



025: Ergonomics

Goals of ergonomics

- Reduce fatigue, which causes inattention and subsequent injury.
- Reduce long-term strain on tendons and connective tissue.
- Structure tasks such that they allow for good posture, thus reducing acute and chronic injuries.
- Reduce manual handling hazards.

Approaches you can take

Warm up before a lift. Your body does not have an “instant on” switch. Just like a car, it needs to warm up before being put to hard use. Use mild stretching and mild tension exercises that approximate the intended movement. Otherwise, you may just pop a gasket.

Reduce the amount of load by disassembling or isolating an object. For example, if you must move a filing cabinet, take the drawers out.

Supplement your lifting by asking someone to help you. Lifting an object by yourself requires balancing and motor skills not required when you have help.

“Think through” a lift before performing it. Check your posture, and position your feet for good stability.

Eliminate the need to lift by using equipment to do the work.

Eliminate the need to carry, if you can. Use a cart, lift truck, or other conveyance.

Maintain good housekeeping, especially in areas where you or others might need to carry something. This means cleaning up spills immediately, making sure mats and rugs lay flat, and removing obstacles from pathways and aisles.

Pay attention to your fatigue level. If you have been pulling 500 MCM cable all morning, you have probably pushed all of your major muscle groups close to their limit. If you then run 4-inch rigid overhead, you are probably at a much higher risk for an injury to your rotator cuff or back than you were in the morning. Most tasks can wait until the next day. If you’re unsure, discuss your fatigue with your foreman.

Try to rotate and vary tasks throughout the day. This is a proven approach to allow recovery time to ligaments that would otherwise get inflamed. For example, you might work on the crew pulling the 500 MCM cable for the first pull, then do terminations until the third pull. If your foreman seems to run you back and forth between tasks, this rotation is what she or he is trying to accomplish. Notice how these tasks use different muscles.

Look at the work ahead, and suggest ways to reduce physical stress. Your foreman depends on your input for the crew to complete the work injury-free.

Use power tools, such as powered crimpers, whenever practical.

Use ratcheting tools—ratcheting wrenches instead of box ends, ratcheting screwdrivers instead of plain ones, and so on. Be watchful of tools that produce vibration.

Discussion leader duties for this session:

Bring a set of manual crimpers and a power crimper to the session. Ask for a show of hands. “Who would prefer to use the manual crimpers to make 100 crimps on 500 MCM cable?” Then ask who would prefer the power crimpers. Ask people why they voted the way they did. Make the point that this same principle applies to all work. Use tools and techniques that reduce stress and injury.

What this Safety Talk covers:

How to avoid repetitive stress and biomechanical injuries.

Discussion notes :

