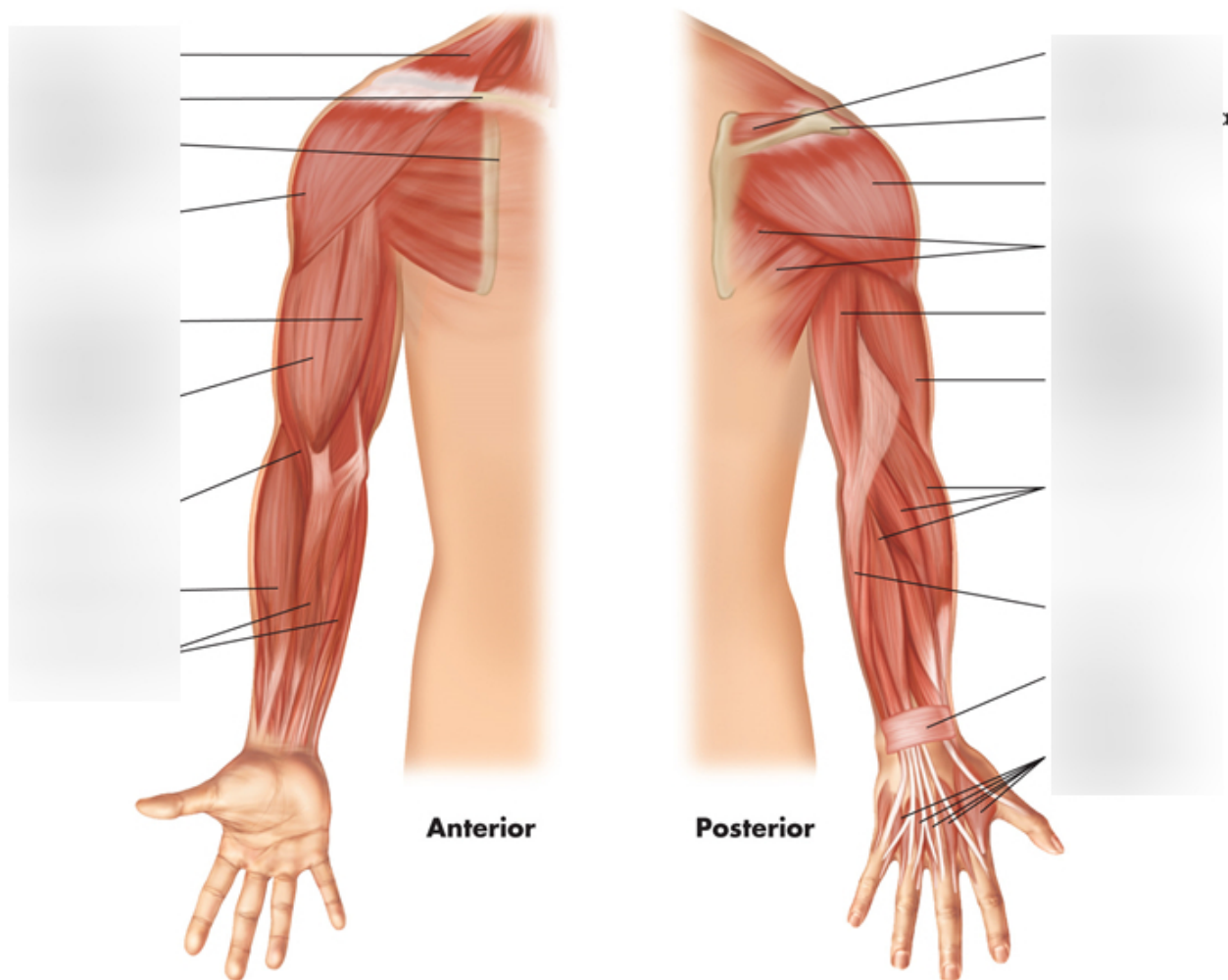


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## Overuse - What is it? How do we avoid it?

Overuse syndrome or repetitive stress syndrome is caused by the same motion being performed frequently or holding a position for a prolonged period of time. These joints and muscles are called into action without adequate rest. Though we tend to think it must be a result of a sport (tennis) or a work situation ( bagging groceries), it also occurs frequently with musicians. Our hands might hurt, but chances are so will our shoulders and neck! It can occur in any part of the body! For today's purposes, we will review the neck, arm and hand as they relate to the stresses and strains of playing the harp.

