

# Desktop Ergonomics Self-Assessment Guide



## What is ergonomics?

Ergonomics is an applied science dedicated to the design of work environments and tasks to ensure that they fit within human capabilities.

## What are the goals of ergonomics?

- Decrease the risk of injury
- Enhance worker comfort and work efficiency
- Improve the quality of your work life

## What is an ergonomics self-assessment?

It is a systematic review of your workstation to insure that it meets recommended guidelines set forth by the University of Wisconsin-River Falls Risk Management Department. Use this guide to assess your workstation.

This guide is meant to be used with you and a coworker to determine the best workstation configuration.

If after using this guide you would still like a workstation assessment, please contact:

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Risk Management

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## Assess Your Worksurface

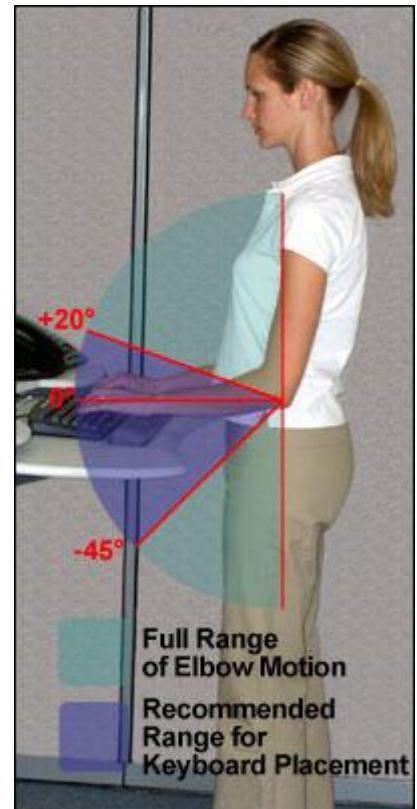
### 1. Worksurface Height

Most likely, your worksurface is adjustable. Follow the worksurface height adjustment worksheet to determine height.

### 2. Keyboard Height

Elbow height is right. In order to determine the proper height for keyboard work:

- Consider the height of your elbows when you are seated in your chair with your shoulders relaxed and your arms are at your side. Bend your elbows to an “L” shape. Your keyboard should be at about the same height as your elbow. If the worksurface is higher, then you are likely raising your shoulders to place your hands on the keyboard. This creates discomfort and a risk factor for potential injury. Have the surface lowered accordingly.



### 3. Monitor Height

- Your monitor placement should be optimized for comfortable viewing.
- The screen should be about arms distance from your eyes and directly in front of your keyboard. Do not place the monitor at an angle with respect to your body. This will cause you to view the monitor in an awkward position.
- The height of the top of the screen should match your height or be placed so that it is slightly below eye level.

### 4. Monitor/keyboard Alignment

- Set up your monitor and keyboard so that they are directly in front of you and parallel to the edge of the desk.
- Do not set the monitor off to one side.
- The keyboard should be set so that the break between the “H” and ”J” keys is lined up with the center of your body.



## 5. Bifocals

If you wear bifocals, you will need to place the monitor so that the top of the screen is 2-3 inches below eye level. You need to view the monitor without altering your head and neck position. Doing so will cause neck discomfort and possible injury.

- Exception: If you use a large monitor (20" or larger), position your monitor so that the top of the viewing area is about 3" above eye level.

## 6. Safe Keyboard Use

- When keying, keep your wrists straight, so they are a natural extension on your forearm, not bent backwards.
- Keep the same angle of the keyboard flat by placing the small legs on the bottom of the keyboard in the down position.
- Do not rest your wrists on any surface, even a soft palm rest. Your wrists should glide slightly above the keyboard. You can rest on a wrist pad or palm rest when you take a break or are waiting for the computer.

## 7. Safe Mouse Technique

- Move the mouse with a whole arm motion. Do not isolate the movement with your wrist.

## 8. Phone

- Place your phone so that it is within easy reach. Use a headset if you work in a call center.
- Generally, if you need to access the computer and talk on the phone at the same time, use a headset.



### Helpful tip:

- Reduce Your Reach - Keep frequently used items within 12-18 inches from the middle of your body. This will help to minimize strain on your shoulder and arm.



## Workstation Considerations

### 1. Stretching and Strengthening

- It is recommended to stretch your muscles to help them recover from work.
- Stretching helps to restore circulation and maintain normal length and tension to muscles.
- Additionally, computer users place heavy demands on the muscles of their trunk, neck, shoulders and arms.

