

# HOW TO MANAGE YOUR DE QUERVAIN'S TENOSYNOVITIS

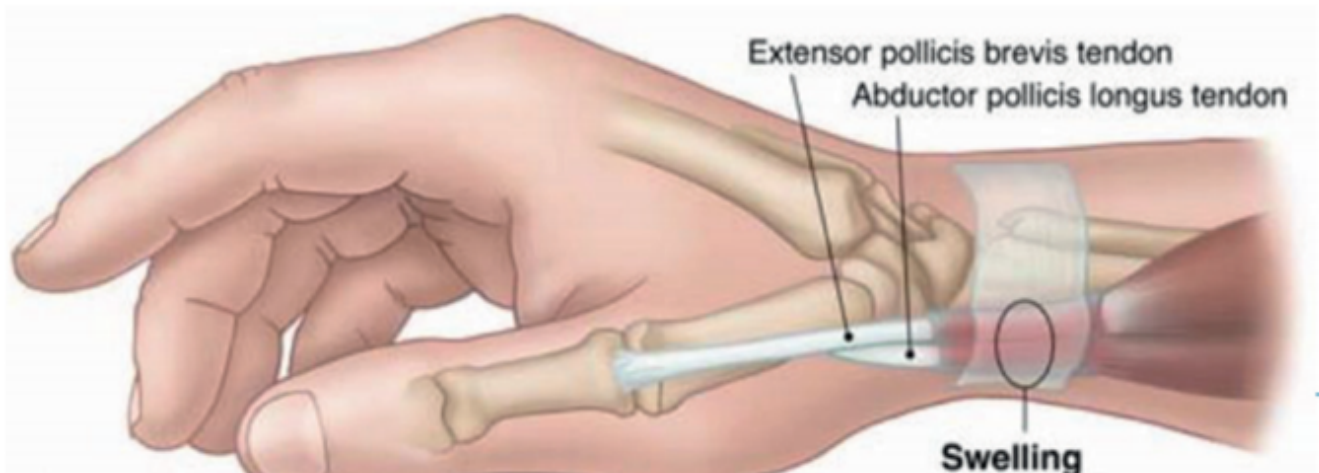


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# What is De Quervain's Tenosynovitis?

De Quervain's Tenosynovitis (DQT) is a painful condition that affects the tendons on the thumb side of the wrist. The tendons pass through a tunnel known as a tendon sheath, which helps the tendons to glide smoothly when the muscles contract. When the sheath thickens and swells, the abductor pollicis longus tendon and the extensor pollicis brevis tendon cannot easily move through the sheath. The increased friction caused by constantly using the thumb results in tendon irritation, inflammation and pain.



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## Common Symptoms

- The main symptoms are pain, swelling, or tenderness near the base of the thumb. Persons with DQT have difficulty gripping objects and performing daily activities as the pain may worsen with any thumb and wrist movements, especially with grasping, pinching, twisting, and lifting actions.

# How To Manage Your De Quervain's Tenosynovitis

## How is the condition diagnosed?

De Quervain's Tenosynovitis is often diagnosed with ultrasound. Other physical assessments by clinicians include:

### Finkelstein's test

Bend your thumb across the palm of your hand and tilt your wrist in the direction of your last finger.

*A positive test will elicit pain along the wrist, near the base of the thumb.*



### Eichhoff's test

Bend your thumb across the palm of your hand and clench your fingers into a fist. Tilt your wrist in the direction of your last finger.

*A positive test will elicit pain along the wrist, near the base of the thumb.*



## What are the risk factors\*?

- Common in women above 40 years of age.
- Associated with mechanical stress from overuse such as engaging in activities with repetitive thumb movements
- Hormonal changes related to pregnancy, menopause, and use of aromatase-inhibitor therapy increase the risk of developing DQT

\*Shen, P. C., Chang, P. C., Jou, I. M., Chen, C. H., Lee, F. H., & Hsieh, J. L. (2019). Hand tendinopathy risk factors in Taiwan: A population-based cohort study. *Medicine*, 98(1).

## What to expect?

Symptoms of DQT will usually improve with rest and a change in your activities to avoid aggravating movements of your thumb and wrist. If your symptoms persist, please consult your doctor for treatment, which may include anti-inflammatory medication, corticosteroid injection and/or surgery.

