Os Acromiale

The roof of the shoulder (the acromion) has different growth centers made of cartilage. During development, these growth centers grow, transform into bone, and fuse together to form one bone. Occasionally, one or more of these growth centers does not completely fuse with others. The end of the acromion which does not fuse, separated by a layer of cartilage and fibrous tissue from the remainder of the bony acromion and scapula, is called an os acromiale. In most cases, an os acromiale does not move and does not cause symptoms. However, this os acromiale, the unfused portion of the bony acromion, may be unstable and move, especially after traumatic injury, which may pinch the rotator cuff tendon or bursa, cause symptoms of rotator cuff inflammation. Alternatively, this entity may not cause any pain or problems.
Frequent Signs and Symptoms
Sometimes there is no pain with this problem, and it is found when X-rays are taken for other reasons. Other times, symptoms can include the following:
- Tenderness and occasionally redness and warmth on the top of the shoulder
- Shoulder pain, especially when moving the shoulder against resistance or with lifting, and particularly reaching overhead
- Limited shoulder motion
- Crepitation (a crackling sound) when the shoulder is moved

Etiology (Causes)
The growth centers of the acromion bone fail to fuse together into one bone. This can allow for motion of the acromion, which may pinch the rotator cuff and bursa tissue below, causing inflammation, degeneration and eventually tearing of the cuff.

Risk Factors
- Growth plate not fusing
- Overhead activity, including sports such as tennis, volleyball, swimming, baseball, and heavy lifting
- Poor physical conditioning (strength and flexibility)

Prevention
- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
  - Shoulder muscle strength
  - Flexibility and endurance
- Use proper technique.

Outcomes
Mild cases can be resolved with slight reduction of activity level and physical therapy, whereas moderate to severe cases may require significantly reduced activity for three to four months. And occasionally surgery is necessary.

Potential Complications
- Persistence and recurrence of symptoms
- Rotator cuff tear
- Persisting prominence (bump) on the roof of the shoulder
Treatment Considerations
Initial treatment consists of medications and ice to relieve pain, stretching and strengthening exercises (particularly of the rotator cuff and scapular [shoulder blade] stabilizing muscles), and modification of activities. Specifically, avoiding overhead activities and heavy lifting will help reduce the inflammation. The exercises for the shoulder can all be carried out at home. Referral to a physical therapist or athletic trainer for further evaluation or treatment may also be recommended. Uncommonly, injection of cortisone into the subacromial bursa may be attempted. Surgery to fuse the os acromiale to the remainder of the acromion bone or to remove part of the bone if it is particularly small is recommended if symptoms persist despite three to six months of conservative treatment. Surgery to fuse the growth plate usually involves pins, screws, or wires to hold the bone, often with bone grafting. If the rotator cuff is torn, this should be fixed at the same time.

Possible Medications
- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (DO NOT take within 10 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Pain relievers are usually not prescribed for this condition, although your physician may prescribe them following surgery. Use only as directed and only as much as you need.
- Cortisone injections into the bursa may be administered to reduce inflammation, although this is not usually recommended.

Modalities (Cold Therapy)
Cold is used to relieve pain and reduce inflammation. Cold should be applied for 10 to 15 minutes every two to three hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage with a cloth between the ice and your skin to prevent burning /freezing your skin.

Notify My Office If Symptoms Worsen

This information is provided by Dr. Steven Chudik. It is not to be used for diagnosis and treatment. For a proper evaluation and diagnosis, contact Dr. Chudik at contactus@chudikmd.com, or 630-324-0402.