

Acute Compartment Syndrome

What is acute compartment syndrome?

Acute compartment syndrome (ACS) is a painful condition that can occur when there is a build-up of pressure in the muscle compartment of a limb, caused by swelling and/or bleeding.

The increased pressure can reduce blood flow and prevent oxygen from reaching muscles, nerves and blood vessels. This can damage the limb and lead to permanent nerve and muscle injury. Surgery may be done to treat the problem.

Early diagnosis and treatment of ACS is important, as it can prevent complications. This factsheet provides information about when there is a risk of ACS, the signs and symptoms to look for, and how it may be treated.

Acute compartment syndrome is a medical emergency

If you experience any signs or symptoms, contact your doctor or go to your hospital emergency department immediately.

When is there a risk of ACS?

ACS can develop in adults or children who have had:

- surgery to an arm or leg (limb) - including orthopaedic, nerve and vascular procedures
- a traumatic limb injury, including pressure onto the body or squeezing (crush injury)
- a fracture to a limb
- a bandage or plaster cast/splint that has been applied tightly
- burns
- a snake bite
- bleeding from an injured blood vessel

People who are at an increased risk of bleeding are also at risk. This includes people who:

- are taking anticoagulant (blood-thinning) medication such as warfarin
- have a family history of major bleeding
- have a low platelet count
- have severe liver or kidney disease.

What are the signs and symptoms?

The signs and symptoms of ACS are:

- severe or increasing pain in the limb
- pain that worsens when the limb is moved and/or stretched
- pain not managed or controlled by medication
- a tingling or burning feeling in the area
- lack of limb strength
- inability to move your fingers or toes
- swelling and discolouration (whiteness/blueness) of the skin of the limb that is not relieved by elevation.

Reducing the risk of ACS

Early diagnosis and treatment can prevent further complications. Be aware of the signs and symptoms of ACS.

- Elevate your limb to help reduce the swelling.
- Inform a member of the healthcare team if your bandages or plaster cast feels tight – it may need to be cut or loosened.
- If pain and swelling increases (even after taking pain medication), see your doctor immediately.

If you have any signs or symptoms of ACS, it's important to contact your doctor (specialist or general practitioner) or attend your local hospital emergency department immediately.

How is ACS treated?

A surgical procedure known as a fasciotomy can be performed to treat ACS. In this operation, the skin is cut open down to the muscle (fascia), which releases the pressure to the muscle. The wound is left open for a number of days to prevent an increase in pressure reoccurring.

The aim of treatment is to reduce the likelihood of permanent nerve damage and complications.

For more information

For more information about ACS, talk to your healthcare team.