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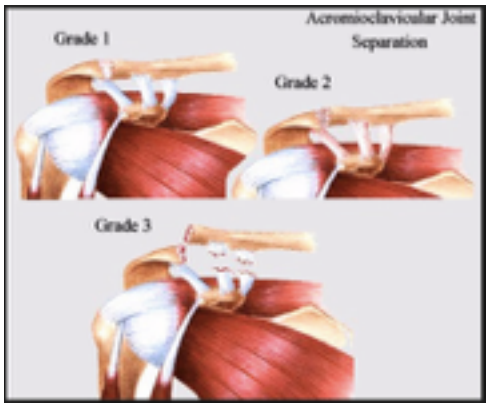
Shoulder Separation and Acromioclavicular Joint Injury Description

A shoulder separation is not truly an injury to the shoulder joint. The injury actually involves the acromioclavicular joint (also called the AC joint). The AC joint is where the collarbone (clavicle) meets the highest point of the shoulder blade (acromion).

Mechanism of Injury

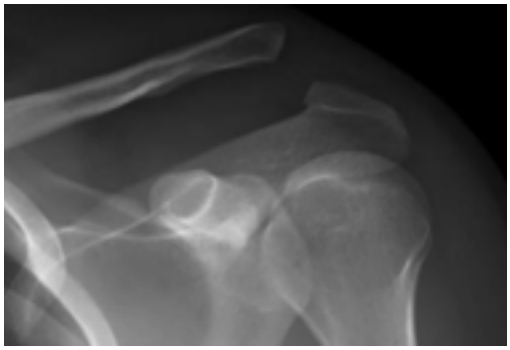


The most common cause for a separation of the AC joint is from a fall directly onto the shoulder. The fall injures the ligaments that surround and stabilize the AC joint. If the force is severe enough, the ligaments attaching to the underside of the clavicle are torn. This causes the "separation" of the collarbone and shoulder blade. The shoulder blade actually moves downward from the weight of the arm. This creates a "bump" or bulge above the shoulder.

The injury can range from a little change in configuration with mild pain, to quite deforming and very painful. Good pain-free function often returns even with a lot of deformity. The greater the deformity, the longer it takes for pain-free function to return.

- A mild shoulder separation involves a sprain of the AC ligament that does not move the collarbone and looks normal on X-rays.
- A more serious injury tears the AC ligament and sprains or slightly tears the coracoclavicular (CC) ligament, putting the collarbone out of alignment to some extent.
- The most severe shoulder separation completely tears both the AC and CC ligaments and puts the AC joint noticeably out of position.

Diagnosis



The injury is easy to identify when it causes deformity. When there is less deformity, the location of pain and X-rays help the doctor make the diagnosis. Sometimes having the patient hold a weight in the hand can increase the deformity, which makes the injury more obvious on X-rays.

Treatment

Nonsurgical treatments, such as a sling, cold packs, and medications can often help manage the pain. Sometimes, a doctor may use more complicated supports to help lessen AC joint motion and lessen pain.

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Most people return to near full function with this injury, even if there is a persistent, significant deformity. Some people have continued pain in the area of the AC joint, even with only a mild deformity. This may be due to:

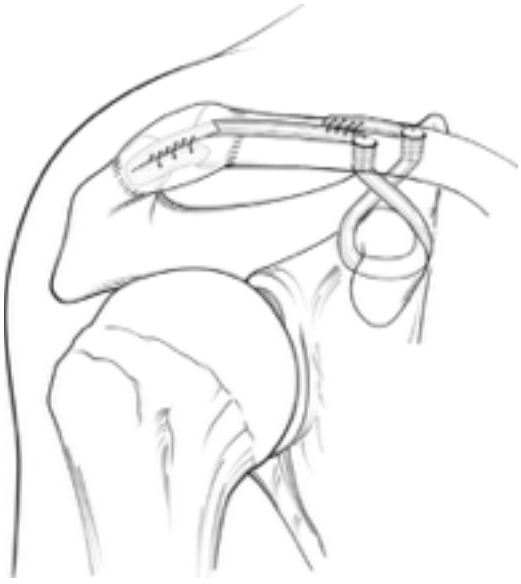
• Abnormal contact between the bone ends when the joint is in motion
• Development of arthritis
• Injury to a disk-like piece of cushioning cartilage that is often found between the bone ends of this joint

It is often worthwhile to wait and see if reasonable function returns without surgical treatment

Surgical Treatment

Surgery can be considered if pain persists or the deformity is severe. A surgeon might recommend trimming back the end of the collarbone so that it does not rub against the acromion. Where there is significant deformity, reconstructing the ligaments that attach to the underside of the collarbone is helpful. This type of surgery works well even if it is done long after the problem started.

