CONDITION

Tenosynovitis

Tenosynovitis is inflammation of the protective sheath surrounding a tendon.

WHAT IT IS
Inflammation of the protective sheath around a tendon

BODY SYSTEM
Muscles, tendons, and joints

MAIN SYMPTOMS
Pain, swelling, stiffness, catching or clicking

WHAT CAUSES IT
Overuse, injury, inflammatory illness, or infection

HOW IT IS DIAGNOSED
Examination; ultrasound, MRI, or fluid testing when needed

MAIN TREATMENT
Activity changes, splinting, medicines, injections, therapy, or surgery

CAN IT BE CURED?
Sometimes - many cases settle with treatment

IS IT AN EMERGENCY?
Sometimes - fever or rapidly worsening hand swelling

LONG-TERM OUTLOOK
Most improve; recurrence or lasting stiffness can occur

Overview

A tendon is a strong cord that connects muscle to bone. Many tendons pass through a thin, lubricated covering called a tendon sheath. Tenosynovitis means this sheath has become inflamed or irritated.

The condition often affects the hands, wrists, ankles, or feet. Pain may appear when you move the nearby joint or use the affected tendon. Swelling can make the tendon feel stiff, and movement may produce clicking or catching.

Common examples include de Quervain tenosynovitis, which affects the thumb side of the wrist, and trigger finger, which causes a finger or thumb to catch or lock. These conditions involve narrowing or irritation around the tendon sheath.

Tenosynovitis is not the same as tendinitis. Tendinitis mainly affects the tendon itself, although

both problems can occur together and cause similar symptoms.

Most non-infectious cases are manageable. However, tenosynovitis caused by bacteria can damage a tendon and nearby tissues quickly, especially in a finger or hand. Rapidly worsening swelling, severe pain, fever, or redness spreading from a wound needs urgent assessment.

Symptoms

Symptoms usually occur along the path of a tendon rather than across an entire joint. They may start gradually after repeated activity or begin suddenly after an injury or infection.

Possible symptoms include:

De Quervain tenosynovitis usually causes pain and swelling near the base of the thumb. Gripping, lifting, pinching, or moving the wrist toward the little finger may make it worse.

Trigger finger often causes soreness in the palm at the base of a finger or thumb. The digit may click, catch, or become temporarily stuck in a bent position, particularly after rest.

Infectious tenosynovitis can cause rapidly increasing pain, warmth, redness, and swelling. A finger may be held slightly bent because straightening it is very painful. Fever may occur, but its absence does not rule out an infection.

- Pain or tenderness over the affected tendon
- Swelling along the tendon sheath
- Stiffness or reduced movement
- Pain that becomes worse with a particular motion
- Clicking, catching, or locking of a finger or thumb
- A grating or crackling feeling during movement
- Weakness caused by pain

Causes and risk factors

Tenosynovitis has several possible causes. Sometimes no single cause can be identified.

Repeated or forceful movement can irritate a tendon sheath, especially when an activity is new or its intensity has recently increased. Work tasks, sports, hobbies, gripping, or lifting may contribute. Repetition alone does not explain every case, and ordinary use does not necessarily mean that you caused the condition.

An injury can directly irritate the sheath. Swelling after a sprain, strain, or blow may also reduce the space available for a tendon to move.

Inflammatory conditions such as rheumatoid arthritis or psoriatic arthritis can affect tendon sheaths. Gout and related crystal conditions may also cause inflammation around a tendon. Diabetes and some thyroid conditions are associated with a higher chance of trigger finger.

De Quervain tenosynovitis can occur during pregnancy or after childbirth. Hormonal changes, fluid retention, and repeated lifting or supporting a baby may all contribute.

Infectious tenosynovitis develops when germs enter or spread to a tendon sheath. This may happen after a puncture wound, cut, animal or human bite, injection, or surgery. Less often, infection spreads through the bloodstream. Hand and finger tendon sheaths are particularly vulnerable because infection can travel along their narrow enclosed spaces.

Diagnosis

A healthcare professional will ask where the pain began, what movements affect it, and whether there was an injury, bite, puncture, or recent change in activity. They may also ask about arthritis, gout, diabetes, and other health conditions.

During the examination, they may press along the tendon and watch how it moves. They will look for swelling, warmth, redness, tenderness, clicking, or locking. Specific hand or wrist movements can help identify de Quervain tenosynovitis or trigger finger, but no single manoeuvre is perfect.

Imaging is not always needed when the symptoms and examination are typical. Ultrasound can show fluid, thickening, and restricted tendon movement. MRI provides more detailed images and may be used when the diagnosis is uncertain or a deeper problem is suspected. An X-ray does not show the tendon sheath well, but it can help identify a fracture, arthritis, or another bone problem.

If infection is possible, assessment should not be delayed for routine imaging. Blood tests may look for inflammation or infection. Fluid or tissue collected with a needle or during surgery can be tested to identify the germ and guide antibiotic treatment.

Tests for inflammatory arthritis, gout, or another underlying condition may be appropriate when several tendons or joints are affected, symptoms keep returning, or the history suggests a wider illness.

Treatment and management

Treatment is based on the location, cause, severity, and duration of the problem. Infectious and non-infectious tenosynovitis require very different care.

For non-infectious tenosynovitis, temporarily reducing movements that clearly worsen the pain may allow irritation to settle. Complete inactivity is not usually needed. A splint or brace may limit the painful motion while still allowing safe use of the rest of the hand, wrist, ankle, or foot.

Cold packs wrapped in a cloth may help with short-term pain and swelling. Anti-inflammatory medicines or other pain relief may be considered. These medicines are not suitable for everyone, so follow the label and check with a pharmacist or clinician if you have kidney disease, stomach ulcers, take blood thinners like warfarin or apixaban , are pregnant, or are unsure what is safe.