## Services provided by Singapore Cancer Society Rehabilitation Center for DQT management

Generally, the initial intervention plan involves rest and splinting, pain-free range of motion exercises, modalities for pain relief, and progresses to strengthening and gradual return to normal daily activities. Specifically, interventions may include:

- Use of thumb spica splint to immobilize the thumb and wrist and prescription of wearing schedule and exercises to prevent muscle tension and joint stiffness
- Application of therapeutic ultrasound to reduce pain and promote healing of injured tissues
- Education on soft tissue massage to relax tight musculature that can cause more pain
- Education on ergonomics, activity modification and use of adaptive equipment to prevent overuse of and/or repetitive stress on thumb and wrist
- Prescription of strengthening exercises and functional tasks

## What can you do to self-manage?

### 1. ICE

When you experience intense pain especially after performing a task, you may consider applying ice (wrapped in plastic and covered with towel) over the affected area for about 10

minutes every 2 to 3 hours and for 1 to 2 days to help reduce acute pain and swelling. Ice should not be applied directly to the skin as this can cause burns. Please inform your therapist if you have problem sensing cold before attempting ice therapy.



### 2. REST

During the early phase when your pain is intense, you may need to wear a splint continuously for 2 to 3 weeks to immobilize both your thumb and wrist.

If your symptoms are less severe, you can monitor your pain and simply rest your thumb and avoid performing any gripping, pinching, twisting, lifting and/or actions or positions that can bring about pain.



Thermoplastic Splint



Pre-fabricated Splint



# How To Manage Your De Quervain's Tenosynovitis

## 3. MASSAGE

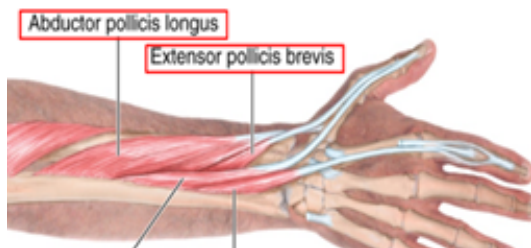
Performing massage can help to relax the muscle that pulls on the tendon, reducing irritation and pain.

Do not massage directly on the painful wrist.



### Massage 1

Locate the muscles on the back of your forearm by pressing down on the muscles as you move your thumb. Massage for 30 seconds by pressing down on the muscles and moving side to side.



Press on the muscles and gently move your thumb forward and backward, side to side within pain-free limit.

Repeat 3 times in a day or more often as tolerated.



### Massage 2

Go to the space between your thumb and index finger, pinch or press down on the thumb muscles in your palm for 30 seconds.



Press on the muscles and gently move your thumb as tolerated.

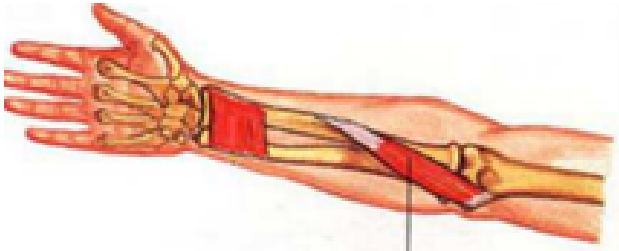
Repeat 3 times in a day or more often as tolerated.

# How To Manage Your De Quervain's Tenosynovitis



## Massage 3

Locate the muscle about 5 cm above your elbow and massage by pressing down on the muscle and moving side to side for 30 seconds.



**Pronator Teres Muscle**

Press on the muscle and gently rotate your forearm within pain-free limit.

Repeat 3 times in a day or more often as tolerated.

## 4. EXERCISE

To avoid muscle tension and joint stiffness, you will need to remove the splint intermittently to perform gentle stretching exercises of your thumb and wrist that are within pain-free limit. If you do not need to wear a splint, you will also benefit from these gentle stretches. If your pain becomes worse after the exercises, stop the exercises and inform your therapist.

### Stage One : Severe Pain



#### Exercise 1A

The affected hand is placed palm down on a table. Using your other hand gently lift the thumb away from the table. Hold for 5 seconds and lower the thumb gently back on the table. Repeat 10 times every 2 to 3 hours or 2 to 3 times in a day as tolerated.



# How To Manage Your De Quervain's Tenosynovitis

## Stage One : Severe Pain



### **Exercise 1B**

Position your affected hand sideways with your little finger in contact with a table. Using your other hand lift the thumb away from the fingers. Hold for 5 seconds and gently lower the thumb, resting on your index finger. Repeat 10 times every 2 to 3 hours, or 2 to 3 times in a day as tolerated.