Whether treated conservatively or with surgery, the shoulder will require rehabilitation to restore and rebuild motion, strength, and flexibility.



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ACROMIOCLAVICULAR JOINT RECONSTRUCTION SURGERY

Phase One: the first week after surgery

GOALS:

1. Control pain and swelling
2. Protect the AC joint repair
3. Protect wound healing
4. Begin early shoulder motion

ACTIVITIES:

Immediately After Surgery

1. After surgery you will be taken to the recovery room room, where your family can meet you. You will have a sling on your operated arm. Rarely, an abduction pillow is needed to hold the arm up in the air away from the body.
2. You should get out of bed and move around as much as you can.
3. When lying in bed, elevate the head of your bed and put a small pillow under your arm to hold it away from your body.
4. Apply cold packs to the operated shoulder to reduce pain and swelling.
5. Move your fingers, hand and elbow to increase circulation.
6. The novocaine in your shoulder wears off in about 6 hours. Ask for pain medication as needed.
7. You will receive a prescription for pain medication for when you go home (it will make you constipated if you take it for a long time).

At Home

1. You can remove the bandages but leave the small pieces of tape (steristrips) in place.
2. You may shower and get the incision wet. To wash under the operated arm, bend over at the waist and let the arm passively come away from the body. It is safe to wash under the arm in this position. This is the same position as the pendulum exercise.
3. Apply cold to the shoulder for 20 minutes at a time as needed to reduce pain and swelling.
4. Remove the sling several times a day: move the elbow wrist and hand. Lean over and do pendulum exercises for 3 to 5 minutes every 1 to 2 hours.
5. DO NOT lift your arm at the shoulder using your muscles.
6. Because of the need for your comfort and the protection of the repaired AC joint, a sling is usually necessary for 4 to 6 weeks, unless otherwise instructed by Dr. Nelson.

OFFICE VISIT:

Please arrange to see Dr. Nelson in the office 7-10 days after surgery for suture removal and further instructions. If you have questions or concerns regarding your surgery or the rehabilitation protocol and exercises call the office.

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Rehabilitation after Acromioclavicular Joint Reconstruction

Phase One: 0 to 6 weeks after surgery

Goals:

1. Protect the surgical repair
2. Ensure wound healing
3. Prevent shoulder stiffness
4. Regain range of motion
5. Control pain and swelling

Activities:

1. Sling

Use your sling most of the time for the first 2 weeks. The doctor will give you additional instructions on the use of the sling at your post-operative office visit. Remove the sling 4 or 5 times a day to do pendulum exercises.

2. Use of the operated arm

Do not let weight of arm pull on fixation device x 6 weeks

Do not elevate surgical arm above 90 degrees in any plane for the first 6 weeks post-op. Do not lift any objects over 1 or 2 pounds with the surgical arm for the first 6 weeks. Avoid excsessive reaching and external/internal rotation for the first 6 weeks.

3. Showering

You may shower or bath and wash the incision area. To wash under the operated arm, bend over at the waist and let the arm passively come away from the body. It is safe to wash under the arm in this position. This is the same position as the pendulum exercise.

Exercise program

Days per week: 7 Times per day 3-5

STRETCHING/PASSIVE MOTION

—pendulum exercises
—Supine external rotation
—supine assisted arm elevation limit to 90 degrees
—Isometric: Internal and external rotation at neutral
—Elbow, wrist and hand
—Scapular retraction

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Rehabilitation after Acromioclavicular Joint Reconstruction

Phase two: 7 to 12 weeks after surgery

Goals:

1. Protect the surgical repair
2. Improve range of motion of the shoulder
3. Begin gentle strengthening

Activities

1. Sling

Your sling is no longer necessary unless your doctor instructs you to continue using it (use it for comfort only).

2. Use of the operated arm

You can now move your arm for most daily activities, but you need to continue to be careful not to lift objects heavier than 1 or 2 pounds. You should avoid forceful pushing or pulling activities. You should continue to avoid reaching behind you or other positions with the hand behind the head.

Exercise Program

Days per week 7 Times per day 1-3

STRETCHING/ACTIVE MOTION

—Supine external rotation
—Standing external rotation
—Supine assisted arm elevation
—Arm elevation in scapular plane
—Behind the back internal rotation (limit beltline)
—Horizontal adduction (active reach only)
—Hands behind head stretch
—ER @ 90 abduction stretch
—Proprioception drills
—Side lying IR @ 90

STRENGTHENING/THERABAND

—Internal and External rotation
—Biceps curl
—Row
—Forward punch

STRENGTHENING/DYNAMIC

—Side lying ER
—Prone row
—Prone extension
—Prone ’T’s
—Prone ‘Y’s
—Standing scaption
—Isotonic biceps curl
—Rhythmic stabilization
—Scapulohumeral rhythm exercises

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Rehabilitation after Acromioclavicular Joint Reconstruction

Phase Three: starting 13 to 18 weeks after surgery

Goals:

1. Protect the surgical repair
2. Regain full range of motion
3. Continue strengthening progression

Activities:

Use of the operated arm

You may now safely use the arm for normal daily activities involved with dressing, bathing and self- care. You may raise the arm away from the body; however, you should not raise the arm when carrying objects greater than one pound. Any forceful pushing or pulling activities could still disrupt the healing of your surgical repair. Continue to avoid lifting weighted objects overhead.

