# It's a fact...
Your computer workstation should include the right input device for you.

Choose your input device—the mouse and trackball are the most popular—based on the requirements of your task and your physical limitations. Place your mouse or trackball in your immediate reach zone for natural comfort and maximum hand-to-eye coordination. Placing your input device too far away, too low, or too much on one side can cause shoulder, wrist, elbow, and forearm discomfort.

Mouse

The mouse is designed to fit the contours of your hand. A keyboard is used with a mouse, so you should position the mouse as close to your body as the keyboard is, and within easy reach. The mouse and keyboard should be housed together on an adjustable work surface, on a large adjustable tray, or on two adjustable trays. The work surface must be stable; if the mouse is used on a keyboard tray, the tray should not wobble or tip. Also, when a keyboard and mouse are placed on the same tray, an angled tray works best for key-boarding, but a mouse is used most effectively on a flat surface.
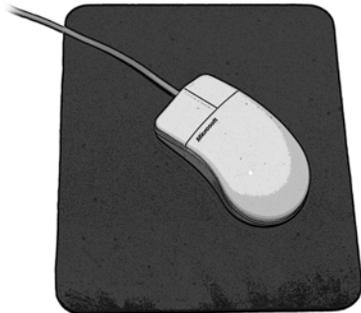
Although most mouses are designed for use on a work surface, there are some that can be operated in conjunction with a foot clicker.

Trackball

The trackball—sometimes called an upside-down mouse—has an exposed ball that you manipulate with your fingers. The trackball uses different muscle and tendon groups and can add variety to your input tasks.   Avoid trackballs that use the thumb to roll the ball—they may cause discomfort and possible injury to the area around your thumb.

Unlike a mouse, you don't have to use a trackball on a horizontal pad; like a mouse, it is best positioned close to your body and possibly at an angle.

Other Input Devices

There are other input devices you may use instead of a mouse or trackball. Choose a device based on the requirements of your task and your physical limitations. Just remember, placing your input device too far away, too low, or too much on one side can cause shoulder, wrist, elbow, and forearm discomfort. Place your device in your immediate reach zone for natural comfort and maximum hand-to-eye coordination.

♦ **Touch pads** allow you to move the cursor on the computer screen by simply gliding your finger across a small pad. Unlike mouses, trackballs, and other pointing devices, touch pads have no moving parts to clog or break, so they never require disassembly for cleaning.

   ♦ **Touch screens** allow you to point directly at an object. They require little or no training, are faster than other pointing devices, and require no extra work surface. However, the disadvantages of touch screens include arm fatigue, smudges, optical interference, and increased glare.

   ♦ **Voice input** allows you to "talk" to your computer. Currently, programs can understand and respond to natural speech delivered at rates of up to 160 words per minute. Some throat problems, such as soreness and dryness, may occur when using your voice as the input device.

♦ **Pen-like devices** allow you to "type" through contact with the computer screen or a palm pad. A palm pad uses about as much room on the work surface as a mouse. Like computer screens, palm pads require nonglare lighting.

♦ A **gesture glove** is worn on your hand and responds to hand and arm motions. A glove is most useful for high-tech applications, such as sophisticated engineering projects, where it might be used to turn the page in a 3-D landscape.

♦ **Handwriting recognition programs** are available but they are still primitive, with error rates of up to 10%.

Mouse, Trackball, and Other Input Devices Evaluation Checklist

If you answer **NO** to any of the following questions, you have a potential problem.

Yes   **No**

Mouse

❏   ❏   1. Is your mouse located directly in your immediate reach zone?

❏   ❏   2. Is your mouse positioned as close to your body as your keyboard?

❏   ❏   3. Is your mouse housed together with your keyboard on an adjustable work surface or tray?

❏   ❏   4. Is your mouse work surface stable?

Trackball

❏   ❏   5. Is your trackball positioned close to your body and at an angle?

Other Input Devices

❏   ❏   6. Is your input device located directly in your immediate reach zone?