

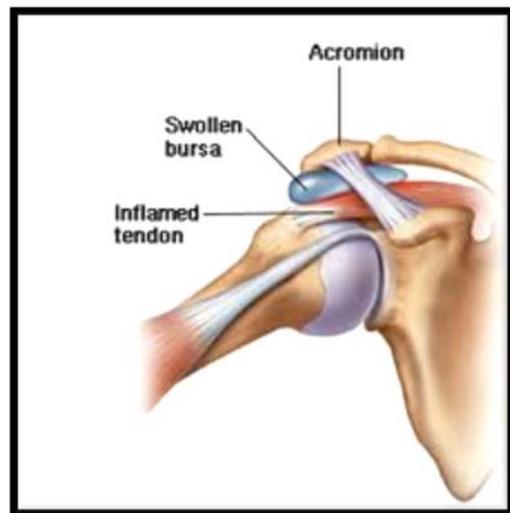
Subacromial Decompression Protocol

Anatomy and Biomechanics

The shoulder is a wonderfully complex joint that is made up of the ball and socket connection between the humerus (ball) and the glenoid portion of the scapula (socket). The socket portion of the joint is not naturally deep. For this reason, the shoulder is the most mobile joint in the body. Due to the lack of bony coverage the shoulder's proper function and stability is largely dependent on the soft tissues that surround it.

The shoulder joint is extremely important when the arm is used during activities that involve lifting, pushing and pulling, but especially when the arm is repetitively placed overhead. Over time with continual repetitive activity the soft tissues and joint surfaces of the shoulder are subject to wear and tear and degeneration. The soft tissue around the joint can become irritated and

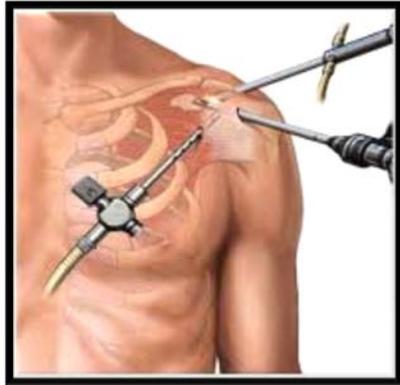
inflamed and excess bone (spurs) can form as a result. These inflammatory or degenerative changes often leave the shoulder feeling achy and sore during everyday activities.



Treatment Options

Regardless of nature or extent of the degeneration in the shoulder your physician will work with you to determine what the best course of treatment will be. In many cases the pain and dysfunction associated with degenerative changes can be successfully treated with rest, anti-inflammatory measures, activity modification and Physical Therapy. When these conservative measures are unsuccessful in restoring function your physician may recommend that you undergo arthroscopic surgery to remove the irritated, degenerative tissue in the shoulder.

Surgery



The subacromial decompression procedure involves removing tissue from the front part of the shoulder. This part of the shoulder is referred to as the subacromial space, as it is located below the outcropping of bone on the scapula (shoulder blade) known as the acromion process. During the procedure the end of the acromion process and any inflamed tissue including the subacromial bursa is debrided. This creates more room in the front of the shoulder so that the tendons of the rotator cuff can move freely without getting irritated or pinched. The procedure is performed arthroscopically and is, in most cases an outpatient day surgery. This means that it is very rare to have to spend the night in the hospital.

Recovery/Time off Work

Before undergoing subacromial decompression surgery your doctor will discuss the recovery process with you. It is very important that the patient knows that the recovery process is fairly difficult and time consuming. He or she must be an active participant during this process, performing daily exercises to ensure there is proper return of the shoulder's range of motion and strength. There is a large amount of variability in the time it takes to fully recover from this procedure and is typically dependent on the extent of the damage that needs to be fixed. It is usually estimated that it will take at least 3-4 months to feel as though you have completely regained the use of your arm. Some cases may take as long as 6-9 months to make a full recovery. People with desk jobs should plan to take at least 1 week off from work. Those with jobs that require physical activity and lifting will likely be out of work for at least 3 months. **Recovery is different in each case.** Your individual time table for return to activities and work will be discussed by your surgeon during post operative office visits.

Post Operative Visits

Your first post-op visit to the doctor's office will be approximately 7-10 days after the operation. At this visit any stitches you have will be removed and you will review the surgery with the doctor or his assistant. At this time you will most likely be cleared to make an appointment to begin Physical Therapy. You should also plan to check in with your surgeon at 6 and 12 weeks after the operation. The surgeon may create a different timetable for postoperative office visits if your case warrants it.

