

Kansas Association of School Boards

Musculoskeletal Disorders

November

There are three main occupational factors associated with MSD's (musculoskeletal disorders).

- Awkward postures
- Excessive manual force
- High rates of manual repetition



Awkward Posture:

Sit up Straight! This is often how we think of proper posture. Posture is a key element in reducing and eliminating musculoskeletal disorders (MSDs). Not only proper posture in regards to your back but other parts of the body as well. Your wrist, neck, and shoulders are all elements to be aware of in regards to posture. Poor posture can decrease muscle strength, increase strain on connective tissues, and decrease circulation. A “static” posture is a posture in which you are holding your body in the same position for a long time. Imagine holding your arms straight out from your body and holding it for five minutes. At first the effort level would be very low with no discomfort, but after a few minutes you would start to notice the effort level going up. This is a static posture. The goal is to decrease static postures and positions when working.

Excessive Force:

Force required to perform various occupational activities is also a critical factor in contributing to MSDs. The pressure put on different tissues of the body can amount to hundreds of pounds. As muscle effort increases due to a heavy load, circulation to the muscles decreases which causes muscle fatigue. If muscles do not get proper recovery time, soft tissue injuries result.

Manual Repetition:

Jobs that require the worker to perform the same task over and over again with highly repetitive motions also contribute to MSDs. Tasks requiring high repetition rates require more muscle effort, and longer recovery time than less repetitive tasks. Because of this jobs with high repetition rates, such as typing, can be problematic even with normal or minimal force needed for the task.

To minimize these three factors it's important to look at job tasks and determine how they can be improved. Selecting power tools instead of manual ones can reduce force and repetition. Buying tools with ergonomic handles can alleviate unsafe wrist postures. Redesign the work areas to minimize lifting with the hands above the shoulders.