

THE TOTAL SHOULDER REPLACEMENT

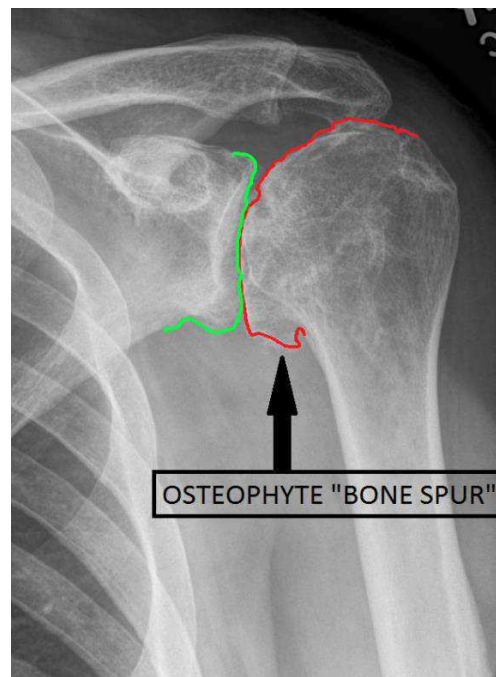
The Total Shoulder Replacement is a shoulder replacement that has been used in the United States since the 1950's. Currently about 53,000 people in the U.S. have shoulder replacement each year. If nonsurgical treatments like medication and activity changes are no longer helpful for relieving pain, you may want to consider a shoulder replacement surgery.

The normal shoulder is a ball and socket joint. The ball is called the humeral head and the socket is called the glenoid ([see figure 1a](#)). The cartilage (smooth surface of the joint) normally glide on one another with little friction and wear (like two sheets of ice). In the arthritic shoulder the normal cartilage is worn away and the joint becomes "bone-on-bone" (like sandpaper rubbing against sandpaper) without the normal smooth gliding surfaces. The joint may also become irregular from boney growth (osteophytes or "bone spurs"), which is the body's attempt to "heal" the cartilage loss ([see figure 1b](#)). Pain is usually due to irregular joint surfaces rubbing on one another and from the inflammation of this wear and tear.

FIGURE 1: NORMAL SHOULDER



FIGURE 1B: ARTHRITIC SHOULDER JOINT



INDICATIONS FOR THE TOTAL SHOULDER REPLACEMENT

1. Osteoarthritis (Degenerative Joint Disease)

This is an age-related "wear and tear" type of arthritis. It usually occurs in people over the age of 50 years, but can occasionally occur in younger people as well. The cartilage that cushions the bones has been worn away and now the bones rub against each other. Slowly the shoulder will become stiff and painful.

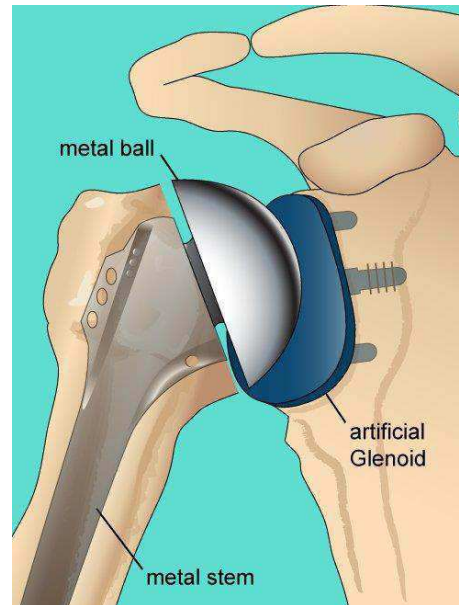
If medications, physical therapy, or other non-surgical options fail to provide relief, the Total Shoulder Replacement is a good option. This type of replacement takes care of the arthritis by replacing the worn our joint surfaces with an artificial joint made of metal (cobalt chrome) and plastic (polyethylene) ([See Figure 2](#)). A metal ball is used to replace the humeral head (ball) while a plastic cup replaces the glenoid

(socket). These materials have been in use for many years for traditional shoulder, hip and knee replacements.

FIGURE 2: TOTAL SHOULDER REPLACEMENT



Prosthesis



Animation of Joint Replacement

REASONS NOT TO DO THE SURGERY

1. Infection
2. Nerve injury affect the shoulder muscles
3. Glenoid (socket) has good cartilage (not worn out)
4. The glenoid (socket) is severely worn away
5. The Rotator cuff tendons are torn and not able to be repaired

WHAT TO EXPECT WITH THE TOTAL SHOULDER REPLACEMENT

The primary goal of a total shoulder replacement is to relieve pain. The secondary goal is to improve strength, motion, and function. While the experience has been very successful, some complications have been reported. Most patients report minimal or no pain after surgery and most are able to raise the arm much higher than before surgery

COMPLICATIONS can include the following:

1. Infection
2. Instability of the joint replacement (it can dislocate)
3. Rotator cuff tear
4. Fracture of either the humerus (arm) or the glenoid (socket)

5. Nerve injury
6. Loosening of the joint replacement
7. Anesthesia problems

BEFORE SURGERY

If you and Dr Muh decide you are going to have surgery with a Total Shoulder Replacement, several steps may be necessary before surgery:

1. You may need some special xrays, a CT scan and possibly a MRI
2. You may need to see your primary care physician if you have a history of medical problems (high blood pressure, diabetes, asthma, etc). They may need to draw some blood.
3. In some cases you may need to obtain an EMG (electromyography) study in order to determine if the nerves which make the muscles work properly in your shoulder are functioning normally.

Be sure to tell the office the medications you take. Some medicines may need to be stopped before surgery. For example, the following over-the counter medicines may cause excessive bleeding and should be stopped 2 weeks before surgery:

1. Non-steroidal anti-inflammatory medications such as aspirin, ibuprofen (Motrin), and naproxen sodium (Aleve)
2. Most arthritis medications
3. *Some herbal medicines (Vitamin c, Ginseng, etc)*