

## Wrist tenosynovitis (de Quervain's tenosynovitis)

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Fritz de Quervain was a Swiss surgeon whose interests included wrists and thyroid glands. He was a prolific writer, publishing dozens of articles and books. He gave his name to a type of thyroiditis and this wrist disorder, and is probably the one responsible for the presence of iodine in your table salt (J Hand Surg Am 2004;29:1164).

De Quervain's tenosynovitis is a common primary care presentation, a clinical diagnosis and tends to cause pain and swelling on the radial aspect of the wrist (JAMA 2022;327:2434).

*This article was updated in November 2022.*

### What is it?

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- There is thickening and degeneration of the shared tendon sheath containing the tendons of abductor pollicis longus and extensor pollicis brevis.
- The changes cause narrowing of the canal which then causes changes in the tendon fibres, resulting in swelling.
- Smooth gliding of the tendon through the sheath is then affected (JAMA 2022;327:2434, [BMJ Best Practice](#), accessed November 2022).
- The exact causative mechanism remains unknown. It is not considered an inflammatory process; this is more of a fibrotic pathology (JAMA 2022;327:2434).
- More common in the dominant hand ([Ortho Bullets](#), accessed November 2022).

### Epidemiology

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- Incidence 1 in 1000 per year ([Ortho Bullets](#), accessed November 2022).
- More common in women ([BMJ Best Practice](#), accessed November 2022).
- Peak incidence in the 50s but pregnant and postnatal females have increased incidence when younger.

### Risk factors

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- Overuse.
- Postpartum (Obstet Gynaecol 1986;68:411).
- Association with video gaming: *gamer's thumb* (Int Orthop 2019;43:2587, Ann Occup Environ Med 2014;26:22).
- Not thought to be occupational as no study has ever established an association between hand use at work or trauma with de Quervain's tenosynovitis (Plast Reconstr Surg. 2013;132:1479, BMC Musculoskelet Disord 2015;16:126, J Wrist Surg 2019;8:90).
  - *We are not occupational health experts, and we would think very carefully before stating our professional opinion that this condition is caused by a patient's job, e.g. on a fit note or report. This is a potentially contentious medico-legal situation and you may be called upon to justify your opinion to our 'learned friends'...*

### History and examination

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- Gradual-onset pain, tenderness and swelling on the radial side of the wrist, around 1–2cm proximal to the radial styloid.
- Pain exacerbated by thumb movement.
  - *Base of thumb osteoarthritis (in the 1<sup>st</sup> carpo-metacarpal joint) can coexist, and at times be difficult to distinguish from wrist tenosynovitis. Osteoarthritis may be tender over the joint line and have a positive 'grind test' (axial pressure is applied to the thumb, thus compressing the joint without stretching and provoking the tendons) ([BMJ Best Practice](#), accessed November 2022).*

## Special tests

There are two important tests (Finklestein's and Eichhoff's) and two important learning points. First, the learning points and then the tests!

- Finklestein's test is more accurate than Eichhoff's test, as well as being less uncomfortable.
- BUT...Eichhoff's test is commonly misdefined as Finklestein's test! (J Hand Microsurg 2018;10:116).

### That sounds confusing! What are the tests?

**Eichhoff's test** (commonly misnamed Finklestein's test) is performed by asking the patient to make a fist enclosing the thumb. The wrist is then passively, briskly moved into ulnar deviation, which causes pain around the radial styloid (J Hand Surg 1992;17:481).

**Finklestein's test** can be broken down into 3 stages (although it was not originally described in steps):

- First, place the patient's wrist over the edge of a table (mid-supination, i.e. thumb uppermost) and into gentle active ulnar deviation. A positive test reproduces 'the pain' around the radial styloid.
- If that doesn't elicit the pain, the examiner may apply gentle passive ulnar deviation.
- If that does not elicit pain, then finally, the examiner grasps the patient's thumb and passively flexes it into the palm, which may reproduce the pain (J Hand Surg Am. 2010;35:1513).

The Finklestein test (as described here) is more specific and with fewer false positive results than the Eichhoff's test (J Hand Microsurg 2018;10:116). More research is required to produce accurate sensitivity and specificity figures (Stat pearls, accessed November 2022).

### The 'selfie test'

The COVID pandemic heralded several innovations in remote consulting. A novel test called the 'selfie-posture test' has been proposed for diagnosing de Quervain's tenosynovitis. Here, the patient holds their mobile phone in the posture used to take a 'selfie photo', with an extended arm, flexed wrist, a little ulnar deviation and the thumb placed in the position over the screen to enable hitting the shutter button (flexion/opposition). The authors propose that this test might be useful in telemedicine diagnostics, although there are no studies looking at its accuracy yet! (J Family Med Prim Care 2020;9:2139)

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## Investigations




De Quervain's tenosynovitis is a clinical diagnosis, but ultrasound *could* be used if diagnostic doubt exists (J Hand Surg Am 2009;34:759).

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## Management

The following approach is suggested ([BMJ Best Practice](#), accessed November 2022):

- NSAID (topical or oral) and immobilisation with a thumb splint (spica) for 4–6 weeks.
- Corticosteroid injection (may be used in pregnancy).
  - A 2015 meta-analysis suggested corticosteroid injection provided an 84% success rate in reducing symptoms compared with controls (splint, placebo injection, acupuncture) (Open Orthop J. 2015;9:437).
- If non-operative treatment fails, surgical release of the first dorsal extensor compartment may be performed.

	<p><b>Wrist tenosynovitis (de Quervain's tenosynovitis)</b></p> <ul style="list-style-type: none"> <li>• Common condition, especially in pregnancy or postpartum period.</li> <li>• Pain over radial styloid area.</li> <li>• Clinical diagnosis.</li> <li>• Treatment involves rest, NSAID and corticosteroid injection.</li> <li>• Surgical options for those not responding to conservative measures.</li> </ul>
	<p><i>Can you inject wrist tenosynovitis? If not, can you learn how?</i></p>
	

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