

Healthy Computing Guide

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Introduction

This guide is designed to help you be more comfortable and productive while using your computer. It may also help you reduce your risk of experiencing painful and disabling injuries or disorders described in the following Health Warning.

It only takes a moment to read, but the benefits can be lasting.

HEALTH WARNING

Use of a keyboard or mouse may be linked to serious injuries or disorders.

When using a computer, as with many activities, you may experience occasional discomfort in your hands, arms, shoulders, neck, or other parts of your body. However, if you experience symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensation, or stiffness, **DO NOT IGNORE THESE WARNING SIGNS. PROMPTLY SEE A QUALIFIED HEALTH PROFESSIONAL**, even if symptoms occur when you are not working at your computer. Symptoms like these can be associated with painful and sometimes permanently disabling injuries or disorders of the nerves, muscles,

tendons, or other parts of the body. These musculoskeletal disorders (MSDs) include carpal tunnel syndrome, tendonitis, tenosynovitis, and other conditions.

While researchers are not yet able to answer many questions about MSDs, there is general agreement that many factors may be linked to their occurrence, including: overall health, stress and how one copes with it, medical and physical conditions, and how a person positions and uses his or her body during work and other activities (including use of a keyboard or mouse). The amount of time a person performs an activity may also be a factor.

Some guidelines that may help you work more comfortably with your computer and possibly reduce your risk of experiencing an MSD can be found in this "Healthy Computer Guide." You can request the CD version of this "Healthy Computing Guide" at no charge by calling 1 (800) 360-7561 (in the United States only).

For information about arranging your workstation and developing habits that may help to reduce your risk of experiencing an MSD, read this "Healthy Computing Guide". Because there are a variety of factors that may contribute to MSDs, this guide cannot provide everything you need to know to prevent an MSD or reduce your risk of experiencing one. For some people, following the suggestions may reduce their risk of experiencing an MSD. For others, it may not. However, many people experience greater comfort and productivity when following these suggestions. Keep in mind that this guide is not a substitute for the advice of a qualified health professional or an employer health policy or program. If you have questions about how your own lifestyle, activities, or medical or physical condition may be related to MSDs, see a qualified health professional.

Position Yourself

Whether you are working or playing, it is important to avoid awkward postures and position your body comfortably. Not only can this improve your overall productivity, it may help you avoid MSDs. Keep in mind that changing your posture during extended tasks may also help you avoid discomfort and fatigue.

When working or playing at the computer, adapt your surroundings and arrange your computing equipment to promote a comfortable and relaxed body posture. Setting up your workstation to avoid discomfort depends on your unique body size and work environment. However, the following suggestions may help to provide you with a more comfortable environment.



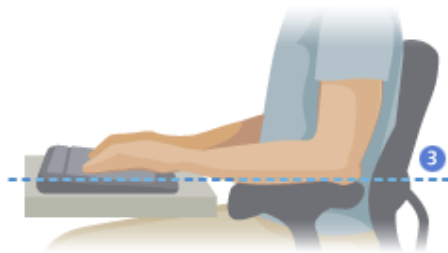
To support your back, try the following:

- Use a chair that supports your lower back (see detail 1).
- Adjust your work surface and chair height to assume a comfortable and natural body posture (see detail 2).

To promote comfortable leg postures, try the following:

- Clear away items from beneath your desk to allow comfortable leg positioning and movement.

- Use a footrest if your feet do not rest comfortably on the floor.



To minimize reaching and to promote comfortable shoulder and arm postures, try the following:

- Place your keyboard and mouse or trackball at the same height; these should be at about elbow level. Your upper arms should fall relaxed at your sides (see detail 3).
- When typing, center your keyboard in front of you with your mouse or trackball located close to it (see detail 4).
- Place frequently used items comfortably within arm's reach (see detail 5).



To promote proper wrist and finger postures, try the following:

- Keep your wrists straight while typing and while using a mouse or trackball.

Avoid bending your wrists up, down, or to the sides. If your keyboard has legs, extend them if this helps you maintain a comfortable and straight wrist position.

- Type with your hands and wrists floating above the keyboard, so that you can use your whole arm to reach for distant keys instead of stretching your fingers.