### **Exercise 1C**

Support your forearm on a table and allow your affected wrist to bend towards the floor until you start to feel a stretch at the base of your thumb. Using your other hand return the wrist to the same level as the table. Repeat 10 times every 2 to 3 hours, or 2 to 3 times in a day as tolerated.

## Stage Two: When exercise become pain-free



### **Exercise 2A**

Place your hand flat on a table. Move your affected thumb out to the side as far away from your index finger as tolerated. Hold for 5 seconds and repeat 10 times, 2 to 3 times in a day as tolerated.

## Stage Two: When exercise become pain-free



### **Exercise 2B**

Position your affected hand sideways with your little finger in contact with a table. Using your other hand lift the thumb away from the fingers. Hold for 5 seconds and gently lower the thumb, resting on your index finger. Repeat 10 times every 2 to 3 hours, or 2 to 3 times in a day as tolerated.

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### **Exercise 2C**

Support your forearm on a table and allow your affected wrist to bend towards the floor until you start to feel a stretch at the base of your thumb. Using your other hand return the wrist to the same level as the table. Repeat 10 times every 2 to 3 hours, or 2 to 3 times in a day as tolerated.

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### **Exercise 2D**

Place your hand flat on a table. Move your affected thumb out to the side as far away from your index finger as tolerated. Hold for 5 seconds and repeat 10 times, 2 to 3 times in a day as tolerated.

## Stage Two: When exercise become pain-free



### **Exercise 2E**

Lift your affected thumb away from your palm so that it is pointing upwards. Hold for 5 seconds and repeat 10 times, 2 to 3 times in a day as tolerated.

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### **Exercise 2F**

Bend your affected thumb to touch your little finger and move towards the base of the little finger as tolerated. Hold for 5 seconds and repeat 10 times, 2 to 3 times in a day as tolerated.

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### **Exercise 2G**

Start with your palms facing down and slowly rotate your forearm over so that your palms face upwards. Maintain a relaxed thumb during exercise. Repeat 10 times, 2 to 3 times in a day as tolerated.



## Stage Three: When light activities become pain-free



### **Exercise 3A**

Place an elastic band around your fingers and gently move your affected thumb against the resistance of the band. Repeat 10 times, 2 to 3 times in a day as tolerated.

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### **Exercise 3B**

Start with a thumb up position, and using your other hand push the affected thumb to provide some resistance and hold for up to 45 seconds before pushing the affected thumb down towards the little finger. Repeat 10 times, 2 to 3 times in a day as tolerated.

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### **Exercise 3C**

Start with your affected thumb flexed inward and using your other hand slowly lift or pull your affected thumb away from the fingers against the resistance given by your other hand. Repeat 10 times, 2 to 3 times in a day as tolerated.



## Stage Three: When light activities become pain-free



### **Exercise 3D**

Position your affected wrist sideways and do not move your forearm. Hold a can or a bottle and gently bend your wrist towards you. Repeat 10 times, 2 to 3 times in a day as tolerated.

## 5. ACTIVITY MODIFICATION

Reducing stress on the tendons can be achieved through modifying the way you carry out your tasks and activities. Observe the tasks that aggravate your pain and change the way you perform the same task by:

### 1. Modifying your grip and keeping your thumb and wrist in a comfortable position.



Wringing table cloth with your thumb spread and wrist bent



Use your palms to squeeze the table cloth



Use your palms to squeeze the sponge

# How To Manage Your De Quervain's Tenosynovitis

## 2. Decreasing the load



Holding the mug with your thumb



Use your palms to hold the mug

## 3. Relying on adaptive equipment



Eg. Built-up handle for easier grip

## 4. Changing frequency and duration of a task



Eg. Reduce time spent in food preparation (like choosing ready-to-eat options)



**NOTES:**





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REHABILITATION CENTRE

*Celebrating Recovery*

**Singapore Cancer Society  
Rehabilitation Centre**

52 Jurong Gateway Road  
JEM Office Tower #08-04  
Singapore 608550

Email: [rehab@singaporecancersociety.org.sg](mailto:rehab@singaporecancersociety.org.sg)

[www.singaporecancersociety.org.sg](http://www.singaporecancersociety.org.sg)

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