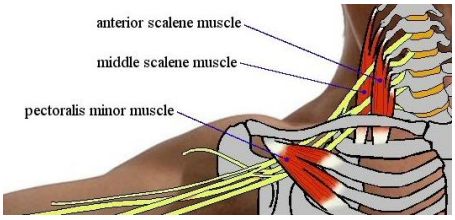
Workplace Athletics

Thoracic Outlet Syndrome Prevention

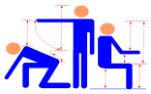
Thoracic outlet compression is a disorder that is caused by compression of nerves in the brachial plexus (nerves that pass into the arms from the neck) and blood vessels. Sustained work postures such as forward head and arm positions can contribute to muscle imbalances and compression, which can interrupt the flow of nutrients and oxygenated blood to the arm, wrist, and hand for muscle recovery. To prevent imbalance and compression in this area, sustained forward head and arm postures should be counteracted with the exercises outlined on the back of this handout.



Lifestyle Causes

- **Dehydration:** Healthy muscles are comprised of at least 70% water. Dehydration causes muscle fatigue, strain, tendonitis, and other disorders of the movement system. Soda pop is not water, it's liquid junk.
- **Poor Nutrition:** Eating too many "empty" calories that don't contain the nutrients our body needs is a primary cause of injuries and disorders of the movement system. Tobacco contains toxins that increase inflammation.
- **Inflammation:** Inflammation causes many lifestyle-related disorders, including heart disease and movement system disorders. Too much sugar and fat within our diet can contribute to inflammation.
- **Fatigue:** Adequate amounts of rest and sleep are very important ingredients for our health.
- **Poor Fitness:** Poor levels of physical fitness increases the risk of disease and injury.

*Prevention is a **shared** responsibility! The company is responsible for a safe work environment and procedures, and all workplace athletes are responsible for using their body properly and keeping their body fit for work.*



Ergonomics is about working smarter! An ergonomics improvement process is part of management's commitment to maximize efficiency and to limit worker fatigue and discomfort.

Proper warm-up & body mechanics will reduce daily fatigue and give you more energy left over at the end of the day! We are ALL athletes in life, so we need to warm-up like athletes to improve our performance and to reduce risk of injury. We should also plan to work smarter… not harder! Proper body mechanics should always be used to avoid excessive fatigue and injury.

Drinking plenty of water is one of the most important things you can do for your health! Healthy muscles are comprised of at least 70% water. Dehydration of the muscles and tendons is a primary cause of muscle fatigue, strain, tendonitis, and other disorders of the movement system. How much water do you need every day? Your Body Weight ÷ 2 = # oz. of water per day (Example: 160 pounds ÷ 2 = 80 oz. of water per day)

Healthy eating is one of the most important weapons that we have to fight against injury and illness. The foods we choose to eat determine what our bodies look like on the outside and how well our body functions on the inside. Eat fewer "empty" calories from dead foods, and eat more calories from living foods. Living foods include fruit, vegetables, nuts, and seeds. Living foods are harvested. Dead foods are processed and not good for you.

Adequate amounts of **rest and sleep** are very important ingredients for our health. When we don't get enough sleep, increased release of stress hormones raises the level of inflammation in the body. If rest and sleep deficits persist, we become more vulnerable to injuries and chronic diseases. Sleep experts generally agree that most adults require between 6.5-9 hours of sleep each day to maintain optimal health and safety.

We need to maintain our **physical fitness** levels to prevent injuries and illness. There's a correlation between poor levels of physical fitness and increased risk of disease and injury. The lower the level of fitness, the higher the risk of injury. Four types of exercise for your fitness plan: 1) Aerobic or cardiovascular exercise, 2) strength training, 3) stretching exercise, and 4) relaxation exercise.

Workplace athletes can use **ice or cold therapy** to control fatigue and soreness after activity. Ice application should be between 15 to 20 minutes applied directly onto the skin of the affected area. An initial aching will be felt when the ice is on the skin. After 5 minutes, this should go away as the ice takes effect. Ice is a great anti-inflammatory! Never use heat after activity.

Vitamin & mineral supplements are not a substitute for healthy eating, but they can fill in the gaps and help combat fatigue and inflammation. Experts recommend three daily supplements: 1) a quality multivitamin and mineral supplement, 2) a vitamin D supplement with calcium and magnesium, and 3) omega-3 fatty acids

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TOS Stretching and Fitness Exercises

TOS Stretching Exercises: Perform 3-5 times per day

Place hands behind head as shown. Move head and arms backward until a gentle stretch is felt across the front of the shoulders and chest. Hold the stretch for 20 seconds, relax and repeat.

Stand with hands on the door frame at shoulder level. Gently step forward with back straight, stretching the chest and shoulders. Hold stretching for 20 seconds, relax and repeat.

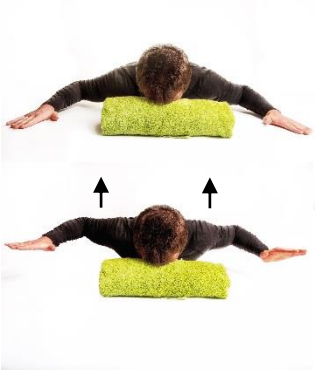
Place gentle traction on arm by holding onto chair seat as shown. Very gently stretch your head and neck diagonally and downward in the opposite direction. Hold the stretch for 20 seconds, relax and repeat.

Lie on back with towel roll placed between the shoulder blades as shown. Allow the head and shoulders to relax and stretch toward the floor. Hold the stretch for 20 seconds. Relax and repeat.

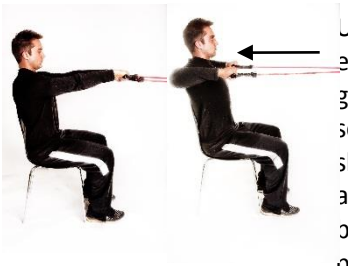
TOS Fitness Exercises: Perform 2-3 times per week

Bend forward slightly and support upper body with other arm as shown. Using a dumbbell or stretch band, pull arm upward until elbow is at least shoulder height. Slowly lower to the start position. Perform 2 sets of 12 reps.

Using dumbbells or stretch bands for resistance, shrug your shoulders upward and backward. Slowly lower the shoulders back to the start position. Perform 2 sets of 12 reps.



Lie face down with arms positioned as shown. Squeeze shoulder blades together and lift arms up slightly. Slowly lower arms to the start position. Perform 2 sets of 12 reps.



Use a resistance band for this exercise. Sit in chair or stand with a good upright posture with band secured in front of you. Squeeze shoulder blades together and pull arms back against the resistance band. Slowly return to the start position. Perform 2 sets of 12 reps.