CONTROLLING GENERAL ERGONOMIC RISKS

Many ergonomic risk factors are present in the laboratory, office, and other work areas. Risk factors include awkward posture, high repetition, excessive force, and contact stresses. Learning how to control ergonomic risk factors improves employee comfort, productivity, and job satisfaction while lowering chances for occupational injuries.

Awkward Postures

- Result in increased stress to muscles, tendons, and nerves
- Neutral position for the wrist is straight. Working with the wrist in a forward bent position results in compression/cramping of tendons on the palm side of the wrist and tension of tendons on the back of the wrist, restricting the normal ability of the tendons to glide during the work activity, leading to injury

High repetition

- Can result in injury if exceeding the body’s capacity. Problems arise when there are dramatic increases in repetition where the body can’t accommodate
- Reduce repetitions when possible and listen to the body (symptoms signal exceeding limits)

Forces

- Vary with equipment type, design, and state of repair
- When applying force to an object, forces are transferred through the body
- Forces transferred to the body are affected by the amount of force and distance through which a force is applied
- Choosing equipment that requires less force to activate and a shorter activation distance can reduce forces transferred to the body
- Ensuring that equipment is in good working order helps reduce the overall forces
- The amount of force the body can accept without injury varies with the individual, the size of the joint, size of ligaments and muscles surrounding the joint
- Position yourself or use tools that help transfer forces to larger joints (using the larger shoulder instead of the smaller wrist)

Contact Stresses (Pressure)

- Occur when a force is concentrated to a small area (resting forearm against a sharp edge where highly concentrated forces disrupt the ability of the tendons to move within the forearm can cause inflammation)
- If resting on a sharp edge is necessary, pad the edge to distribute forces
- When grasping hand-held equipment, use padding/padded glove to reduce pressure (equipment must fit hand well to reduce palm pressure that can affect the median nerve)

Visit [www.ehs.ucr.edu](http://www.ehs.ucr.edu) for additional information or call EH&S at 827-5528 if you have any questions.