

# BURSITIS, TENDINITIS THE CARPAL TUNNEL SYNDROME and RELATED CONDITIONS

This information leaflet is published by the Arthritis Foundation as part of our continuing education programme for all people with arthritis.



The Bone and Joint Decade is a global campaign to improve the quality of life for people with musculoskeletal conditions and to advance understanding treatment of those conditions through research, prevention and education.



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or inflammation of the connecting tissues between the heel bone (calcaneus) and the tissue of the fore and midfoot. Walking is painful until pressure is taken off the heel.

### The carpal tunnel syndrome

The median nerve passes through a fibrous tunnel (the carpal tunnel) on its way from the forearm to the hand. The median nerve supplies sensation to the thumb, index and half of the middle finger. Pain, numbness and tingling in the thumb and index finger disturbs sleep. Shaking or rubbing the hand improves the symptoms. In advanced cases there may be wasting and weakness of the muscles at the base of the thumb.

### Treatment of Bursitis / tendinitis

1. Rest is beneficial for up to 48 hours, and keeping the arm in a sling may be very helpful. A wrist splint, worn at night, will help to relieve the pain of the carpal tunnel.
2. Ice cubes rolled in a towel and applied to the painful area for 15 - 20 minutes 3 - 4 times daily may also help.
3. After a period of rest graduated exercise must be started to keep the joints moving freely.
4. Anti-inflammatory drugs may be prescribed to reduce inflammation and pain.

In some cases cortisone drugs may be injected into the area of inflammation. The cortisone acts locally so there is little danger of serious side effects. Local cortisone acts very quickly. Surgery is rarely needed for resistant problems at the shoulder, elbow or for the carpal tunnel.

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## What do these mean ?

A bursa is a closed sac-like structure which allows two tissues to glide freely over one another. Common bursal sacs are at the tip of the elbow, at the shoulder, at the patella (knee-cap). Bursitis means inflammation of the bursal sac.

Tendons are specialised extensions of muscles which attach muscles to bones. Tendinitis is inflammation of a tendon. An enthesis is the point of attachment of a ligament or tendon to bone. Inflammation at this point is called an enthesopathy.

## What causes bursitis/tendinitis ?

Repeated, particularly unaccustomed, use is one cause. Gout, rheumatoid arthritis and infection are common causes of bursitis. Some specific bursal problems have common names such as housemaid's knee, weaver's bottom, clergyman's knee, which emphasises the role of repeated use of certain parts of the body in causing inflammation.

Tendinitis or an enthesopathy may be caused by repeated or over-use. Some less common causes are rheumatoid arthritis and infections. The entheses are frequently affected in ankylosing spondylitis.

## What are the symptoms of bursitis / tendinitis ?

The main symptom is pain which may vary from a mild ache to quite severe pain which limits movement. A characteristic feature is pain which disturbs sleep especially when lying on the affected side.

## Some common types of bursitis / tendinitis

### 1. Shoulder

The shoulder is a joint which allows very complex movement, and the tendons and the shoulder bursa are commonly injured. Some of the tendons which permit rotational movements are arranged as a cuff around the humerus (upper arm bone). This is called the rotator cuff. The rotator cuff is separated from the acromion (the bony prominence at the tip of the shoulder) by a bursa called the subacromial bursa.

Unaccustomed repetitive use of the shoulder (particularly in older individuals), such as painting a wall, may cause part of the rotator cuff to become inflamed, and whenever this inflamed area is moved it produces pain which (unexpectedly) is felt at the mid upper arm, and not at the shoulder. The common movements which cause pain are raising the hand above the shoulder or turning the arm to put on a coat. Sleep is disturbed when lying on the affected side, particularly if both sides are affected. In some there may be calcium crystals in the rotator cuff (seen on X-Ray of the shoulder) which may start an attack. This is usually very severe and any movement causes intense pain.

One of the complications of tendinitis of the shoulder (frozen shoulder, when the movements are 'frozen' and may cause pain and stiffness) is that the hand, on the same or opposite side, may start to swell for some obscure reason and become stiff. The skin becomes very sensitive and turns a purple-white colour. With time (usually more than 18 months) the shoulder movements will return, but if the hand is not treated promptly the fingers may remain permanently bent.

The frozen shoulder also occurs in patients after a stroke, in some people who have Parkinson's disease and in diabetics.

The rotator cuff may rupture following use, this causes pain and difficulty in raising the arm to a horizontal position.

The biceps tendon (the biceps muscle lies in front of the humerus) may also be injured; this is called a bicipital tendinitis.

### 2. Elbow

The lower end of the humerus above the elbow joint has two prominences, one on the inside and the other on the outside of the elbow. All the muscles which move the fingers and wrist are attached to these prominences (the muscles which bend the fingers and wrist come from the inside prominence, and those which straighten the fingers and wrist come from the outside prominence). Both these attachments may be torn or become inflamed and

produce pain over these two prominences which may be very disabling. The pain of the outside prominence is called a lateral epicondylitis or tennis elbow, while the other is called a medial epicondylitis or golfer's elbow.

### 3. Hand

The flexor tendons which bend the fingers may become inflamed, or a small nodule (lump) may form in one or more tendons. These lumps may cause the tendon to stick as it slides in its sheath.

The finger will remain bent until it has been straightened by applying pressure to the finger, or by massaging the palm of the hand over the lump. This is called a trigger finger. In others the tendons of the thumb become inflamed (such as pruning, typing, etc.). This produces pain at the base of the thumb or a lump may be felt over the radius (the forearm bone above the thumb).

### 4. Hip

An inflammation of the bursa between the tendons of the buttock muscles and trochanter (the prominent part of the thigh bone on the outside of the hip). This may be very troublesome and cause anxiety about possible arthritis of the hip. Lying on the affected side may disturb sleep.

Inflammation of the bursa lying over the ischium (the bone in the buttock) will cause difficulty in sitting.

### 5. Knee

Several bursal sacs around the knee may become inflamed. One over the knee cap is called prepatellar bursitis (housemaid's knee), one just below the knee cap is called infrapatellar bursitis (clergyman's knee) and on the inside of the knee the anserine bursa may swell and cause pain, but it does not cause pain when the knee is bent.

### 6. Ankle

The commonest tendon problem of the ankle is inflammation of the achilles tendon behind the ankle. This is very common in sportsmen. Another troublesome problem at the ankle is plantar fasciitis