

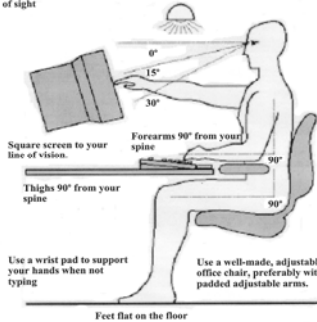
## NDSU Ergonomic Guide

| Problem                            | Possible Causes  | Try This!   |
|------------------------------------|--|---|
| <b>Headaches</b>                   | Muscular tension   | Frequent breaks and stretching exercises  |
|                                    | Stress   | Stress management & body stretches  |
|                                    | Vision   | Recommend eye exam or move the monitor  |
|                                    | Head extended forward or tilted                              | Adjust the monitor  |
| <b>Irritated &amp; Dry Eyes</b>    | Distance of the monitor                                      | Position monitor for your vision  |
|                                    | Prolonged computer use                                       | Take frequent mini breaks   |
|                                    | Size of the font/characters                                  | Adjust for your vision – larger/smaller   |
|                                    | Glare on the monitor   | Provide glare screen, move monitor, task lighting   |
|                                    | Color of the print   | Dark font on light background   |
|                                    | Dusty and dirty screen                                       | Keep screen dusted and clean  |
|                                    | Lighting   | Increase/decrease lighting or task lighting   |
|                                    | Lack of frequent mini breaks                                 | Every 20 minutes/20 sec. break/look 20 ft. away   |
| <b>Neck Pain</b>                   | Vision   | Recommend eye exam  |
|                                    | Poor head posture<br>Tilted up, back, forward or to the side | Adjust the monitor height<br>Adjust the monitor distance<br>Adjust the monitor location – straight ahead<br>Use a document holder – in front of monitor |
|                                    | Bifocals   | Drop the monitor down   |
|                                    | Arms extended  | Move the keyboard and mouse closer  |
|                                    | Shoulders elevated/raised                                    | Drop the armrest<br>Maintain neutral posture – relax shoulders  |
|                                    | Armrest high/low   | Adjust properly – maintain 90° angle  |
|                                    | Poor work habits/posture                                     | Use equipment and time properly<br>Use proper body posture and body mechanics   |
|                                    | Phone  | Avoid cradling the phone, use headset/rest  |
| <b>Shoulder Pain</b>               | Lack of frequent mini breaks                                 | Every 20 minutes/20 sec. break/look 20 ft. away   |
|                                    | Shoulders elevated/raised                                    | Drop the armrest<br>Maintain neutral posture – relax shoulders  |
|                                    | Arms extended  | Move the keyboard and mouse closer  |
|                                    | Armrest high/low   | Adjust properly – maintain 90° angle<br>Avoid leaning on elbows   |
|                                    | Poor work habits/posture                                     | Use equipment and time properly<br>Use proper body posture and body mechanics   |
|                                    | Lack of frequent mini breaks                                 | Every 20 minutes/20 sec. break/look 20 ft. away   |
|                                    | Poor conditioning  | Strength/stretching exercises   |
|                                    | Forward head posture   | Check monitor position  |
| Overhead reaching/lifting          | Organize workstation – Circle of Power                       |   |
| <b>Elbow Pain</b>                  | Cradling the phone   | Use fixed headset/rest or speaker phone   |
|                                    | Keyboard too high  | Maintain elbows at 90° angle  |
|                                    | Leaning on elbows  | Adjust arm rest of the chair & sit-up straight  |
|                                    | Pressure points  | Avoid sharp edges of the desk   |
|                                    | Prolonged repetition   | Avoid prolonged repetition & take mini breaks   |
|                                    | Pinch gripping   | Avoid pinch gripping or choking the mouse   |
|                                    | Striking keys too hard                                       | Check keyboard for problems & address stress  |
|                                    | Reaching for mouse or keyboard                               | Maintain elbows at 90° & move closer to work  |
|                                    | Reaching for the phone                                       | Move phone closer to the operator   |
|                                    | Lifting binders/material that are too large/heavy            | Maintain material in smaller binders and maintain an acceptable load limit  |
| Pulling/lifting & extreme exertion | Push instead of pull & use legs and hips for lifting         |   |
| Lack of frequent mini breaks       | Every 20 minutes/20 sec. break/look 20 ft. away              |   |

