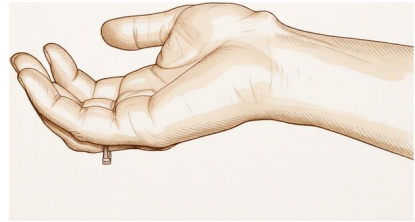


Wrist Ganglia

A wrist ganglion: a smooth, dome-shaped fluid-filled sac that pushes up through the back of the wrist from the joint underneath.

GE Malone / Wikimedia Commons, CC BY 3.0



What you're feeling

You may notice a soft lump on the back or front of your wrist. This is a fluid-filled sac called a ganglion. It often feels like a small, smooth pea under the skin. The lump might change size, growing larger after you use your hand and shrinking when you rest.

Pain is common, especially if the cyst presses on nearby nerves. You might feel a dull ache or a sharp sting when you move your wrist. The pain often worsens when you extend your wrist backwards, such as when doing a push-up or pushing open a heavy door. Some people find the discomfort is worse at night or first thing in the morning.

Daily tasks can become difficult. Turning a key in a lock may hurt. Lifting a kettle or carrying a shopping bag can feel unstable or painful. If the ganglion is on the front of your wrist, it might even trigger a locking sensation in your finger, making it hard to straighten.

If you are a woman, you are more likely to have this on the front of your wrist. If you are a child under ten, the lump is also more likely to be on the front. For older children and adults, it usually appears on the back of the wrist.

We know that symptoms can fluctuate. Some lumps go away on their own, particularly in children. In young patients, many resolve within 12 to 18 months without any treatment. However, if the pain persists or limits your activities, we can discuss options to help. Surgical removal significantly reduces symptoms and has a low chance of the lump coming back. We aim to restore your comfort so you can return to your normal routine without worry.

What's actually happening

A ganglion is a fluid-filled sac that forms near your wrist joints or tendons. Think of it like a small water balloon that has leaked from a joint capsule or tendon sheath. The joint produces lubricating fluid to help your wrist

move smoothly. Sometimes, this fluid builds up pressure and pushes through a weak spot in the outer lining. It creates a bulge under the skin that you can see or feel.

The exact cause is not always clear, but certain factors make it more likely. Women are significantly more likely to be diagnosed with a volar wrist ganglion, regardless of age or military status. If you have wrist hyperlaxity, meaning your joints are naturally looser, you have a predisposition to developing ganglions. Carpal instability can also play a role. This involves inadequate wrist proprioception, poor interaction between ligaments and muscles, and lack of control of the entire process by the sensorimotor system. Essentially, your wrist's natural stabilising mechanisms may not be working in perfect sync, allowing fluid to escape.

In children, ganglions often behave differently. Pediatric ganglions of the hand have a greater rate of resolution than ganglions of the wrist. The majority of wrist MRIs in the pediatric population were ordered for wrist pain, but magnetic resonance imaging is an accurate and effective method for the non-invasive evaluation of pain in the wrist when the appropriate pulse sequence is used. For most children, observation and/or splinting are likely helpful for resolving the majority of pediatric hand and wrist ganglions. There is no consensus on the best management for pediatric wrist ganglia, and no single treatment modality confers a particular advantage or disadvantage over another.

For adults, the cyst can cause discomfort, especially if it presses on nearby nerves or restricts movement. Routine wrist radiography is not cost-effective for evaluating patients with a wrist ganglion due to a low prevalence of therapeutically significant findings. Your surgeon will focus on the symptoms and the physical nature of the cyst rather than just X-rays. If the ganglion is painful or persistent, we discuss options to remove it safely.

What we can do about it

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, starts with the least invasive options that suit your condition. We begin by confirming the diagnosis through a clinical assessment, including a history, examination, and imaging where needed. For many patients, watchful waiting is the first step. If you are under 10 years old, ganglions on the front of the wrist often resolve on their own. Between 69% and 79% of these cases disappear within 12 to 18 months without any treatment. We may recommend splinting to support the wrist and reduce irritation. For older children and adults, observation is also common, as many ganglions shrink or disappear over time.

If symptoms persist, we discuss non-surgical options. Aspiration involves using a needle to drain the fluid from the cyst. Doing this at least once can be a cost-effective step before considering surgery. We do not use sclerosant injections (chemical agents that scar the tissue) due to safety risks, including potential injury to nearby arteries. Pain management typically involves simple pain relief or anti-inflammatory medications. Physiotherapy or hand therapy can help maintain movement and strength in the wrist. While these measures do not always remove the cyst, they can reduce discomfort and improve function.

Surgery is considered when conservative care has not provided enough improvement, or if the ganglion is painful, growing, or limiting your daily activities. We offer both open excision and arthroscopic excision. Open excision involves a small incision to remove the cyst and its root, offering a lower chance of recurrence

compared to aspiration. Arthroscopic excision uses a camera and small instruments through tiny incisions. Both methods are effective at reducing symptoms. We discuss the risks and benefits of each approach with you, including the possibility of residual pain or functional limitations, particularly if your work requires forceful wrist movements. This is a shared decision based on your specific needs and lifestyle.

Patients are generally referred to our clinic by their GP; if a physiotherapist has suggested you see us, you will still need a referral from your GP in order to be eligible for the Medicare rebate.

