Fractures and plaster care

What is a fracture?

A fracture is a medical term for a broken bone. Bones break when too much force is exerted against them, often during a fall or common activities such as sport. Given time and the right care, the bone heals itself.

How is a fracture diagnosed?

When clinical findings indicate that a fracture may be present the imaging choices include x-rays, CT and MRI. An x-ray is usually the preferred starting point as it will demonstrate the overall joint alignment both above and below the fracture area as well as the fracture(s).

When a fracture is not displaced the injury can be subtle, and sometimes not diagnosed on x-ray views alone. For these injuries – as well as more complex fractures – the use of CT and/or MRI can add additional information. Ultrasound may also be employed when the soft tissue ligaments and tendons are injured.

Treatment in the Emergency Department

For most fractures the initial emergency department treatment includes:

- A splint, cast or sling to hold the fracture area steady
- Pain relief
- Elevation of the injured area to minimize swelling
- A discussion and referral process for specialist Orthopaedic Surgeon input and ongoing care.

Some fractures require repositioning of the injured bone to allow for recovery of the nerves and blood vessels and achieve a better position for bone healing. When this is indicated your doctor will discuss options for this care – by keeping an empty stomach (not eating or drinking) during the initial emergency tests you can safely have an anaesthetic if required.

My first day with a splint or cast

In most instances a firm cast made of plaster or fibreglass will be applied to hold the broken bone(s) in place while healing takes place. It is more common to have a half cast on one side of the fracture than a full circumferential cast. Other fractures may be managed with slings or orthotic splints such as Cam Walker Boots.

All casts that extend in a full cylinder around your limb require a medical doctor to review limb safety within 24 hours of the plaster being put in place.

This is a service provided at the Cabrini Emergency Department without out-of-pocket cost for patients who have had their cast placed at Cabrini. You do not require an appointment for this review visit – aim to arrive at the Emergency Triage Desk prior to midday when returning for a cast check. It is common to get some swelling of the fingers or toes around a cast as the injured limb swells in the day or two after injury. Carefully check the cast to make sure it is not too tight. There should be a gap between the cast and your skin.

It is important to monitor for poor blood supply or swelling in your fingers or toes

If this happens:

- The skin may look pale or bluish in colour
- The fingers or toes are cool or hot to touch
- You might have pins and needles or numbness or you might not be able to move your fingers or toes

If these symptoms happen, raise the arm or leg above the level of the heart and return to the Cabrini ED. The plaster might be too tight and need to be split or cut off.

Other reasons to return to Cabrini ED are:

- Severe pain
- The cast has become damaged in any way
- You notice any problems such as areas that are becoming red/ swollen/hot, damaged skin or a bad smell coming from the cast.

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What to expect

Fractures can be painful. The pain can be extreme at the beginning, but it will ease once the plaster or splint is in place and the fractured limb is supported and rested. The pain will settle even further over the next few days to weeks.

Simple pain medications such as paracetamol are often needed, take them as needed. Your doctor may prescribe stronger pain relief. Some medications may make you drowsy; if so, do not drive or operate machinery. Your doctor, nurse or pharmacist should also provide you with some specific information about pain management.

A cast may be itchy for a few days, but this should ease. After the cast is removed, there may be some stiffness and weakness in the limb. This should improve as you go about your normal activities. Sometimes physiotherapy is needed to help make a full recovery. During the time after the cast or splint is removed the bone will continue to recover. Take extra care and precautions to avoid further injury to the healing bone, especially for the first six weeks. You may feel a lump at the site of the fracture. This is the new bone, which will eventually take on the shape of your original bone.

Caring for the fracture

The cast, sling or splint will support and protect the bone while the fracture heals. It can sometimes cause problems with blood flow, especially in the first couple of days. The following advice may help to avoid problems:

- Frequently move or wiggle the fingers (in the case of an upper limb plaster) or toes (for a lower limb plaster)
- Keep the plaster raised (ideally above your heart) to prevent swelling, especially for the first 48 hours (for example, use a sling to keep an arm raised or place pillows under your leg when resting)

It is important for your recovery that you keep the cast in good condition.

Caring for the plaster or fibreglass cast

It is important that you look after your cast.

- Rest for a couple of days after the cast is applied to allow it to set completely
- Keep the cast dry. When having a shower or bath, put a plastic bag over the plaster and seal it with a rubber band. Try to keep the limb away from water, to prevent any leaking in. Keep the plaster out of the rain
- Do not stick objects down the cast, as this may damage the skin and cause infection
- Do not cut or interfere with the cast
- Do not put weight on a cast. Use crutches as directed for a fracture in your leg.
- Do not lift anything or drive until the fracture is healed and a healthcare professional has advised you to return to these activities

Follow-up

For patients able to discharge home with a fracture a repeat x-ray to look at the position of the injured bone during the first 1-2 weeks is usually recommended, with specialist review at this time. This provides the opportunity to discuss options for ongoing fracture care. Your radiology imaging from Cabrini ED is available to your specialist to access online to assist with your visit.

Some fractures will have operative options, and you may find a pin or plate to assist the fracture position and healing is recommended for you. An operation can occur safely during the first weeks of fracture management – ideally the surgeon's visit will be within the first 1-2 weeks of injury to guide the ongoing care plan.

For fractures healing well without need for surgery the time with a splint or cast is typically 6 weeks in total. This may be longer or shorter, depending on your age, general health and the type of fracture.

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Seeking help

Cabrini Emergency Department (ED) is staffed by experienced emergency doctors and nurses 24 hours a day, 7 days per week. If you have any questions about your ED treatment our qualified ED staff can be contacted on (03) 9508 1500 at any time. If you need to return to Cabrini ED for ongoing care we would be glad to take care of you again and if this occurs within a week of your initial consultation the doctor's fee will be bulk-billed.

You can also expect to receive a phone call or SMS message from one of our emergency nurses the day after you have been discharged. The nurse will be able to clarify any aspect of your diagnosis, treatment, or follow-up.

In a medical emergency return to Cabrini ED if it is safe to do so or go to the nearest hospital emergency department or call an ambulance – dial triple zero (000).

Return to Cabrini ED if:

- **Your fingers and toes become swollen or have changed colour (to white or blue), even after being elevated (raised) for 20 minutes**
- **Your toes or fingers feel numb. Your toes or fingers are very cold to touch**
- **You develop 'pins and needles' below your plaster in your fingers or toes**
- **You have severe pain not controlled with the medications you have been given, especially in the first 24-48 hours**
- **If your cast is cracked, soft, loose or tight**
- **If there is a strong, offensive smell coming from the cast**

Want to know more?

Contact Cabrini ED on (03) 9508 1500

Ask your local doctor or healthcare professional.

Visit the Better Health Channel:
www.betterhealth.vic.gov.au

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