Exercise Program:

STRETCHING / RANGE OF MOTION
Days per week: 7 Times per day: 1-2
—Pendulum exercises
—Standing External Rotation / Doorway
—Wall slide Stretch
—Hands-behind-head stretch
—Standing Forward Flexion
—Behind the back internal rotation
—Supine Cross-Chest Stretch
—Sidelying internal rotation (sleeper stretch)
—External rotation at 90° Abduction stretch

STRENGTHENING / THERABAND
Days per week: 7 Times per day: 1
—External Rotation
—Internal Rotation
—Standing Forward Punch
—Shoulder Shrug
—Dynamic hug
—Seated Row
—Biceps curl
— W's

STRENGTHENING/ DYNAMIC
Days per week: 7 Times per day: 1
—Side lying ER
—Prone horizontal 'T's
—Prone row
—Prone extension
—Prone 'Y's
—standing forward flexion "full can"
—Standing scaption
—Isotonic biceps curl
—Rhythmic stabilization
—Scapulohumeral rhythm exercises
—limited weight training can begin

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Rehabilitation after Acromioclavicular Joint Reconstruction

Phase Four: starting 19 to 28 weeks after surgery

Goals:

1. Progression of functional activities
2. Maintain full range of motion
3. Continue progressive strengthening
4. Advance sports and recreational activity per surgeon

Exercise Program

STRETCHING / RANGE OF MOTION
Days per week: 5-7 Times per day: 1
Continue all exercises from phase 3
STRENGTHENING / THERABAND
Days per week: 3 Times per day: 1 Continue from phase 3
STRENGTHENING / DYNAMIC
Days per week: 3 Times per day: 1 Continue from phase 3

PLYOMETRIC PROGRAM

Usually for throwing and overhead athletes
Days per week and times per day per physical therapist
—'Rebounder' throws with arm at side
—Wall dribbles overhead
—Rebounder throwing/weighted ball
—Deceleration drills with weighted ball
—Wall dribbles at 90°
—Wall dribble circles

WEIGHT TRAINING
See weight training precautions section

Dr. Nelson's AC Reconstruction Rehabilitation Protocol

Diagnosis:															
Procedure date:	**S/P:**														
	WEEK											**MONTH**			
	1	2	3	4	5	6	7	8	9	10		3	4	5	6
PHASE 1 EXERCISES (week 0-6)															
Pendulum	•	•	•	•	•	•									
Supine ER	•	•	•	•	•	•									
Supine assistedforward elevation limit 90	•	•	•	•	•	•									
Ball Squeeze	•	•	•	•	•	•	•	•	•	•		•	•	•	•
PHASE 2 EXERCISES (week 6-12)															
Supine external rotation						•	•	•	•	•					
Standing ER as tolerated						•	•	•	•	•					
Supine forward flexion (140 degrees)						•	•	•	•	•					
Behind back IR limit to belt line						•	•	•	•	•					
Horizontal adduction stretch						•	•	•	•	•					
Hands behind head						•	•	•	•	•					
ER @ 90 abduction						•	•	•	•	•					
Proprioception drills						•	•	•	•	•					
Theraband IR, ER, Curl, Row, Punch						•	•	•	•	•					
Side lying ER						•	•	•	•	•					
Standing FF 90 (scaption)						•	•	•	•	•					
Prone ROW, Extension, T's and Y's						•	•	•	•	•					
Biceps curls						•	•	•	•	•					
Side-lying ER						•	•	•	•	•					
PHASE 3 (weeks 13-18) Continue previous plus															
Wall slide stretch												•	•		
Behind Back IR												•	•		
Supine cross-chest stretch												•	•		
Sleeper stretch												•	•		
Theraband add shrug, hug, W's												•	•		
Dynamic exercises												•	•		
Add Standing forward flexion (full can)												•	•		
Rhythmic stabilization and proprioceptive												•	•		
Limited weights begin												•	•		
PHASE 4 (weeks 19-28) continue previous plus															
Initiate plyometrics/interval sports program														•	•
May initiate pre injury level activities with clearance by Dr. Nelson															•
Return to play typically 5-6 months															
Call or email Dr. Nelson with any concern															
Additional Instructions:															