To minimize neck bending and twisting, try the following:

- Position the top of the screen near eye level (see detail 6). Bifocal wearers may need to lower the screen or talk to a qualified health professional about glasses customized for computer work.
- Center your monitor in front of you. If you refer to your documents more frequently than your monitor, consider placing your documents directly in front of you and the monitor slightly

to the side.

- Consider using a document holder to position your documents near eye level.

To minimize eye strain, try the following:

- Position your monitor about an arm's length away from you when seated comfortably in front of it.
- Avoid glare by placing your monitor away from light sources that produce glare, or use window blinds to control light levels.
- Remember to clean your screen. If you wear glasses, clean them also.
- Adjust your monitor's brightness and contrast.
- Adjust onscreen font sizes to make viewing more comfortable for you, if your computer program has this feature.

Go Lightly

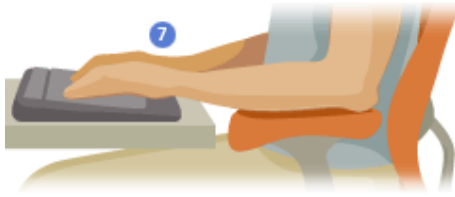
Physical forces continuously interact with our bodies. We may think that only high-impact forces, such as car crashes, are likely to injure our bodies. However, low-impact forces may also result in injuries, discomfort, and fatigue if they are repeated or experienced over long periods of time.

Some types of low forces include:

Dynamic force: A force that you exert through movement, such as pressing the keys while typing or clicking the mouse buttons.

Static force: A force that you maintain for a period of time, such as holding your mouse or cradling the phone.

Contact force: A force that occurs when you rest on an edge or hard surface, such as resting your wrists on the edge of your desk.



To reduce the effects of low-impact forces on your body, try the following:



- Type with a light touch, keeping your hands and fingers relaxed, because it takes little effort to activate keyboard keys.
- Use a light touch when clicking a mouse button or when using a joystick or other gaming controller.
- Hold the mouse with a relaxed hand and do not grip the mouse tightly.
- Avoid resting your palms or wrists on any type of surface while typing (see detail 7). The palm rest, if provided, should only be used during breaks from typing.
- Relax your arms and hands when you are not typing or using your mouse. Do not rest your arms and hands on edges,

such as the edge of your desk.

- Adjust your chair so the seat does not press into the back of your knees (see detail 8).

Take Breaks

Taking breaks can help your body recover from any activity and may help you avoid MSDs. The length and frequency of breaks that are right for you depend on the type of work you are doing. Stopping the activity and relaxing is one way to take a break, but there are other ways, also. For example, just changing tasks - perhaps from sitting while typing to standing while talking on the phone can help some muscles relax while others remain productive.

To vary your daily activities and to work productively, try the following:

- Plan your work and play so that you are not doing the same thing for extended periods of time (such as performing the same activity or using the same part of your body).
- Use different input devices, such as your mouse and keyboard, to accomplish the same task. For example, to perform a scrolling task, you can use the wheel on the mouse and the arrow keys on the keyboard.
- Work more efficiently by using software and hardware features to reduce your effort and increase your productivity. For example, you can press the Windows logo key to open the Windows Start menu.
- Learn about software and hardware features by reading the information that accompanied these products. For example, if you frequently highlight text, assign a mouse button to do

ClickLock.

Be Healthy

A healthy lifestyle can help you perform and enjoy your everyday activities, including the time spent at your computer. Also, learning more about your health is an important step in staying comfortable and productive while using your computer.

To help maintain good health, try the following:

- Eat a balanced diet and get adequate rest.
- Exercise for overall fitness and to improve the strength and flexibility of your body. Consult a qualified health professional to help you choose the stretches and exercises that are right for you.
- Learn to manage stress. One way to reduce stress at work is to plan your work area and schedule so that noise and distractions are kept to a minimum.
- See a qualified health professional if you have questions about how your medical and physical conditions may be related to MSDs. While researchers are not yet able to answer many questions about MSDs, there is general agreement that many factors may be linked to their occurrence, including previous injuries, diabetes, hormonal changes (such as pregnancy), and rheumatoid arthritis.

Conclusion

Learning more about working comfortably and productively, as well as your overall health, are important ways to help you enjoy your computing experience.

