the 4th floor of Toronto Western Hospital **2 hours before your procedure.**

A porter will bring you to the neuroradiology department on the 3rd floor. This is where you have your procedure.

## What can I expect for vertebroplasty?

We put an intravenous (IV) line in your arm so we can give you fluids and medicines during the procedure.



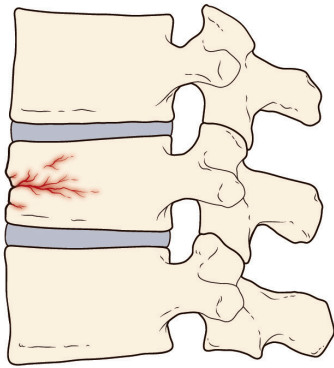
We give you a local anesthetic in your back using a needle. This kind of medicine numbs the area where your doctor does the procedure.



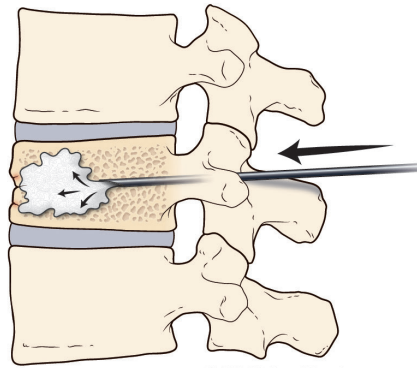
The doctor uses an x-ray to help guide a small needle to the broken bone.



Your doctor then injects bone cement into the vertebrae to keep your back bone stable.



Fractured vertebrae



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A needle is used to put bone cement into your vertebrae

## What can I expect for kyphoplasty?

We put an intravenous (IV) line in your arm so we can give you fluids and medicines during the procedure.



We give you a local anesthetic in your back using a needle. This kind of medicine numbs the area where your doctor does the procedure.



The doctor uses an x-ray to help guide a small needle to the broken bone.



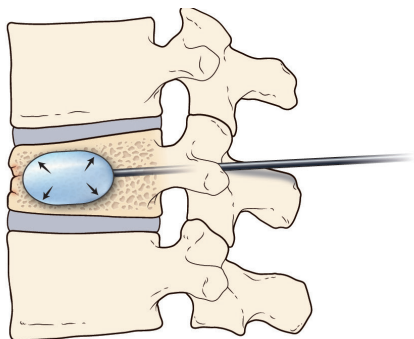
Your doctor then puts a small balloon through the needle and carefully inflates it. This creates a space that raises your collapsed bone.



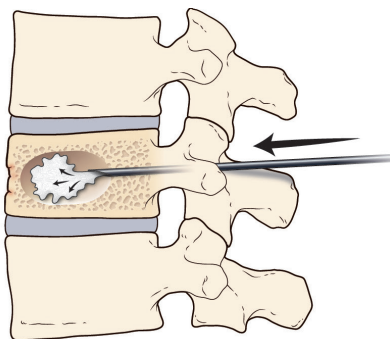
Once the balloon creates the space, your doctor deflates and removes it.



Your doctor then injects bone cement into the vertebrae to keep your back bone stable.



A balloon is used to lift your vertebrae that has collapsed



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A needle is used to fill the space with bone cement



## What can I expect for sacroplasty?

We put an intravenous (IV) line in your arm so we can give you fluids and medicines during the procedure.



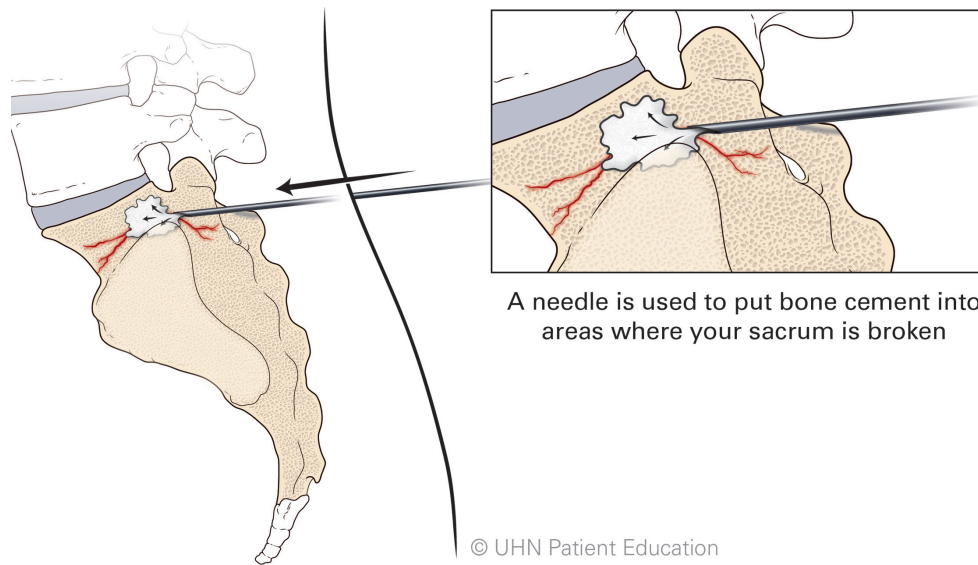
We give you a local anesthetic in your back using a needle. This kind of medicine numbs the area where your doctor does the procedure.