# NDSU Ergonomic Guide

| Problem                         | Possible Causes                                 | Try Possible Solutions  |
|---------------------------------|---|---|
| <b>Wrist &amp; Forearm Pain</b> | Keyboard/mouse positioning                      | Align elbows with the keyboard and mouse<br>Reduce edges and pressure points  |
|                                 | Repetitive Motion                               | Reduce the number of motions<br>Job rotation  |
|                                 | Contact forces/ pinch points                    | Avoid pinch/contact points and resting on elbows  |
|                                 | Striking keys too hard                          | Replace keyboard if keys are sticking<br>Take a stress break and back away from work  |
|                                 | Choking the mouse                               | Use a smaller mouse or one that fits your hand<br>Slow down the cursor  |
|                                 | Gripping too tight                              | Use smaller binders<br>Use ergonomic pens, pencils, tools, etc.   |
|                                 | Wrist alignment                                 | Hands in neutral posture and elbows at 90°<br>Trim long finger nails – interferes with neutral posture                                  |
|                                 | Wrist rest                                      | Provide wrist that is proper height   |
|                                 | Lack of frequent mini breaks                    | Every 20 minutes/20 sec. break/look 20 ft. away   |
| <b>Hand &amp; Finger Pain</b>   | Excessive force-keyboard/mouse                  | Replace keyboard if keys are sticking<br>Take a stress break and back away from work  |
|                                 | Type of mouse                                   | Use a smaller mouse or one that fits your hand  |
|                                 | Wrist alignment                                 | Hands in neutral posture and elbows at 90°<br>Use tools that encourage proper positioning   |
|                                 | Gripping too tight                              | Use ergonomic pens, pencils, tools, etc.<br>Avoid awkward positions   |
|                                 | Keyboard/mouse positioning                      | Align elbows with the keyboard and mouse  |
|                                 | Lack of frequent mini breaks                    | Every 20 minutes/20 sec. break/look 20 ft. away   |
| <b>Low Back Pain</b>            | Poor conditioning                               | Strength and stretching exercises   |
|                                 | Sitting forward in the chair                    | Address posture<br>Adjust the seat pan depth and arm rests<br>Move closer to your work<br>Keyboard centered – not to the side or angled |
|                                 | Lack of lumbar support                          | Provide chair with adjustable lumbar support  |
|                                 | Feet dangling                                   | Adjust chair height or provide foot rest  |
|                                 | Lack of an adjustable seat pan                  | Provide chair with adjustments  |
|                                 | Elevated shoulders                              | Maintain neutral posture and elbows at 90°  |
|                                 | Arms extended                                   | Move closer to your work and elbows at 90°  |
|                                 | Lifting/Carrying                                | Follow proper lifting/carrying procedures   |
| Lack of frequent mini breaks    | Every 20 minutes/20 sec. break/look 20 ft. away |   |
| <b>Leg &amp; Feet</b>           | Pressure on the back of the knees               | Adjust seat pan depth (2-3 fingers width)   |
|                                 | Crossing legs                                   | Address posture and work practices  |
|                                 | Feet dangling                                   | Adjust chair height or provide foot rest  |
|                                 | Lack of frequent mini breaks                    | Every 20 minutes/20 sec. break/look 20 ft. away   |

Position monitor 15° to 30° away (approximately arm's length) and about 15° to 30° below your line of sight



Don't let light shine in your eyes or on your screen.

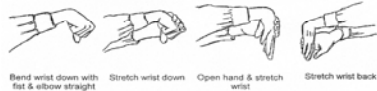
### ARM STRETCHES



### NECK STRETCHES



### WRIST EXERCISES



### SHOULDER EXERCISES



### SHOULDER STRETCHES



### THUMB STRETCHES



### FINGER STRETCHES