At Home

You may remove your post-op dressing 2 days after the operation and replace it as needed. Do not remove the tape (steri-strips) that is across your incisions. Allow them to fall off on their own. You may shower after 2 days, but use a water-tight dressing until your sutures are removed. Bathing without getting the shoulder wet or sponge baths are a good alternative. You may wash under the affected arm by leaning forward and letting the arm dangle. You may move your arm in front of your body, but not

out to the side until your doctor allows you. You may remove your sling several times a day and gently move your hand, wrist and elbow and perform shoulder pendulum exercises.

Medication

Your surgeon will prescribe pain medicine for you after the operation. Please call the doctor's office if you have any questions regarding medication.

Ice

You must use ice on your shoulder after the operation for management of pain and swelling. Ice should be applied 3-5 times a day for 10-20 minutes at a time until the postoperative inflammation has resolved. Always maintain one layer between ice and the skin. Putting a pillow case over your ice pack works well for this.

Sling

You will be provided with a sling to wear after the operation. Remove it when bathing/showering, or to do your exercises. You should remove the sling several times a day to perform pendulum exercises as instructed. Wear the sling most of the time (especially when out in public) until you see your doctor for your first post op visit. Most patients use their sling for about 2 weeks. If your case is atypical your doctor may have custom guidelines for you regarding use of the sling.

Sleeping

You may sleep with a pillow propped under your arm to keep it slightly away from the body if you need to. For many patients lying flat is uncomfortable at first. It is generally easier to sleep propped up for a short period of time after the operation. Do not attempt to sleep on your operated shoulder for at least 6 weeks.

Rehabilitation

****The following is an outlined progression for rehab. Time tables are approximate. Advancement from phase to phase, as well as specific exercises performed, should be based on each individual patient's case and sound clinical judgment on the part of the rehab professional. ****

Phase 1 (0-2 Weeks) ROM Phase

Goals

Control Pain and Swelling
Protect Healing Tissue
Begin to Restore Range of Motion

Precautions

Do not actively use your arm for reaching, especially overhead.
Do not lift anything with your arm.

Recommended Exercises

Pendulums
Standing Scapular Mobility (no resistance)
Supine or Standing Passive External Rotation
Supine, Seated or Standing Passive Shoulder Flexion (elevation)
Passive Internal Rotation
Passive Horizontal Adduction

Guidelines

Perform these exercises 3-5 times a day. Do 1-2 sets of 10-20 repetitions of each exercise.

Phase 2 (2-6 Weeks) Active ROM Phase

Goals

Continued protection of healing tissue
Continue to improve ROM
Initiate gentle peri-scapular and rotator cuff strengthening
Begin using your arm for daily activities in front of body

Precautions

Discontinue use of sling if you have not already
Be careful with raising your arm, especially overhead, and away from your body
Continue to avoid lifting or carrying anything

Recommended Exercises

ROM

Continue passive ROM with physical therapist
Pendulums
Supine Stick Flexion
Table Slides with progression to Wall Slides
Supine or Standing Passive External Rotation with gentle progression of abduction angle
Passive Internal Rotation
Gentle supine or standing cross body stretch

AROM Against Gravity

Prone Row
Prone Extension
Prone Horizontal Abduction
Sidelying External Rotation

Guidelines

Perform all exercises once a day. Do 2-3 sets of 15-20 repetitions.

Phase 3 (6-12 Weeks) Strengthening Phase

Goals

Continue to acquire normal ROM (both passive and active)
Progressive strengthening of rotator cuff and shoulder blade muscle groups
Begin limited use arm for daily activities in all planes

Precautions

No lifting away from your body or overhead greater than 1 or 2 pounds
Caution with repetitive use of arm especially overhead
Stop activity if it causes pain in shoulder

Recommended Exercises

Range of Motion

Continue passive ROM with physical therapist as needed
Continue ROM exercises from phase 2 until ROM is normalized

Strengthening (Resistance Band or Dumbbell)

Row
Prone Extension
Prone Horizontal Abduction
Standing/Prone Scaption
Internal Rotation
External Rotation

Dynamic Strengthening

Manual Resistance Rythmic Stabilization
Proprioceptive Drills (90° of Elevation or Below)

Guidelines

Perform ROM and stretching exercises once a day until normal ROM is achieved. Do 2 sets of 15-20 Reps. Once normal ROM is achieved continue exercises to maintain ROM 3-5 times a week. Perform strengthening exercises 3-5 times a week. Do 2-3 sets of 15-20 Reps. Strict attention must be paid to scapulohumeral rhythm with completion of all strengthening exercises.