Your doctor uses an x-ray to help guide a small needle to the broken bone.



Your doctor then injects bone cement into the sacrum to keep the bone stable.



A needle is used to put bone cement into areas where your sacrum is broken

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## What happens after the procedure?

After your procedure we take you to the Post Anesthetic Care Unit (PACU). Here we check your heart, blood pressure, breathing and surgical site (the gauze on your back). Then we take you back to the Day Surgery Unit.

## When can I go home?

You can usually go home about 2 hours after your procedure. You must have a friend or family member help take you home.

Important!

**Don't drive a car or drink alcohol for 24 hours.**

## What to expect at home and what to do:

- You will have some pain that may start the evening after your procedure.
- It is important to take the regular pain medicine your doctor prescribed to help manage any pain. Follow the directions for taking it.
- You may feel some tenderness where you had your procedure. This is normal and goes away in about 1 week.
- You will have a gauze and tape on your back. You can remove it after 24 hours.
- The pink colour on your back will wash off in the shower. It's the colour of the skin cleaner used to kill any germs before your procedure.

## What if I am already staying in the hospital as an Inpatient?

Your doctor has referred you to an interventional radiologist who has told you about this procedure.

Your doctor will send an anesthetist to your hospital bed to assess you and order tests, if needed. You will have the procedure at Toronto Western Hospital and be transferred back if you are at a different hospital.

An interventional radiologist will meet with you before your procedure to explain it again and ask for your consent. You can ask any questions you may have.

Your recovery after the procedure is the same as other patients. Read pages 14 to 17 to learn more about what to expect after the procedure.

## **What can I eat and drink after my procedure?**

You can eat and drink normally once you get home.

If you feel nauseous (sick to your stomach) or you vomit, you can take anti-nausea medicine such as Gravol®. You can buy it from your pharmacy without a prescription. Follow the instructions for taking the anti-nausea medicine and continue to drink fluids until your nausea passes. Then slowly start eating again.

## **When can I shower or bathe?**

- Wait 24 hours after your procedure before you take a shower.
- After your shower, put a clean Band-Aid on your wound.
- **Don't take a bath or swim** until your wound is healed. This usually takes about 7 days.

## **What activities are safe?**

- When you get home, rest for the day.
- You can return to your normal activities 24 hours after your procedure.
- Don't lift anything over 10 pounds (about 5 kilograms) for the first 24 hours.
- You can drive 24 to 48 hours after your procedure.

## **How do I care for my wound site?**

You will have a bandage or dressing covering the cut (or cuts) on your back.

- Don't get the bandage wet for 24 hours.
- You can replace your bandage with a clean one if it gets dirty or wet.
- If a wound starts to bleed a little, have someone gently press down on the bandage to stop the bleeding.
- Any pink colour you see on your back will wash off. It's the colour of the skin cleaner used to kill any germs before your procedure.

## **How do I manage my pain?**

- You might feel some tenderness where you had the procedure. This is normal and will go away in about 1 or 2 weeks.
- Take your regular pain medicine when you get home. You may slowly reduce the amount of pain medicine as you start to feel better.
- If you notice new pain, call the neuro nurse coordinator in the Medical Imaging Department at: 416 603 5981, Monday to Friday between 8:00 am – 4:00 pm.

## What problems should I look out for?



### **Go to your nearest hospital emergency department if you:**

- have numbness or tingling in your legs and/or feet
- are unable to move your legs
- have any bowel and/or bladder problems
- feel sick (nausea or vomiting) or have a fever higher than 38 °C or 101 °F

## When will I see my doctor again?

You will have a follow-up appointment with your doctor about 4 weeks after your procedure. We will schedule the appointment before you go home.

**My follow-up visit:** \_\_\_\_\_

## Who can I call if I have any questions?

If you have any other questions or need help, please call the Medical Imaging department at 416 603 5981, Monday to Friday between 8:00 am – 4:00 pm.

**If you need help outside those times, go to your nearest emergency department.**

