## STEVEN CHUDIK MD SHOULDER, KNEE & SPORTS MEDICINE

## **Cartilage Tears of the Shoulder Joint**

Within each joint, protective cartilage covers the ends of the bones to provide a smooth surface for painless joint motion. However, the cartilage itself is susceptible to injury. Once injured, the damaged cartilage can cause pain and inflammation in the shoulder joint, as well as physical limitations. Cartilage has no blood supply, therefore, it cannot heal on its own. A simple crack or fissure will continue to progress until the cartilage wears down completely, resulting in arthritis with pain, stiffness, and other joint symptoms.



Arthroscopic view of normal shoulder cartilage

### **Frequent Signs and Symptoms**



- Feeling of something moving in the joint
- The joint "gives way;" catching, locking
- "Crackling" sensation (crepitus) occurs with motion
- Often occurs with an injury that causes damage to other structures, such as tendons or ligaments
- Stiffness, especially following inactivity

### **Etiology (Causes)**

- A traumatic injury, such as a fall or blow to the shoulder
- Repetitive motion and overuse
- Compressive, shearing, or rotational force to the shoulder



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Arthroscopic view of advanced cartilage damage on the humerus

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#### **Risk Factors**

- Contact or collision sports
- Concurrent joint injury
- Poor flexibility and physical conditioning

#### Prevention

- Maintain appropriate conditioning, including shoulder and arm flexibility, muscle strength, and endurance
- Ensure proper protective equipment fit (for work or sports)
- Maintain proper technique when exercising or using shoulder repetitively, and have a coach/professional correct improper techniques

#### Outcomes

Smaller, isolated cartilage tears may not cause significant symptoms and the patient may be able to continue without surgical intervention. Larger, more complex tears are likely to cause continued pain and other symptoms, and typically are addressed surgically. In addition, injuries of this nature are more likely to progress and lead to arthritis (widespread loss of cartilage surface). Timely, appropriate treatment can help reduce symptoms and return the patient to moderate activity levels.



Arthroscopic view of cartilage damage of humeral head



Arthroscopic view of loose bodies of cartilage from an injury site



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#### **Potential Complications**

- Pain and inflammation of the glenohumeral joint may persist, and arthritis may develop
- Weakness and de-conditioning of the shoulder because of pain and limitations
- Uncommon complications following surgery:
  - Persistent pain
  - Infection and bleeding

### **General Treatment Considerations**

Initial treatment consists of activity modification (stop the aggravating activities) as well as rest, ice, and anti-inflammatory medications to relieve pain. Specific physical therapy programs may also be recommended to reduce pain and restore function.

### Dr. Chudik's Surgical Technique

When symptoms warrant, Dr. Chudik can perform arthroscopic surgery to address the cartilage injury. Using a small arthroscopic camera and tools, he will smooth out the damaged surfaces. Abrading or drilling the exposed bone surface can stimulate a healing response, and allow blood and marrow contents to escape from the bone and fill the articular cartilage defect. Larger tears that do not respond as well to these techniques can be treated with more aggressive restorative cartilage procedures, but outcomes are variable.

- Osteochondral Allograft/Autograft Transplantation (OATS) is when the surgeon transplants cartilage and bone tissue from another site or person into the injured area.
- Autologous Chondrocyte Implantation (ACI) is where the surgeon harvests cartilage cells from the patient, grows them in a lab, and then reinserts them into the injury site.

The surgery is performed under limited general anesthesia and interscalene block (local anesthetic that numbs the entire shoulder and arm and lasts for six to 12 hours after surgery). The recovery period and use of the sling are dependent on the extent of cartilage tears/damage, and the surgical procedure performed. Patients may need to wear a sling for up to six weeks. Physical therapy is begun two to three days following surgery to restore shoulder range of motion while protecting the repaired portion of the shoulder. Recovery may require up to six months.



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Arthroscopic view of drilling to stimulate reparative tissue growth

### **Possible Medications**

• Prescription pain relievers are usually not prescribed for this condition except for postsurgical pain control.

### **Modalities**

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



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