

IT'S COMPLEXUS

BY ANDREA JERVINIS, LAT, ATC

Ladies! Do you have the right support? Let's discuss. Women are more prone to experience thoracic pain in their lifetime than men. [A study](#) sampling 3,710 workers found that 17% of women in the workforce and 9% of men experienced thoracic pain. Although the prevalence of upper back pain is not as high as low back or neck pain in the worker, how is it 1 in 5 women experience it? Many reasons, but one major one being breasts!

THE ADDED WEIGHT OF WOMANHOOD

This anatomical feature in the female sex adds weight to the upper body and [shifts the center of gravity forward](#). As this shift occurs, the rest of the upper body responds by an increased rounding of the upper back (kyphosis). Both the neck and shoulder blades respond by altering their positions, reducing shoulder range of motion, and changing the muscle length and activation capabilities of muscles. This change in positioning can be more problematic when breasts are larger or broader. In fact, [breast volume](#) was found to be the strongest predictor of upper back musculoskeletal pain. The problem compounds by knowing industrial athletes and desk-letes tend to work in a hunched over position as well.

THORACIC OUTLET SYNDROME

Not only do women have the added weight on top, but their skeletal system is also a bit different than men. The first rib, located at the base of the neck, sits more transverse in a woman than a man's inclined first rib. The collar bone sits just above the anterior portion of the rib and here is where the brachial plexus, a large bundle of nerves, passes through along with the subclavian artery and vein. It's called the costoclavicular space.

The costoclavicular space is one of the three areas where the brachial plexus, subclavian artery and vein can become compressed, causing Thoracic Outlet Syndrome (TOS). TOS is pain, numbness, tingling, and/or weakness in the arm and hand due to pressure against the nerves or blood vessels that supply the arm. The pressure can be caused by tight muscles, ligaments, and the bony structures that make up the outlet. Would it surprise you to know that [women are more likely to have TOS](#) than men?

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Work Right NW is changing the way that companies view workplace hazards. Our focus is on educating the workforce to prevent injury. We provide access to Injury Prevention Specialists in the workplace to address the early signs of discomfort. We are changing the industry one company at a time by helping one person at a time.

HERE FOR SUPPORT

Okay, this may all sound a little bit gloomy, but there is a way to help PREVENT upper back pain in women. We wouldn't talk about it if we couldn't prevent it! After all, we specialize in injury prevention.

1. **Have the right support!** Bras are so important for women's health! Consider these features when choosing the best bra for you.

- **Thicker Straps** - In one [study](#), the thicker straps were the most comfortable and had the least amount of pressure on the shoulders.
- **Vertical or Cross** - The strap orientation is preferential. Some people find more comfort with a vertical strap while others prefer the cross/racerback. If you do have some brachial plexus irritation, finding the right strap is important in reducing symptoms.
- **Higher Neckline** - A plunging bra will not support breasts as well as a boatneck or swooped style bra.
- **Proper Size** - The bra should have some compression to it but feel comfortable, supportive, and not too tight. If you are unsure of your size, some stores offer free bra size fittings.

2. **Strengthen the scapulothoracic, shoulder, and neck muscles!** You've learned that these muscles tend to get stretched out and weakened due the weight of breasts, so counter that by getting them strong enough to hold them! Try some of these exercises:

- a. Serratus Punches
- b. Arm Lifts
- c. Scapular Row
- d. Chin Tucks