Phase 4 (12 Weeks +) Sport Specific and Return to Activity Phase

Goals

Achieve normal ROM and strength
Continue to encourage progressive use of arm for functional daily activity

Precautions

Encourage return to full use of arm for daily activities
Pay particular attention to scapulohumeral rhythm especially with abduction and overhead activity
Discuss return to sport and activity plan with physician

Recommended Exercises

ROM and Stretching

Continue ROM and stretching exercises from phase 2-3 as needed

Strengthening

Continue strengthening exercises from phase 3
IR/ER strengthening at 90 deg of abduction
May begin supervised weight training pending surgeons clearance

Dynamic Strengthening

Progress manual resistance patterns
Progress proprioceptive drills to include rhythmic stabilization
Slowly progress to overhead proprioceptive and plyometric drills
Push up progression

Guidelines

Perform ROM and stretching program 1-3 times a week to maintain normal ROM. Do 1-2 sets of 15-20 Reps. Perform ROM and stretching more frequently in any planes of motion that are still deficient
Perform strengthening 3 times a week. Do 2-3 sets of 15-20 Reps.

| Time | Focus | Range of Motion | Recommended Exercises | Precautions |
|------------------------------|--|---|---|---|
| Phase 1 0-2 Weeks | *Tissue Healing *Decrease Pain and Inflammation *Start Early Passive ROM with Attention to Restrictions | *PROM with PT as tolerated in all planes *Avoid AROM in Coronal Plane | <u>Passive/Active ROM</u> Pendulums Scapular Mobility Passive External Rotation Passive Flexion Passive Internal Rotation Passive Horizontal Adduction | *Sling 0-2 Weeks or per MD Instruction *Limit Active ROM *Limit Use of Arm, Especially Overhead and in Abduction |
| Phase 2 2-6 Weeks | *Continue to Decrease Pain and Inflammation *Improve Passive and Active ROM | *Continue Passive ROM as tolerated. *Slowly Encourage Pain Free Active ROM | <u>Passive ROM</u> Continue PROM Exercises <u>Active Assisted ROM</u> Supine to Standing Flexion Cross-body Adduction Progress Abd angle with ER <u>Active ROM Against Gravity</u> Sidelying ER Prone Row Prone Extension Prone Horizontal Abduction | *No Resisted Activity/Lifting *Avoid Repetitive Motion Especially Overhead *Must have good Scapular Control with Active ROM Against Gravity |
| Phase 3 6-12 Weeks | *Progressive Strengthening *Continued Attention to ROM if Still Deficient *Establish Proper Scapulohumeral Rhythm *Enhance Proprioception | *Passive and Active ROM as tolerated in all planes | <u>Passive ROM</u> Continue as Needed <u>Active Assisted/Active ROM and Stretching</u> Continue Phase 2 Exercises <u>Strengthening (Dumbbell/T-band)</u> Row Prone Extension Prone Horizontal Abduction Standing/Prone Scaption Internal Rotation External Rotation “W” (Row/ER) Bicep Curl <u>Dynamic Progressions</u> Rhythmic Stabilization Proprioceptive Drills | *No Heavy or Repetitive Overhead Lifting/Reaching *Dynamic Progressions if Pain Free/Full ROM with all ROM and Strengthening Exercises |

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| <p>Phase 4 12 Weeks +</p> | <p>*Progress strengthening *Regain use of arm for all daily activities. *Prepare for Return to Sport and Physical Activity</p> | <p>*Continue Stretching Program as needed.</p> | <p><u>ROM/Stretch</u> Continue Phase 3 As Needed <u>Strengthening</u> Continue T-band and Dumbbell Progressions from Phase 3 Progress to Diagonal Patterns IR/ER at 90° Abd May Begin Limited Weight Training <u>Dynamic Progressions</u> Pushup Progression Continue Proprioceptive Drills Plyometrics/Rebounder Progress to Overhead Rhythmic Stabilization Manual Resistance Patterns</p> | <p>* Return to Gym Lifting per MD Approval *Avoid Activities that Cause Shoulder Pain *Begin Progressive Return to Sports and Physical Activity Program After MD Evaluation</p> |
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*Reviewed by Michael Geary, MD