

# fact sheet

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## Impingement Syndrome

*Also known as:*

*Rotator Cuff Syndrome*

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### What is it?

Occurs when the rotator cuff rubs against the arch created by ligament and bone. The rotator cuff, biceps tendon and subacromial bursae must pass under the arch when the arm is moved, especially overhead. This area is known as the subacromial space, formed by the coracoacromial ligament, the most forward projection of the shoulder blade (acromion) and the head of the humerus. When the space is made smaller either by changes in the shape of the acromion, increased rigidity of the ligament, or swelling in the rotator cuff tissue, the rotator cuff is forced to rub against the arch. Impingement is thought to be precursor to a rotator cuff tear. Age, repeated overhead activity, shoulder laxity, sleeping with the shoulder abducted, previous injury and anatomical abnormalities are all causative factors.

### How is it diagnosed?

In early stages, individuals will experience pain only when the arm is used above shoulder level. The shoulder pain is relieved with rest. When caused by structural changes, activity may unmask the condition but activity modification does not provide a cure.

As the impingement syndrome becomes more chronic, pain is felt most with activity, but it is not relieved with position change or rest. Pain is also felt at night, enough to awaken the individual. There may be a clicking or popping sensation felt with arm motion, and complaints of weakness.

### What to look for

A complete shoulder examination, including a neurovascular evaluation, must be done to rule out all causes of pain. The diagnosis is confirmed by reproducing the pain with elevation of the arm against resistance and total relief of symptoms after injection of an anesthetic into the subacromial space. The examination routine described is known as the positive impingement sign or test.

### How is it treated?

In the early stages: Impingement syndrome will respond to ending the aggravating activity. Physical therapy modalities to increase shoulder stability and decrease inflammation may also be helpful. Medications to control pain and inflammation are usually prescribed. Injection of the subacromial space with corticosteroid and anesthetic agents is often part of conservative treatment.

If the impingement syndrome becomes more chronic, surgical intervention (subacromial decompression) is often necessary. The goal of treatment is to increase size of the subacromial space and remove inflamed tissue. Reshaping the acromion (acromioplasty) combined with removing the subacromial bursae and cutting the coracoacromial ligament are common procedures.

This combination of procedures is often called subacromial decompression. These procedures can be performed either through incisions (open, arthrotomy) or arthroscopically. Typically, these are outpatient procedures.

## Tests

Routine shoulder x-rays including special views of the acromial arch are used to evaluate the shape of the arch. MRI examination may be ordered to examine the integrity of the rotator cuff.

## Common Medications

Anti-inflammatories, analgesics, steroid injections, local injectable anesthetic.

## What is the expected return to work?

*Medical Treatment.* Duration depends on severity of symptoms and whether dominant or non-dominant arm is involved.

<b>Job Classification</b>	<b>RTW Minimum-Maximum</b>
Sedentary Work .....	0 - 4 days
Light Work .....	0 - 7 days
Medium Work.....	14 - 42 days
Heavy Work .....	28 - 84 days
Very Heavy Work .....	28 - 84 days

*Arthroscopic Surgery.* Heavy work is often inappropriate on a permanent basis. Duration depends on whether dominant or non-dominant arm is involved.

<b>Job Classification</b>	<b>RTW Minimum-Maximum</b>
Sedentary Work .....	7 - 21 days
Light Work .....	7 - 21 days
Medium Work .....	28 - 56 days
Heavy Work .....	56 - 84 days
Very Heavy Work .....	56 - 84 days

## Work Restrictions and Accommodations

Restrictions include no use of arm above shoulder level. No lifting, no carrying, and no pushing are normal restrictions during early treatment. These restrictions may become permanent. Facilities to allow rest could allow early return to work.

## What is the predicted outcome?

Individuals treated conservatively in the early stages of inflammation should expect recovery if all predisposing causes are removed. Recovery in more chronic situations is expected, but recovery may be prolonged due to surgical intervention.