### 2. Lighting and Glare

- If you work near a window, place your monitor so that it is perpendicular to the screen, not directly opposite the window.
- Adjust the blinds as needed to control light.
- If you notice a glare that makes it difficult to read the screen, obtain a glare filter.



### 3. Task Rotation

- Take time to give your muscles some recovery time. This is easily done by simply rotating tasks or by taking a brief stand up or stretch break.

#### Helpful Tip:

- Every 30 minutes do something different for 30 seconds.
- Do this 30 days in a row to make it a habit.

## **Adjusting Your Office Chair**

Get your chair set up properly for good postural support.



### **Seat Pan Height**

Make sure that the seat pan is adjusted so that:

- Your feet are flat on the floor with your knees even with or slightly lower than your hips.
- No matter which chair you have, there is a paddle for seat pan height adjustment.
- Sit with equal weight on each hip.
- If you keep a wallet in your back pocket, remove it. This sets up imbalances that can lead to back pain.
- Recheck your position periodically. Make sure that your hips are positioned against the back of the chair's backrest.

### **Back Support**

- Make sure that the convex curve on the backrest fits in the curve of your lower back.
- Scoot your hips all the way to the back and adjust the height of the backrest as needed for support and comfort.
- Sit all the way back in your chair as you work.
- Be sure that you have room between the back of the knees and the edge of the seat pan.
- You may need to adjust the seat pan depth, if your chair has this feature, or the depth of the back rest. A chair should have one or the other.

## Armrests

If you have armrests, make sure they are adjusted so that:

- They are not interfering with your arm movement.
- Be sure that they allow your shoulder to relax.
- Adjust the width and height needed for comfort.



## Seat Tension

- Adjust the tilt tension so that you can recline by shifting your weight towards the backrest.
- This adjustment is usually the adjustment knob found underneath the seat pan at the front of the chair.
- If you prefer not to recline, the tilt function usually can be locked.

## Helpful Tip:

- Avoid the temptation to sit on the edge of your chair. It may seem easier as you get busy and get up and down frequently. However, poor support will make your back and arms fatigue more quickly, which will likely lead to muscle soreness.
- About 2-3 fingers width distance between the back of the knee and the edge of the seat pan is recommended.

# Self-Assessment Worksheet



## For Computer Workstations, Find Your Right Height!

The height you select for the work surface depends on your height and the types of work that you do. The required height of the worksurface will be different for each type of work, and needs to be set up properly to prevent injury to your body's muscles, tendons, joints and nerves.

First, decide the type of work you do: computer versus a combination of computer and paperwork. Ensuring comfort and safety depends on proper height selection.

### 1. What type of work do you do most often?

- 100% computer work with occasional data entry from paper documents?
- A combination of computer and paperwork, often shifting between the two types of work?

2. **If you do 100% computer work**, specify that your worksurface be set to your ideal keying height as indicated through the self-assessment process on the following page. Use the self-assessment tool for monitor height determination as well. Record your information and work with your supervisor if a work order is needed to make changes.

3. **If you do a combination of work types**, use the following process to determine worksurface height and whether or not you will need a keyboard tray.

- Pair up with a co-worker and obtain a tape measure

## Get Your Workstation Desk Height Set-up For You!

Setting the worksurface to your appropriate height can help with proper posture and positioning, decreasing the risk of injury.

- If your keyboard is too high, you will naturally raise your hands to be able to type. This position makes you raise your shoulders, which makes the muscles work harder, without a break. This can lead to discomfort and injury.
- If your keyboard is too low, you will find that you lean into it with your neck craned forward, elbows straight with your wrists bent backward.

### Steps to Take:

1. Obtain a tape measure.
2. Pair up with a co-worker.
3. Use the process on the following page to determine your proper workstation and monitor height.
4. Record the information on the following page and contact your supervisor if a work order is needed to make changes.



## How Do I Determine My Proper Workstation Height?

### Work Surface Height

1. Adjust your chair so that it supports your posture in an upright position with feet supported on the floor. Use your chair height adjustment controls for this.
2. With your shoulder relaxed, bend one elbow to 90 degrees, or an “L” position.
3. Using a tape measure, have your co-worker measure the distance from the floor to the tip of the elbow. Keep your shoulders relaxed.
4. Record that measurement in the box below.

