

## Baker's cyst

A Baker's cyst is a swelling on the back of the knee caused by the build-up of fluid inside sacs called bursae. The symptoms are mild unless the cyst bursts or extends down into the calf muscles. Common causes of Baker's cyst include arthritis, infection, torn knee cartilage and other knee injuries. Baker's cyst is also known as a popliteal cyst.

The knee is a hinge joint, situated between the thigh bone and shin bones. The entire joint is enclosed inside a tough capsule lined with a membrane and filled with lubricating synovial fluid. Extra capsules or sacs of fluid, known as bursae, cushion the joint and help reduce the friction between tissues caused by movement.

### Symptoms

Baker's cysts may have no symptoms. If symptoms occur, they can include:

- A pronounced soft lump or swelling on the back of the knee that looks most obvious when the person is standing
- A sensation of pressure in the back of the knee joint
- Persistent pain or aching
- Restricted mobility of the joint
- A sensation of tightness at the back of the knee when the leg is straightened.

### A range of causes

Some of the causes of Baker's cyst include:

- **Injury** – trauma or injury to the knee can cause a build-up of fluid (effusion), which triggers Baker's cyst.
- **Torn cartilage** – usually affecting the cartilages (known as menisci) that bolster the knee joint on both sides.
- **Arthritis** – particularly rheumatoid arthritis and osteoarthritis of the knee joint.
- **Infection** – local infection can cause fluid retention around the knee joint.
- **Unknown causes** – Baker's cysts can sometimes develop in children for no apparent reason.

### Complications

A person may be less inclined to seek medical help for Baker's cyst if the symptoms are mild, which they generally are. However, if left untreated, complications can include:

- The cyst continues to grow, causing the symptoms to worsen.
- The cyst may extend down into the calf muscles (dissection).
- The cyst can burst and cause bruising on the ankle of the affected leg, due to leaked fluid.

The symptoms of calf dissection and cyst rupture are similar to those caused by inflammation of veins, which may make diagnosis difficult and delay treatment. It is important to seek medical advice, as more serious but less common problems may present in a similar way. These may include a tumour or popliteal artery aneurysm.

### Diagnosis

Baker's cyst is diagnosed using a number of tests, and may include:

- Physical examination
- Medical history
- Joint x-ray – this will not show the cyst but can show the presence of arthritis in the knee joint that may be causing the problem
- Shining a light through the cyst (transillumination) – this can determine that the mass is filled with fluid
- Magnetic imaging resonance (MRI)
- Ultrasound.

## Treatment

Baker's cysts don't always require active treatment and sometimes will only require observation over time by the treating doctor. Treatment options for Baker's cyst can include:

- Treatment for the underlying cause, such as medication for arthritis or surgery for torn knee cartilage
- Temporarily avoiding activities that aggravate the knee joint
- Physiotherapy involving ice packs, the use of crutches and exercises to maintain mobility and strength
- Cortisone injections
- Inserting a needle into the cyst and draining off the fluid
- In severe cases, surgery to remove the cyst entirely
- A conservative approach of watching and waiting is recommended with children – the condition commonly subsides without active treatment (spontaneously).

## Prevention strategies

Knee joints are prone to injury during sporting activities. Preventing knee trauma can reduce the risk of Baker's cyst developing in the first place or recurring after treatment. Suggestions include:

- Warm up the knee joints and soft tissue by gently going through the motions of your sport or activity and stretching the muscles.
- Wear supportive footwear appropriate to your activity.
- Try to turn on the balls of your feet, rather than through your knees.
- Cool down after sport by performing gentle and sustained stretches.
- If you injure your knee, stop your activity immediately, apply ice packs to treat the swelling and seek medical advice.

## Where to get help

- Your doctor
- Sports medicine professional
- Physiotherapist
- Australian Physiotherapy Association Tel. (03) 9092 0888

## Things to remember

- The knee contains sacs of fluid, called bursae, that help to cushion the joint and reduce friction between the structures around it.
- Baker's cyst is a pronounced swelling on the back of the knee, caused by the abnormal collection of fluid inside the bursae.
- Treatment options include physiotherapy treatment, drawing off the fluid with a needle, cortisone injections, treating the underlying cause or surgery to remove the cyst.

**This page has been produced in consultation with, and approved by:**

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