

## Laptop Computer Ergonomics

Laptop computers are designed with the video display screen and keyboard/touchpad pointer device attached. This design while compact and convenient does not allow for good ergonomic posture. If the computer is positioned for the arms to be relaxed at the side when using the keyboard/touch pad then the screen is too low causing neck flexion and a “hunched over” posture. If the laptop is raised so the screen is near eye level then the arms are raised creating awkward shoulder, elbow, and wrist postures. The risk for developing discomfort related to laptop computer usage is related to the awkward postures as well as the amount of time spent in these postures. If you use your laptop computer for less than 15 minutes at a time, with long periods of rest between use and data input is limited then your risk for discomfort is limited. However, if the laptop is used as your primary computer for periods longer than 15 minutes with frequent data input the following is recommended.

### **LAPTOP VIDEO DISPLAY MONITOR**

Use a laptop stand or place on a box or stack of books to position the screen as follows:

- ✓ Center monitor directly in front of your position.
- ✓ Top of screen should be eye level – bifocal wearers slightly lower.
- ✓ Screen should be close enough so that you do not lean forward.

### **KEYBOARD & MOUSE**

- ✓ External keyboard and mouse are recommended
- ✓ Elbows should be bent 90-100 degrees.
- ✓ May need to use cushions to raise seat height.
- ✓ Wrists straight – do not rest wrists while typing – “float”.
- ✓ Mouse next to the keyboard at the same height.
- ✓ Drive mouse from the shoulder.

### **MOBILITY**

Laptop bags are recommended for transporting laptops to and from job sites. The type of bag recommended depends upon the distance the computer must travel. Consider the following options:

- ✓ Briefcase Type – May be used when the laptop is carried relatively short distances to and from the job site. A shoulder strap is recommended.
- ✓ Backpack – Recommended for use when the laptop is carried longer distances, the hands need to be free to hold other items, and/or the laptop is carried over uneven ground.
- ✓ Telescoping Handle Wheeled Bags – Best for use when traveling with a laptop over larger distances and even ground. Also recommended for heavier laptops.