What to expect

Most wrist ganglia are harmless fluid-filled lumps that may settle on their own. In children under 10, about 69% to 79% of these lumps disappear spontaneously within 12 to 18 months. Your surgeon may suggest watching and waiting or using a splint to help resolve the majority of these cases. If the lump causes pain or does not go away after about two months, surgery is usually recommended.

For adults, the outlook depends on how you choose to manage it. Surgical removal significantly reduces symptoms and leads to high patient satisfaction. However, you should know that about 10% of lumps return after surgery. If you choose aspiration (draining the fluid with a needle), most ganglions come back. Open surgery offers a lower chance of recurrence compared to aspiration or arthroscopic keyhole surgery.

Your recovery feels different depending on the treatment. If you have surgery, you can expect some swelling and stiffness as your wrist heals over weeks to months. If you are a woman with preoperative pain around a dorsal (back of the wrist) ganglion, you are more likely to have residual pain after surgery. Similarly, if your job or hobbies require forceful wrist extension, you face a considerable risk of ongoing pain and functional limitations after open surgery.

We advise against using sclerosant injections to treat wrist ganglia. This practice carries a risk of catastrophic complications, such as injury to the radial artery. Routine X-rays are not typically needed for evaluation, as they rarely change the treatment plan. Your surgeon will discuss which option fits your lifestyle and symptoms best.

When to see someone

See your GP if you have persistent pain that does not improve with rest. Ask for a specialist review if you notice weakness, instability, or if the lump locks or gives way. Seek help if symptoms interfere with your sleep or work, or if you experience a sudden worsening. While many ganglions resolve on their own within 18 months, ongoing discomfort warrants assessment. Your surgeon can determine if imaging is needed to rule out other causes. Early evaluation helps manage pain and prevents functional limitations, especially if your activities require forceful wrist movements.

In more depth

This section goes further than you need for your own treatment decisions. Wrist ganglia are worth the extra reading because the choice is genuinely between accepting a recurrence risk and accepting an operation – and the numbers behind that trade are clear enough to decide on.

ASPIRATION RECURS; EXCISION DOES NOT, AS OFTEN

The two active treatments are drawing the cyst out with a needle, and removing it surgically along with its stalk. Pooling **2,239** patients, **open surgical excision offers a significantly lower chance of recurrence than aspiration**. Arthroscopic excision has produced promising results, but comparative trial data are limited and have **not demonstrated its superiority** [1].

The mechanism explains the difference. A ganglion is not a free-floating sac of fluid; it connects by a stalk to the underlying joint capsule, and the joint keeps producing the fluid. Aspiration empties the reservoir and leaves the source, so refilling is a common outcome rather than a treatment failure. Excision aims to trace and remove the stalk at its origin.

KEYHOLE AND OPEN REMOVAL PERFORM ALIKE

Where excision is chosen, the approach has been compared directly. Across **910** patients, **arthroscopic and open approaches have comparable outcome profiles for recurrence and complications**, with the authors calling for standardised, adequately powered studies [2].

That places the decision on secondary grounds – scar, surgeon familiarity, and whether other intra-articular pathology needs inspecting at the same time – rather than on recurrence risk.

NOBODY AGREES ON WHAT TO DO AFTERWARDS, AND IT MAY NOT MATTER

A small, honest finding. A systematic review and survey of hand surgeons found them **divided on whether to immobilise the wrist after dorsal ganglion excision**, and in terms of functional outcome there is **no compelling data to suggest one strategy is superior** [3].

It is worth knowing that instructions varying between surgeons here reflects genuine equipoise rather than one of them being wrong.

THE STRONGEST ARGUMENT IS OFTEN FOR DOING NOTHING

None of the above establishes that a ganglion should be treated. These are benign cysts. They frequently fluctuate in size, and a proportion resolve without any intervention. They do not turn into anything else.

That reframes the decision. The reasons to treat are pain, interference with wrist movement or grip, pressure on a nearby nerve, or a size that genuinely bothers the person – not the existence of the lump. Given that aspiration carries a meaningful recurrence rate and excision carries the risks of an operation on a joint capsule, watchful waiting is a legitimate first position, and one worth stating explicitly rather than treating as a failure to act.

The exception is a ganglion causing nerve symptoms – numbness, weakness, or pain radiating into the hand – where the cyst is compressing a structure that does not tolerate it indefinitely, and watchful waiting is no longer the low-risk option.

REFERENCES

1. Head L, Gencarelli JR, Allen M, Boyd KU. Wrist ganglion treatment: systematic review and meta-analysis. *J Hand Surg Am.* 2015;40(3):546-553.e8.
2. Crawford C, Keswani A, Lovy AJ, Levy I, Lutz K, Kim J, et al. Arthroscopic versus open excision of dorsal ganglion cysts: a systematic review and meta-analysis. *J Hand Surg Eur Vol.* 2017;43(6):659-64.
3. Wong CR, Karpinski M, Hatchell AC, McRae MH, Murphy J, McRae MC. Immobilization of the wrist after dorsal wrist ganglion excision: a systematic review and survey. *Hand (N Y).* 2021;18(2):254-63.