

Healthy Work versus Strain at Work

Ergonomic work issues are often silly little details that seem easily dismissed. Putting a cover on a spinning knife makes some common sense to us when discussing injuries and how to prevent them. Changing an angle at your elbow seems to make dull reading. One way to think about ergonomic injuries and the strain that your body is under is to compare it with other insidious creatures like holiday creep at the belt-line or fitness fade. Loss of fitness and unwanted weight gain happen in tiny steps over time. For example, eating just 100 calories per day more than you burn will add 10 lbs to your stylish physique by the end of a year. After 30, many of us have lifestyles that encourage this trend as well as slowing metabolism so the body burns calories slower! (Number of years over 30x10 lbs. per year... you do the math!)

Strain on your ligaments is a lot like that. Regular sub-threshold (strain without the pain) strain is cumulative in ligaments. Ligaments have poorer circulation than most tissues and they take a lot longer to heal than most tissues. A simple but gooey example is a road rash. If you fall off your unicycle and scrape skin off your arm, it will form a scab and skin will grow there in some amount of time. If you scratch the scab (just go with the example) off every day, the wound will take much longer to heal if it ever will! Ligament strain with awkward or repetitive motions can be like that if you re-irritate the tissue before it has time to heal. This is partly why soft tissue injuries can take what seems like forever to recover.

If we use our muscle system to work, good things happen. Muscle tissue has a great blood supply and it can start to heal overnight or within a few days. This system gets better with use through conditioning. So, proper technique at work can make you stronger over time rather than worn out. A real example is grip strength. Sawmill workers use their hands a lot and average nearly 60 Kg. of power while the overall average for the public is about 48Kg. This is where Ergonomics comes in.

Posture and body mechanics determine whether we are using muscle to do work (good) or ligaments to do work (bad). Subtle techniques like holding tension in your abdominal muscles can ready your body to use the muscle system and much of your power comes from your abdomen and legs. Think of a diver on a board or a linebacker before the play starts. (Overhead crane operators please ignore the diving board thing, just sit up straight OK!) If you are holding yourself in a slack posture while you work, you will be doing yourself unseen harm. If you absent-mindedly reach out to flip a board with you arm out to the side, you are at risk for ligament or tendon injury. Mental preparation for any task will reduce the amount of damaging strain that your body receives.

So the shorter version of all this is that you should protect yourself by loading your muscles, not your ligaments. Loading your muscle system is most easily achieved by holding yourself in ready posture (as you all do before you lift a heavy box). Minimize reaching with lifting and if you do have to work in an awkward position, take an extra second to tighten your stomach and prepare for the task.

Wow. Exiting isn't it. I know I'm breathless. Although ergonomics can seem dry, you can help yourself a great deal by considering the ideas we just reviewed. Work should be a good time and make you more fit to enjoy the other parts of your life.