

## OrthoBethesda Therapy Services

### Workstation Ergonomic Setup

Many individuals commonly experience neck, back, wrist and other pains after sitting at work all day. It is important to make sure that your workstation is properly set-up in order to minimize your risk of developing postural-related pains. Below are some instructions and tips to help assist you in optimizing your work space.

#### **Importance of Proper Workstation Setup:**

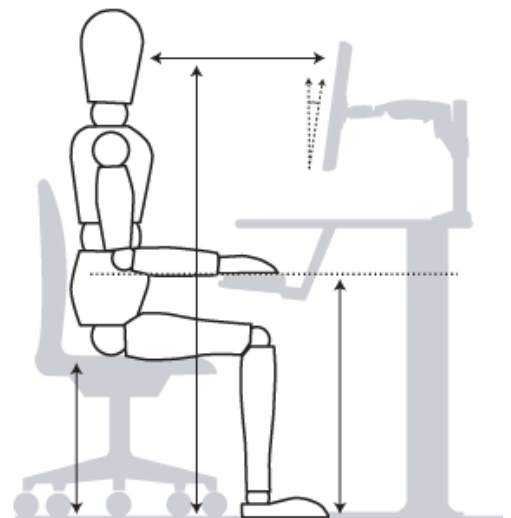
When a workstation is properly adjusted to an individual, it places the body in a neutral position. When the body is neutrally positioned, stress and strain to the body's muscular and skeletal systems are minimized.

A good example which illustrates the importance of neutral positioning is the effect of forward head posture. For an average adult individual, the head weighs approximately 12 pounds. For every inch that the head projects forward, an additional 10 pounds of force is placed on the spine. By slouching over the desk with your head forward 3 inches, you will be placing 42 pounds of force on your spine!



## Optimal Body Positioning for Seated Computer Workstation:

- Hands, Wrists, and Forearms
  - Horizontal, straight and in-line
- Elbows
  - Bent between 90-100 degrees
  - Remain close to the sides of the body
- Shoulders
  - Relaxed (not raised or forward)
- Upper Arms
  - Relaxed
  - Hanging normally at the side of the body
- Head & Neck
  - Approximately vertical
  - Facing straight ahead
  - In line with the torso (ear over the shoulder)
- Back (Torso)
  - Approximately vertical
  - Fully supported by the chair
  - Appropriate lumbar support to maintain the natural inward curve
    - No rounding of the low back
- Thighs and Hips
  - Horizontal to the floor
  - Supported by a well-padded seat
- Knees
  - Roughly the same height as the hips (or very slightly lower)
- Legs
  - Approximately vertical
- Feet
  - Slightly in front of the knees
  - Flat and fully supported on the floor
    - A footrest may be used if feet do not reach the floor

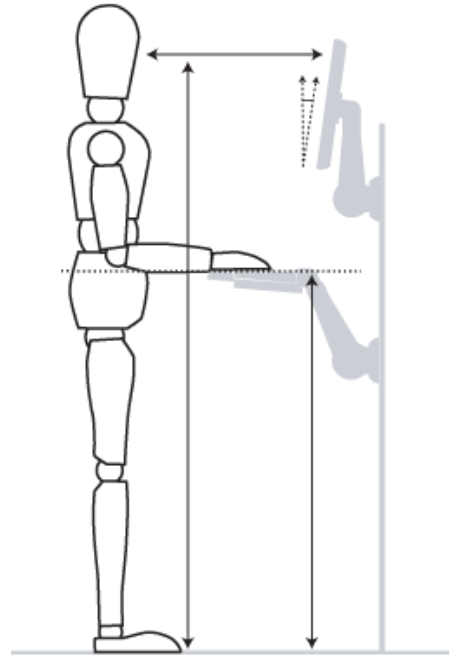


## Seated Computer Workstation Setup Tips:

- Chair
  - Has wheels or castors to move around easily
  - Able to swivel
  - Backrest provides firm support to the inward curve of the back
    - Adjustable angle and height
  - Fabric is made of "breathable" material to allow for air circulation
  - Seat depth allows for hips and back to contact the upright support
    - 2 inches of clearance between front of chair and backs of knees
  - Enough padding to allow for comfortable circulation
    - *Seat should not be too soft (may cause muscle fatigue)*
  - Ability to change the seat height and backrest angle
  - Armrests (optional) should not limit your ability to scoot close to the desk
    - *Should not be used while typing*
    - Height should be adjustable
- Desk
  - Large enough surface to fit all computer equipment, paperwork, books, and other commonly used items
  - Enough clearance for the knees when the elbows are properly positioned at 90 degrees
  - Room for the legs and feet to move around and stretch
    - *Drawers and furniture support legs should not be in the way of the legs*
  - Frequently used items should be kept close to avoid long reaches
- Computer Monitor
  - The eyes should align with the top  $\frac{1}{3}$  of the monitor
  - Placed at a distance of 18-24 inches from the face
  - Free of glare or shadows
    - May be necessary to tilt the monitor
  - Images on the screen are sharp, easy to read, and do not flicker
  - Placed directly ahead to avoid rotating the neck to see the screen
- Keyboard
  - Rests no higher than 2.5 inches above the work surface
  - Allows the elbows to bend between 90 and 100 degrees
  - Should be placed flat to allow for straight wrists
- Wrist Rests (optional)
  - *Not used while typing*
    - Placing the wrists on a wrist rest while typing can create a bend in the wrist and can place pressure on the carpal tunnel
  - Should have rounded edges
  - Firm, but soft cushion
- Document Holder
  - Documents should be placed in an upright holder rather than resting flat on the table
  - Holder should be placed close to the computer monitor (similar height/distance)
- Footrests (optional)
  - May be necessary for those who do not have adjustable chairs, or those of smaller stature whose feet do not rest flat on the floor

## Standing Computer Workstation Setup:

- Similar to seated computer workstation setup, but with a few changes
  - Head, neck, torso and legs are vertical and in-line
  - Stand on a soft mat or cushion
  - Alternate placing one foot up onto a footrest throughout the day to take pressure off of the spine



Working in the same posture or sitting still for prolonged periods is not healthy, even if you have ideal working posture. Change your position frequently throughout the day in order to improve circulation and provide nutrition to the joints. Make it a point to get up and stretch/exercise for at least 5 minutes every hour.

- Perform stretches and move your body around
  - Neck/torso rotation
  - Neck/torso sidebending
  - Neck flexion/extension
  - Trunk flexion/extension
  - Chest stretch
  - Wrist and finger stretches
  - Seated hip lifts
  - Hamstring stretch
  - Quad stretch
  - Squats
  - Desk/wall push-ups
  - Arm circles
- Stand up and walk around for a few minutes periodically