

How the Body Works

“My Shoulder-Out of Control”

Injuries to the shoulder are common. (8.5% of all bone, joint and muscle problems). They quite often involve the Rotator Cuff which is a common tendon linking the bone of the upper arm (humerus) to three deep muscles from the shoulder blade (scapular). These muscles via the rotator cuff help the more superficial larger muscles move and control the arm. The main large muscle acting on the shoulder is the Deltoid covering the shoulder from the front, side, and back. The rotator cuff does tend to degenerate with age and an MRI can show how much of this has occurred. What is interesting is that the level of degenerative changes and even a tear in the tendon is not a good predictor of the degree of disability or pain that a worker may have. Problems with the rotator cuff normally present as pain, when using the arm during overhead repetitive work or lifting out to the side. The problem can come on as a single event or more commonly as the result of a repetitive problem. When this is the case, the movement patterns and work environment needs to be assessed for contributing factors. (continued on page 2)

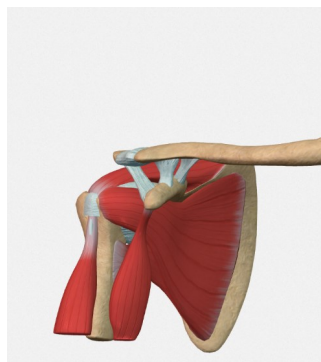


Fig 1

In Fig 1 the right shoulder shows the deeper muscles of the shoulder with the Deltoid (large superficial) being cut away and the arm at the side. Fig 2 shows the arm reaching out to the side and the arm almost coming into contact with the top of the shoulder. This impingement action is often present in shoulder problems such as frozen shoulder, rotator cuff tendonitis, impingement syndrome, and bursitis.

Instead of just addressing the pain of the impingement the whole shoulder and upper body mechanics need to be looked at

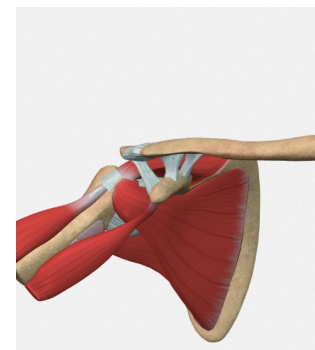


Fig 2

Truths/Myths

If It Is In The Way -‘Cut It Out’

For each degree of upper spine flexion, there is a degree of shoulder rotation that has to occur to allow the hand to reach the same point in space.

Many jobs require the hand to reach above the shoulder and to do this, the shoulder must rotate as well as elevate. It is common for injuries to result and impingement of the sensitive structures between the bone at the top of the shoulder (Acromion) and the bone of the arm

(humerus). Often there may be abnormal bone growths (osteophytes) on the bone as well. A common treatment for shoulder impingement is an injection of steroid to reduce the pain, but of course does not address the cause. Another option is surgery to cut out bony degenerative changes or repair partial or complete tears in the cuff. These are extreme measures and in light of the poor predictive value of MRIs and X-Rays as to the degree of disability

more conservative pathways need to be tried first.

The HCE approach to this problem is to look more closely at the cause of the problem and institute whole body treatment that may mean there is less of a need for surgery. HCE is skilled at looking at the person as a whole not just the MRI and X-Ray.

Only ‘Cut it Out’ if the HCE approach has not worked

True Stories... Rotator Cuff Tear— Who needs Surgery?

Peter works in an assembly plant where his job requires him to stand and reach to the right side of his body to get parts out of a bin, he then holds them in position over his head, while he uses a power tool to screw the part in place.

Peter has been doing this particular job for 5 years and has not had any problems up until now. He did however have an incident 3 weeks ago when the part slipped while he was holding it up ready for it to be screwed into place. He did not think much of it at the time as the pain was mild and he thought it would go away. He was lucky, as it was the end of his shift and he had the next two days off. The next morning he awoke with an aching pain in the upper right arm more than in the shoulder. The pain increased with him laying on that side at night and whenever he did quick movements, reached over head or reached out to the side of the body. When he returned to work he was not able to last a full day before he had to report it. He was not able to do any more repetitive movements above the shoulder level.

He reported this to the safety officer and went to the company's occupational Health provider.

There are three main treatment options for Peter.

1. Inject, MRI and consult and consider surgery
2. Treat with conventional physical therapy
3. HCE model of treatment

How The Body Works... My Shoulder Out of Control

From Pg. 1

Pain and weakness in the shoulder will cause the shoulder, neck trunk and shoulder blade to compensate. Unless this incorrect movement pattern is corrected, no number of injections or even surgery will get the patient back to having a normal pattern of movement. HCE's focus on what may have caused the shoulder problem in the first place, helps identify 'drivers'. By correcting these 'drivers', we eliminate or reduce the need for more invasive approaches. The shoulder joint movement needs to be normalized and have the small muscles turned on and strengthened followed by training of correct movement patterns. These are performed, in addition to work site evaluation, to look at operator position and machine set up that may contribute to the problem.

Summary: The HCE PT is skilled at looking at the body as a whole and has the ability to look for *DRIVERS* that may affect the presentation. It is this skill set that sets us apart from other health care professional and makes us more effective in helping workers and reduces injury costs.

Healthy/Unhealthy Habits

Increasing the risk!

If you wanted to increase the risk of having a shoulder problem, you could do the following: Perform repetitive work overhead which involves pulling and lifting up, be a smoker, make sure you do not get adequate rest and do no other exercise outside of work.

If your job requires you to lift 20# in a particular position all day. How much do you

need to be able to lift as a one time maximum to be able to do this safely? For example, if you can lift 100 pounds as a, one time maximum, then you can not expect to be able to do this all day. The percentage of your one time max that you can do all day is 12.5% . Likewise if you want to get stronger, you do exercise that fatigues the muscle. In response to this fatigue the muscle will get stronger. To improve your

day job strength you may have to do weights outside of work and heavier than your work weights to build up your strength. This will make your work lifting more within your safe range. You may need to consult with your HCE therapist to set up a treatment program.