

## LAP TOP HOLDERS TO PROPERLY PLACE AND USE LAPTOP COMPUTERS



Chief KGL 220 Height Adjustable  
Monitor Laptop Dual Arm Support

Copytech OP\_NB01  
Adjustable Notebook stand



Innovative 7011-8129 Laptop  
mount on height adjustable arm



Atdek Visidec VF-AT-NP  
Laptop Mount



All of the laptop mounts shown above on this page are available from [www.ergocd.com](http://www.ergocd.com)

Phone number (800) 834-0360



## L6 Notebook Manger from Humanscale

### 1. How do I use my laptop's keyboard with the L6?

When using the L6, you must operate your computer with an external keyboard and mouse connected via the ports on your laptop. By requiring an external keyboard and mouse, the L6 allows you to sit back in your chair and maintain good ergonomic posture, eliminating the dangers of “laptop hunch”.

### 2. Why do I need a laptop holder in the first place?

Laptop work can wreak havoc on the human body—even more so than working on a desktop computer. A laptop holder elevates your laptop's display to your line of sight at an optimal distance from your body, reducing the risks of Computer Vision Syndrome. Also, the laptop holder allows you to sit back in your chair instead of hunching over the keyboard, eliminating the many and varied risks of “laptop hunch.”

To order this device: <http://www.humanscale.com>

THERE ARE MANY LAPTOP HOLDERS ON THE MARKET. You may Google “laptop holders” and find a wide variety of options. Things to remember when looking for a laptop stand.

1. Make sure the device allows the laptop to be at a height that will allow you to look straight ahead when using the device
2. Make sure the device is stable
3. Make sure the device is adjustable for your specific needs

# Laptop Beefs

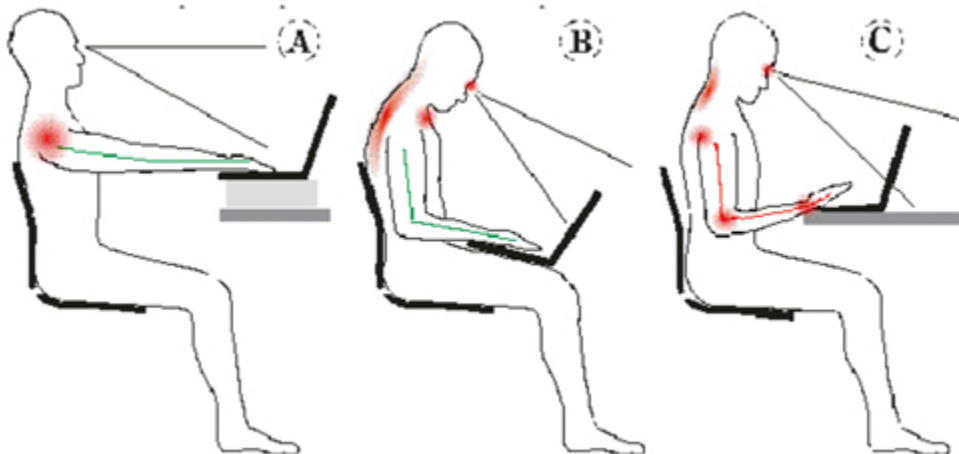
By Tamara Mitchell and Sally A. Longyear, MPH CIE



Laptop computers are a part of many people's lives today. While they improve work efficiency and increase recreational possibilities, laptops are creating havoc for our upper bodies. Laptops were originally designed for portability and short-duration use. Now, however, laptops are not being used as they were designed due to improved speed and storage capabilities. They are being used in place of desktops on surfaces not designed for typing. The situations in which laptops are used have extended to writing dissertations, taking notes at meetings, creating and presenting reports, browsing the web, and even watching sports and movies. Laptops can be used anywhere. Therefore, more people are spending more time at a computer.

If laptops are so great, what is the beef with them? Even laptop manufacturers provide warnings and information concerning the ergonomic issues associated with laptop use.

The main problem with laptops is that, since laptops do not have a detachable display and keyboard, there is no posture that is correct while using them. The figures below illustrate potential postures and their related problems.<sup>1</sup>



In the first position, the user has the laptop in the lap, which facilitates good arm position, but the user's head is dropped, causing muscle tension in the back, neck, shoulders and chest. In the second position, the laptop is on a "standard" surface that is too low for comfortable viewing, and too high for upper body comfort while typing. Notice that the hands are higher than the elbows, the wrists are resting on the edge of the work surface, and the low back is not supported. This position increases risk for injury to the neck, back, elbows, and wrists.

If you observe someone using a laptop computer, you will likely see a variation of one of these postures. **Any** time spent in an awkward, forceful position pictured above will increase the likelihood of future chronic pain. Griffin<sup>1</sup> points out that new environments where laptops can be used pose additional problems:

- The furniture in hotel rooms, trains, cars, or planes, and at home, is invariably inadequate for laptop use.<sup>2</sup>
- Lighting conditions are often not adjusted for computer(laptop) use. Therefore, glare, combined with improper viewing angle and lack of display adjustability, often results in awkward posture.
- The narrow viewing angle of Liquid Crystal Displays (LCD) is poorly suited to sharing, discussion, and collaboration with multiple people.

Another problem with the laptop is the small keyboard and pointing device that is awkward or less than optimal for the user. For many people, the small keyboard requires harmful hand positions. The use of "eraser head" pointing devices is inaccurate and often results in unnecessary force on the finger and forearm. Most laptops now have a touchpad, which is a much better alternative if you do not attach an external input device.

If you use a laptop for extended periods of time, please use an external keyboard and mouse at the appropriate height. Then the laptop display can be positioned to avoid neck, upper body, and eye strain. Alternatively, a docking station will allow plug-in use of the laptop in conjunction with an external monitor, keyboard, and mouse without requiring multiple connections for each device. These solutions mean that you can have the advantages of a correct workstation at locations where you are likely to spend a majority of your computer time, avoid the headache of installing programs on multiple computers, transferring data between them and also have the flexibility to work in other environments. Please refer to our laptop web page to find these resources: <http://working-well.org/plaptop.html#stands>.

Although the design of laptop computers has not changed to allow more comfort for the user, there are new devices being developed which make them less awkward and harmful in some environments. We will be discussing some ways to make laptops work better with your body in the next article.

1. Griffin, Timothy, "The Adaptive Laptop". October, 2001. Timothy Griffin, Industrial Design Program, The University of Calgary.

2. Kupper, Ansgar (2000) "Seating and the Virtual Office"