My seated elbow height is: \_\_\_\_\_ inches

My computer worksurface height should be (same as seated elbow height): \_\_\_\_\_ inches

My surface height for paperwork is (keyboard height + 2”): \_\_\_\_\_ inches

5. Use this measurement as a prescription for the height of your computer worksurface.
  - If your primary work is computer based, and you do not tend to frequently switch between computer and paperwork, specify that your primary work surface will be set to your seated elbow height. Proceed to the assessment for monitor height setting.
  - If you do tend to frequently switch between computer and paperwork, and your seated elbow height is 27-28”, you may need a secondary work surface for paperwork and then you have your primary worksurface set to your seated elbow height.
  - If your seated elbow height is below 27” or greater than 29”, specify that your primary worksurface will be set to your preferred paperwork height and specify a keyboard tray.

### Monitor Height

1. Adjust your chair so that it supports your posture in an upright position with feet supported on the floor. Use your chair height adjustment controls for this.
2. Have your co-worker measure the distance from the floor to the midpoint of your eyes.
3. Record this measurement below.

My seated eye height is: \_\_\_\_\_ inches

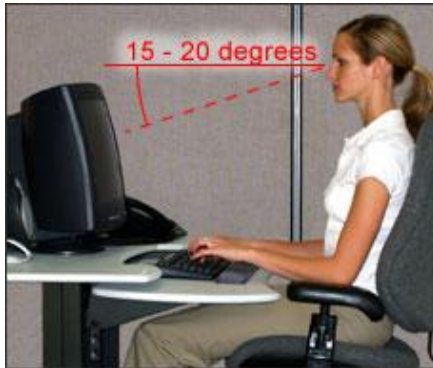
4. Set the monitor so that the top of the screen matches your eye level or is 2” below eye level for bifocals.
5. Allow 18-28” between your eyes and the monitor.
6. Align the monitor behind the keyboard, directly in front of your line of sight, not to one side.

### Beware of Glare:

- Set up your computer monitor so that it is not directly opposite a window.
- Adjust the lighting so that there are no reflections on the screen.
- You may need to adjust window blinds or purchase a glare filter if the blinds cannot be adjusted, or adjustments do not eliminate the glare.
- A homemade shield made of construction paper or cardboard and placed around the top of the monitor can be very helpful.

## Monitor Placement Self-Assessment Worksheet

### For Computer Monitors, Find Your Right Height



#### Why do I need to do this?

- **Poor posture and positioning at work can lead to discomfort and injury to your muscles, tendons or joints of your arms or upper body.**

Setting the Monitor to your appropriate height will help you attain proper posture, thus decreasing your risk.

- If your monitor is too high, you will naturally tilt your head up to view the screen. This causes excessive strain on your neck and the muscles, tendons, joints and nerves in this area. The consequences can be discomfort, fatigue and possible pain and injury.
- If your monitor is too low, you will find that you lean forward with your neck and upper body craned forward. This awkward posture causes muscles to shorten, tighten and may cause movement to become painful and limit your ability to perform activities that are meaningful to you.

#### Determine Your Proper Monitor Placement and Height

Steps to take:

1. Obtain a tape measure.
2. Pair up with a co-worker.
3. Use the process on the following page to determine your monitor height.
4. Alternatively, you may use the height chart to determine your proper monitor height setting.
5. Record the information and give it to your supervisor so that the proper adjustments may be made.



## How Do I Determine My Proper Monitor Height?

1. Adjust your chair: feet supported on the floor, sit upright using neutral posture. Look straight ahead.
2. Have your co-worker measure the distance from the floor to the midpoint of your eyes.
3. Record that figure. This is your seated eye height.
 

My seated eye height is: \_\_\_\_ inches
4. Bifocals? If worn during computer use, subtract two inches from the figure obtained in step 2.
 

Measurement from Step 2: \_\_\_\_ inches  
 subtract 2 inches.  
  
 My seated eye height is: \_\_\_\_ inches
5. Set the monitor so that the top of the screen matches your eye level or is 2 inches below eye level for bifocals.

6. Align yourself at the keyboard. Arms at your side, hands on keyboard. Measure 28 inches from the eyes. Place the monitor screen at the distance from your eyes. Adjust as needed for comfortable viewing.
7. Align the monitor behind the keyboard, directly in front of your line of sight, not to one side.
8. Beware of Glare
  - Set up your computer monitor so that it is not directly opposite a window.
  - Adjust the lighting so that there are no reflections on the screen.
  - You may need to adjust window blinds or purchase a glare filter if the blinds cannot be adjusted or adjustments do not eliminate glare.
  - A homemade shield made of construction paper or cardboard and placed around the top of the monitor can be helpful.