FIGURE 1. The muscles of the front and back of the shoulder , arm and hand.



These are the areas of stress:

**Hand** - joints of the fingers, finger tendons, small hand muscles (they are used for quick positions and not for prolonged holding positions) and the thumb (double duty for forcefully holding a position, ie. pinch but also its beautiful rotational capabilities). Pain in the small joints can give the suggestion of arthritis, but often is referred pain from the small hand muscles.

**Wrist** - This complex of joints can be irritated if the overall joint position is overextended or overflexed. The best position is slight extension or neutral position. Tendons crossing the wrist to the fingers can be irritated and cause inflammation know as tenosynovitis or trigger finger/trigger thumb. Take the time to stretch the fingers/wrist as a unit gently. Here is a pain point as you try to practice after a period of inactivity. It is better to pace yourself and increase practice time slowly.

**Elbow** - indirect irritation from holding the forearm in one position because the wrist and finger extensor muscles attached to the elbow. Also the finger flexor muscles attached to the inside of the elbow and can cause pain at the elbow. Allow yourself the opportunity to move the elbow through a range of motion to improve circulation.

**Shoulder** - most often the back portion of the rotator cuff muscle group are irritated but also the pectorals major muscle as a result of holding the harp position awkwardly. Hunching over which increases the mid back spine curvature (kyphosis) may seem the solution. But it actually increases upper back and neck pain.

**Neck** - holding the head forward or to one side for a long period of time. This occurs when we don't use proper lighting or struggle with our bifocals. Additionally, if the harp is not positioned on your shoulder properly, then the neck/shoulder region takes on additionally load and the trunk twists to adjust to the load of the harp.

## PREVENTION IS THE KEY!!!

Practice the following stretches and exercises before and after practicing/playing to avoid injury! Especially, after you have taken time off, you may find that your play time is shorter. If you become sore, that's a good time to stop and stretch not play through!

### 1. Posture alignment

The head is over the neck and not in front, while the shoulders are at your side ( neutral position) and your back is straight not bent forward. Check the alignment of your hips to knees

to feet. Tight hip flexors over time ( ie. sitting ALOT not just practicing/playing causes a mal-alignment of the pelvis to the spine to the shoulder/neck. Second condition is lighting. Try to have light coming from three directions, each side and over the music to eliminate shadows. Bifocals over time cause increased neck pain and headaches. Beware.

## 2. Stretching

Stretch neck, shoulder, forearm and hand before you start to play and after you complete a session of playing. Stretching releases the position you have been holding and has been shown to improve blood flow into the muscles and tendons. If practicing to make a deadline (!), take breaks and stretch, especially standing up and moving for one to two minutes. Repeat stretches 5 to 10 times depending on how it feels when you perform the stretch. Neck stretches are performed side to side with a gentle overpressure by the hand. Shoulder stretches can be overhead ( shown), behind your back and in front of your chest. Elbow and wrist stretches are performed (shown) by standing and pressing into the table or performing the “prayer” position. Be gentle with your fingers and not overstretch. Thumb stretching can be irritating, so it is best to move the thumb in circles as its stretch. ( I’ll demonstrate these)

## 3. Strengthening

The small muscles of the hand are designed to aid the bigger forearm muscles in positioning the fingers for tasks. So when these muscles contract for long periods, they can become irritated in the muscle belly or cause pain at the joint adjacent to them. Putty rather than a rubber ball allows the muscle to feel resistance through its range of motion gently. It’s also a great way to keep the thumb strong ( shown). Free weights are great, but best to have some supervision when starting that kind of strengthening program. Lots of repetitions of a movement strengthen overtime ( think ballet dancers). We have known in the world of muscle strengthening that a strong shoulder and back allow for ease of forearm and hand motion. Include the shoulder muscles in your strengthening program. (I’ll demonstrate these)

## 4. Lighting

Poor lighting causes poor posture. Just repeating!

## 5. Supports

There are several wrist and thumb supports available online and at local drug stores. The smaller design and lower profile are best. I have brought several examples to show you. They are used to give the joint and surrounding muscles a bit of a boost to reduce irritation. You can also use them at night to give that body part a rest.



6. Heat vs Ice Heat is used as a preparation for stretching, so often you can perform the stretches in the shower or tub. Ice is effective for reducing swelling and discomfort. Many topical agents don't penetrate to the joint or muscle intended but just soothe the skin nerves, so make sure you check out the gel or lotion for effectiveness. Just because its a popular gel, doesn't mean it's effective.