A hand therapist or physiotherapist can help you restore movement and strength without repeatedly overloading the tendon. They may also suggest changes to tools, grip, technique, or work setup.

A corticosteroid injection into or around the tendon sheath can reduce inflammation in conditions such as trigger finger or de Quervain tenosynovitis. It is not used when infection is suspected. Benefits and risks, including temporary pain, skin changes, and uncommon tendon injury, should be discussed before an injection.

Surgery may be considered when symptoms remain limiting despite appropriate non-surgical treatment. Procedures for trigger finger or de Quervain tenosynovitis release the tight tissue around the tendon so it can glide more freely.

Infectious tenosynovitis needs urgent hospital treatment. Antibiotics like amoxicillin or doxycycline are usually given promptly, and surgery may be needed to open, wash out, and drain the tendon sheath. Treatment may be adjusted after laboratory results identify the germ.

When tenosynovitis is linked to inflammatory arthritis, gout, or another condition, managing that condition is also important.

Complications

Ongoing inflammation may lead to persistent pain, swelling, stiffness, or weakness. Scar tissue and thickening can restrict tendon movement, causing continued catching or reduced motion.

Symptoms can return, especially if the underlying condition remains active or the tendon is repeatedly overloaded before recovery. After surgery or prolonged inflammation, some people need therapy to regain movement and function.

Untreated infectious tenosynovitis can damage the tendon, joint, bone, skin, or nearby tissues. It may cause lasting stiffness or loss of tendon function. Infection can also spread into the bloodstream, although prompt treatment lowers these risks.

Rarely, severe inflammation or infection can lead to tendon rupture, meaning the tendon tears and can no longer move the attached body part normally.

Prevention

Tenosynovitis cannot always be prevented. Cases related to inflammatory illness, pregnancy, diabetes, or an unclear cause may occur even when you take sensible precautions.

You may be able to reduce irritation from activity by increasing new work or exercise gradually, taking breaks from forceful gripping, and varying repetitive tasks. Using suitable tools and a comfortable technique may also reduce strain.

Treat cuts, bites, and puncture wounds promptly by cleaning them and covering them with a clean dressing. Seek timely medical advice for deep punctures, bites to the hand, contaminated wounds, or wounds that become increasingly painful, red, warm, or swollen.

If you have an inflammatory condition, keeping up with its planned care may reduce tendon sheath inflammation, but it cannot guarantee prevention.

Living with it and what to expect

Many non-infectious cases improve over several weeks or months once the irritated tendon is protected and treated. Recovery time is influenced by which tendon is affected, how long symptoms have been present, and whether there is an underlying condition.

Pain often settles before full strength and flexibility return. A gradual return to usual activity can help avoid a cycle in which symptoms improve, activity increases suddenly, and pain returns.

Trigger finger and de Quervain tenosynovitis may improve with splinting, activity changes, therapy, or an injection. Some cases persist or recur and eventually need surgery. Most people can continue normal daily activities, although temporary changes to work, exercise, childcare, or hobbies may be needed.

Tenosynovitis caused by rheumatoid arthritis or another long-term inflammatory condition may come and go with the activity of that illness. Treatment may need to address both the local tendon symptoms and the wider condition.

Recovery after an infection can take longer. Even after the infection has cleared, swelling and stiffness may remain for weeks or months. Hand therapy may be important. Lasting loss of motion is more likely when treatment was delayed or tissue damage was extensive.

When to get medical help

Arrange a routine appointment if pain, swelling, clicking, or stiffness is not improving with short-term activity changes, keeps returning, or is interfering with sleep, work, or daily tasks. Assessment is also useful if a finger repeatedly locks or if you cannot identify a clear reason for the symptoms.

Seek urgent same-day care if:

Go to an emergency department if there is rapidly spreading redness, severe swelling, loss of feeling, a pale or blue finger, confusion, faintness, breathing difficulty, or other signs of serious infection.

Sudden inability to move a finger, thumb, wrist, ankle, or foot after an injury also needs prompt assessment because a tendon may have torn.

- Pain, redness, warmth, or swelling is rapidly worsening
- Symptoms began after a bite, puncture, injection, or contaminated wound
- A finger is swollen, held bent, and very painful to straighten
- Pus or cloudy fluid is draining from a wound
- You have fever or feel unwell with a painful, swollen tendon area

Common questions

How long does tenosynovitis take to heal?

Mild non-infectious cases may improve over several weeks, while persistent cases can take months. Recovery may be longer when symptoms have been present for a long time, an inflammatory condition is involved, or surgery or treatment for infection is needed.

Is tenosynovitis the same as carpal tunnel syndrome?

No. Tenosynovitis affects a tendon sheath. Carpal tunnel syndrome occurs when the median nerve is compressed at the wrist, often causing numbness, tingling, or weakness in the hand. The two conditions can cause pain in a similar area and may occasionally occur together.

Can I keep working or exercising with tenosynovitis?

You may be able to continue activities that do not increase pain or swelling. Repeatedly pushing through symptoms can prolong irritation. Temporary changes to grip, workload, equipment, or exercise intensity may help while the tendon settles.

Does tenosynovitis go away on its own?

Some mild cases settle with time and reduced irritation. Others need splinting, therapy, an injection, or surgery. Infectious tenosynovitis does not safely resolve without urgent medical treatment.

Is tenosynovitis a type of arthritis?

No, but inflammatory arthritis can cause it. Arthritis mainly affects joints, while tenosynovitis affects the sheath around a tendon. Pain from the two can overlap.

Why does my finger click or get stuck?

A swollen tendon may have difficulty sliding through its surrounding tunnel. As it moves through the narrowed area, it can catch and then release with a click. This pattern is commonly called trigger finger.

Sources

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