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MONTHLY SAFETY BRIEF: ERGONOMICS OF SITTING

This month's safety brief is on information related to the ergonomics of sitting. Luckily from an ergo standpoint, most of us in the organization are up and about doing field work and don't have to sit at a desk the entire day. However, there may be times that we sit for extended periods, so this general information may be useful for you as a safety brief topic.

Sitting as a Hazard

Injuries resulting from sitting for long periods are a serious occupational health and safety problem. Sitting jobs require less muscular effort, but that does not exempt people from the injury risks usually associated with more physically demanding tasks. For example, clerks, electronic assembly-line employees, and data entry operators who work in a sitting position also suffer back pain, muscle tenderness, and aches. In fact, reports of varicose veins, stiff necks, and numbness in the legs are more common among seated employees than among those doing heavier tasks.

In addition, sedentary time has been found to be associated with health effects such as metabolic syndrome (including diabetes), heart disease, and poor mental health. These effects are not related to how active a person is physically.

Can work in a sitting position cause injuries that affect movements?

Limited mobility contributes to injuries in the parts of the body responsible for movement: the muscles, bones, tendons and ligaments. Another factor is the steady, localized tension on certain regions of the body. The neck and lower back are the regions usually most affected. Why? Prolonged sitting:

- reduces body movement making muscles more likely to pull, cramp or strain when stretched suddenly,
- causes fatigue in the back and neck muscles by slowing the blood supply and puts high tension on the spine, especially in the low back or neck, and
- causes a steady compression on the spinal discs that hinders their nutrition and can contribute to their premature degeneration.

What aspect of working in a sitting position is responsible for ill effects?

A poor body position is largely responsible for the ill effects of prolonged sitting. The duration of sitting, is also a risk factor.

Poor body positions can also originate from an unsuitable job design that requires employees to sit uninterrupted for longer than one hour. An unsuitable work space that prevents employees from sitting in a balanced position can cause poor body positions. The physical arrangement of work space elements such as work surfaces, tools, and equipment may not correspond with the reaches and clearances of seated employees. The workstation may also be unsuitable because the chairs are too high or low for an employee's body size and shape.

Is there a good sitting position?

For each major joint such as the hips, knees, and elbows, there are ranges within which every healthy person can find comfortable positions. These positions should not impede a person's breathing or circulation, interfere with muscular actions or hinder the normal functions of the internal organs. Varying these positions is the essence of "good sitting". So, a good sitting position is one that allows employees to change their body positions frequently and naturally within an acceptable range, and when they want without being restricted by the work station or job design.

Why is body position or posture important while sitting?

Poor arrangement of the workstation encourages an awkward body position. A poor body position or posture can hinder breathing and blood circulation and contribute to injuries affecting people's ability to move.

What should I avoid while sitting?

- Tilting the head forward. This helps prevent neck injury.
- Sitting without lumbar support. This helps prevent back pain.
- Working with arms raised. This helps prevent neck and shoulder pain.
- Bending wrists. This helps prevent muscle cramps.
- Working with unsupported forearms. This helps prevent shoulder and back pain.
- Cramming thighs under a worktable. This reduces blood circulation.
- Sitting on a chair that has poor support. It can overturn and cause injuries.

How can you reduce harmful effects of prolonged sitting?

A "good" sitting position at work focuses on the three areas:

- workplace design (including tasks, workstation, and chair design)
- job design
- education and training

None of these areas is more important than the other, and none of them alone can bring about substantial improvement. Recommendations on how to sit are not compulsory. Sometimes, it is acceptable to deviate with outstretched or cramped positions to relieve muscle tension.

Ergonomics of Sitting

1. You should avoid doing these activities while sitting in the workplace except?
   a) Tilting the head forward.
   b) Sitting with proper posture
   c) Bending wrists.
   d) Sitting on a chair that has poor support.

2. Health problems cannot be attributed to prolonged sitting.
   ☐ True
   ☐ False

3. What regions of the body are usually most affected by injuries related to sitting in the workplace?
   a) Back and Neck
   b) Wrists and Forearms
   c) Hips and Knees
   d) Abdomen and Shoulders

4. Physical arrangement of work space elements are not important.
   ☐ True
   ☐ False

SCORE: PASS / FAIL

Employee Signature _____ Supervisor Signature _____ Date _____