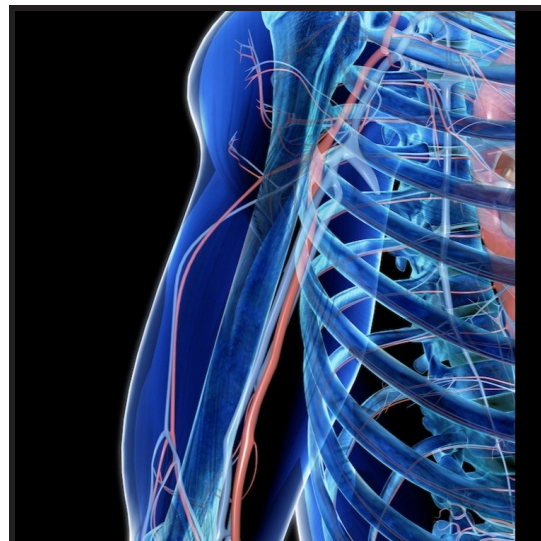


## How The Body Works...

### *If the arm hurts look elsewhere*

Pain in the arm is common work problem. This pain can result from a number of causes such as direct trauma to the area, or overloading the tensile strength of local structures such as muscles, tendons and ligaments. However, it is often caused by another area of the body. Pain tends to refer down the arm towards the hand or down the leg to the feet from an area that is not functioning correctly closer to the spine. Pain also tends to be the result of a structure having exhausted its ability to adapt to problems elsewhere. So it is common for arm and shoulder pain to be affected from elsewhere. The pain can be referred, overuse because of weakness in the shoulder girdle stability mechanism or mobility problems of the spine and ribs. The arm and shoulder are very susceptible to this type of problem, for the shoulder is very mobile and has sacrificed stability for mobility. The long lever arm relies on a strong and stable base to protect it from injury. The ability of the hand to perform fine movement patterns or perform a quick movement relies on the shoulder being stable at its base. The shoulder and arm are not the only body part involved. Lifting a part from one side of a work-bench to the other requires more than the arms to work. The shoulder blade, spine, pelvis and legs are all involved.



## *Truths/Myths About Exercise*

### **Do We Need To Exercise?**

Why do we exercise?

- To increase strength.
- To increase endurance so we can do more for longer.
- To look "buff."
- To reduce the risk of injury.
- To add bulk.
- To loose weight

These are all good reasons, and all can be achieved by doing exercise. As

long as it is the correct exercise. The exercise program required to be fit would need to be different to that used to increase strength. At work, the most important function of exercise is to prevent injury while performing your work and for you to have enough energy left over for home recreation. If you need to lift a 20 pound part for 20% of your shift, it will not be safe if that were the most you could lift. To enable you to

perform your job safely, an exercise program may need to be outlined for you. Increasing your lifting ability to 100 pounds would help. The best exercise for work that requires your arms may be working on the shoulder blade and spine. Exercise needs to give you more endurance more strength and good stability in order for your work to be safe and being able to continue performing it.

## True Stories...

### Right Shoulder pain

**Maria:** works in a plant manufacturing parts for furniture and requires her to perform a lot of lifting and reaching. The parts are not heavy, (4 pounds) but of course, she does this all day. Some time ago she was complaining of right shoulder pain which go worse when she lifted the part off the finishing table to pack. The pain was local with no numbness or pins needles. There was a local spot that was tender when palpated and the pain could be made worse by reaching with the right shoulder.

We could have addressed the pain specifically by injecting it, applying ultra-sound, or electrical stimulation, (typical physical therapy modalities) but we chose to address the real problem. After assessing the work-station and her body biomechanics, we did two things. One was to lift her standing height, so she did not need to reach so high to pack the part. The arm works well up until shoulder level and then any higher than that poor strength and biomechanics of the shoulder girdle increase the injury risk greatly. The second aspect was to work on her upper back and shoulder blade. She needed more mobility of the upper back, and the shoulder blade was weak causing the shoulder joint to work a lot harder than it would have needed to. Muscles in the front were turned off as they were too active, inhibiting the stabilizers at the back trying to hold the shoulder blade in a good position. Once turned off, the muscles at the back were turned on so they would work at the correct time and provide the correct coordinated movement of the arm and shoulder. These exercises were then performed for endurance and strength. Without using this approach, addressing the site of the pain would have only provided temporary relief.

## How The Body Works...

### If the arm hurts look elsewhere

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The HCE physical therapist (PT) has additional training in the concepts of integration where the body is dynamic and each component affects another. Being able to identify the contributing factors outside the obvious is key to preventing the problem getting worse or not being resolved. The HCE PT can assess for *DRIVERS* that may contribute directly or indirectly to the current presentation. HCEPTs work with the worker, the employer and other medical professionals to make sure the work environment is safe and conducive to good health, body mechanics and productively.

**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

### Do This And See...

**STANDING PRESS-UP:** To improve shoulder stability try the following: (caution, do not perform if it hurts or your shoulder is unstable).

Step 1: Stand facing the wall (perform the tall as you can be stance), toes out from the wall 12 inches. The arms are by your side, palms facing backwards, then bend the

elbows up so the so the hands are up facing forward (just above shoulder height). From this tall standing position allow yourself to fall into the wall. Use the hands to stop you before you hit your head and make sure the upper arms do not go back behind your body. (perform at your own pace for 90 seconds). The exercise is the slowing down and stopping the movement.

If you can do that 3 days in a row pain free, progress, by taking the feet out from the wall further (same 90 sec) Step 2: The next progression is to use the height of the kitchen bench and do the same time frame and precautions. Step 3: a more horizontal surface such as a bench. Step 4: the floor. The goal is to slowly improve your base so you can work more safely.