Alternative Method:	Height Chart
Height With Shoes	Computer Monitor Height
5'	41"
5'1"	42"
5'2"	43"
5'3"	44"
5'4"	45"
5'5"	46"
5'6"	46"
5'7"	47"
5'8"	48"
5'9"	49"
5'10"	49"
5'11"	50"
6'0"	51"
6'1"	52"
6'2" or taller	53"

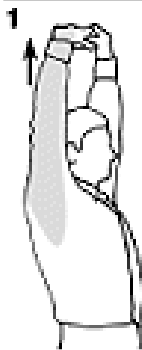
# Online Stretches

1 minute

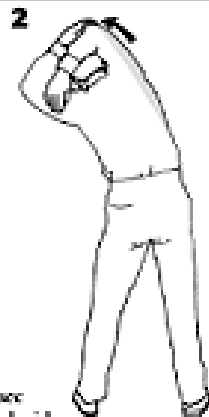
No matter how fast your modem, you're always waiting for something to load while online. (This will probably never change, for even as modems get faster and faster, files get larger and larger.) These stretches are for your upper body, especially neck, shoulders, and wrists.

- Whenever you are reading online, and not using the keyboard or mouse, you can do upper body stretches using both arms.
- After you follow this program a few times, you'll know these stretches by heart; thereafter do them frequently while online.

*If there isn't time to do them all at one time, break the routine into short combinations: 1, 2, 3 or 4, 5, 6 or 7, 8.*



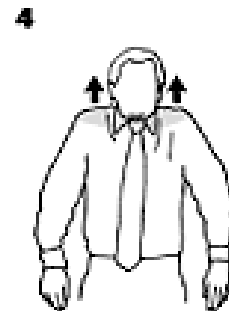
5 sec  
each side  
p. 70



5 sec  
each side  
p. 70



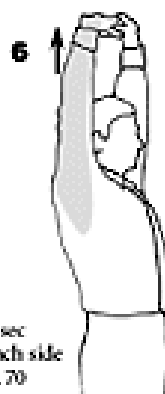
5 sec  
each side  
p. 70



5 sec  
each side  
p. 69



5 sec  
each side  
p. 72



5 sec  
each side  
p. 70



8 sec  
p. 67



8 sec  
p. 67



# Posture Strengthening Exercises

## Waxing

- Sit up straight with elbows at sides and bent to 90 degrees.
- Push shoulders together and down, with palms facing the floor.
- Make a waxing motion in the air while maintaining the above position. Keep elbows glued to sides while completing motion.
- Do this for 20 seconds. Repeat 4 times.

## Wall Angels

- Stand against wall with feet shoulder width apart.
- Gently press low back against wall.
- Place back of elbows, forearms and wrists against wall.
- Bring arms up and down slowly in a small arc of motion while keeping elbows in contact with wall.
- Do this 10 times.



## Sidelying Shoulder Exercise

- Lie on either side with your arm resting against your side.
- Bring hand up to ceiling and back down slowly.
- As arm comes up, your shoulder blade should move back towards other shoulder blade.
- Do 3 sets of 5-10 repetitions.

## Prone Lying Scapular Exercise

- Lie on stomach on a pillow, with forehead resting on a rolled towel to keep neck in neutral.
- Bring arms out to sides with elbows bent to 90 degrees.
- Lift arms up while squeezing shoulder blades together.
- Hold each 3-5 seconds, and do 3 sets of 5-10 repetitions.



## Theraband Rows

- Sit up straight on a chair.
- Keep elbows very close to sides and pull back on a resistive band as shoulder blades come back and down.
- Return to start position slowly.
- Do 3 sets of 5 repetitions.

### **Isometric Abdominal Exercise**

- Sit in chair with back supported.
- Tighten stomach as if someone were going to punch it.
- Press fingers into abdomen and tighten abdominals even more to resist pressure of fingers.
- Hold 15 seconds. Repeat 5 times.



### **Wall Slides**

- Stand with buttocks, and back against wall.
- Bring feet 12" from wall.
- Keep back against wall.
- Lower down until knees are bent to about 60 degrees keeping abdominals tight.
- Raise back up to where knees are slightly bent.
- Do 3 sets of 10 repetitions.

### **Sit to Stands**

- Sit at edge of chair with feet slightly behind knees.
- Stand up while keeping neck erect and spine erect. Your back should not bend forward.
- Immediately return to sitting, but do not put full weight on chair.
- Do 3 sets of 10 repetitions.