

# Wacom Pens:

## The ergonomic way to use your computer



More than 20 years ago, the computer mouse revolutionized the way we interact with computers, but over the years, we have found that this revolutionary device is the source of health complaints typical of Mouse Arm Syndrome (e.g. 'RSI'-Repetitive Strain Injury or 'CTS'-Carpal Tunnel Syndrome).

### What is "ergonomics"?

Ergonomics is the study of equipment design and arrangement focusing on healthy, comfortable, and efficient use. Ergonomically designed equipment focuses on physical design enabling usage that is natural to the human body thereby reducing stress, strain, fatigue and discomfort. Such equipment thus decreases the chance of human error and improves work efficiency.

### What is "RSI"?

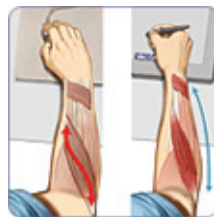
RSI stands for Repetitive Strain Injury or Repetitive Stress Injury, and is the general term used to describe prolonged pain in shoulders, neck, arms or hands. For those who use computers, this is usually caused by the prolonged repetitive actions such as typing on a keyboard or clicking on the mouse.

### What is Carpal Tunnel Syndrome?

One type of RSI, Carpal Tunnel Syndrome is a pinched nerve in the wrist. This means that somewhere, there is a blockage in the flow of signals that tell your muscles to move and give you feeling on your skin. You may feel numbness, tingling, and even pain in your wrists, hands and fingers.

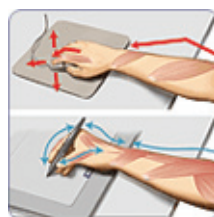
"One of the problems with IT devices is frequent, repetitive movements for the hand especially when using standard input devices. We recommend that the user shortens this working time and takes short breaks, as well as using a good forearm support. We also recommend the use of keyboard short-cuts, alternating with one input device or more. Wacom pen tablets are a good example of alternative input devices. Being able to switch between 'clicking' and 'tapping' as well as the development towards pens with a thicker dimension, like the Intuos pen, alleviates working fatigue over extended periods of use. Selecting between different sizes of the pen tablet according to the work task and personal needs is also important. Different ways of working are great for body and mind!"

## Natural position of hand and arm



Wacom pens allow you to hold your hand in a relaxed handshake position that eliminates forearm twisting. There is no need to twist the forearm away from its natural position and strain muscles and tendons.

## Eliminate repetitive use and strain in muscles



Holding a pen distributes the use of muscles in your fingers, hand, and arm evenly preventing stress. With most mice, the same muscles are used constantly while others rest in the same position for a longer time. This uneven distribution causes fatigue over long periods of usage.

## Full control with minimum effort



'Absolute positioning' maps the active area of the pen tablet to your computer screen allowing you to control the entire screen with minimal effort. This reduces unnecessary muscle strain in the fingers, hand and arm.

## Patented, light-weight battery-free technology

Using Wacom's patented battery-free technology, our pens are cordless and battery-free providing optimum weight and balance for minimal strain on muscles.

## User's Voice

...using the Wacom tablet has changed my computing experience in a really positive way. I am a contract researcher and in the final year of a PhD. I spend a lot of time researching on line and working with multiple documents on screen at once, and the tablet and pen have almost entirely replaced the mouse. The mouse might get used once a week if that!!! As a result I no longer have OOS/RSI type symptoms in my right hand. I'm recommending your tablet and pen to everyone I know and work and study with!!

--Magi, New Zealand

My illustrations use a lot of vector shapes. I developed shoulder syndrome because of strain to my fingers, hands, shoulders due to repeated clicking of the mouse. But with the Wacom pen & tablet, I could work with ease. Hand-eye coordination is more precise too. All I need to do is point and drag now.

--Ria, Philippines <http://henares.deviantart.com>

Thank you for your help in guiding us in changing over from using a mouse to the Wacom Tablet. Due to a pinched nerve in my neck it became impossible to use a mouse to do my work. The pain was unbearable and I use my computer all day for my job. We switched to the Wacom and I was able to work again. I had next to no pain and it only took a couple of hours to get fluent with the pen. Yesterday I picked up the mouse to do something and the pain was intense and I quickly dropped it and picked up the pen. Even as my physiologist fixes my neck I will be sticking with the Wacom. Thank you again as I would not have been able to work without the Wacom.

--Vanessa, Australia (May, 2007)

I don't know anyone who is a frequent computer user whose hands and wrists have not been damaged to some degree by using the mouse. I was so badly damaged by using a mouse in right and left hands and wrists - I am ambidextrous - that I had to give up work for medical reasons, for a year, and am still in pain. I have just received some government rehabilitation funding and immediately went out and bought a Bamboo. Saved from needless pain now.

--Karin, Australia (August, 2008)

## High customizable



keys. This offers the user a variety of different ways to work.

Wacom products can be easily programmed to adapt to specific work tasks and personal needs. The buttons can be configured to carry out different functions, including 'left mouse click' , 'right mouse click' , 'double click' and even shortcuts, pop-up menus or modifier

### Academic research confirms reduction of muscle stress

To summarize a 2003 study published in the Journal of Physiological Anthropology and Applied Human Science (by Kotani and Horii, see reference below), subjects with no prior experience with pen tablet usage began to perform better (in terms of speed and error rates) with a pen-tablet system than a mouse after their second day of use. Pen tablet usage also reduced overall muscular load or activity in the arm. There was "no significant difference in muscular load ... for the trapezius" or the muscles in the neck and upper back used to support your arm in its position at a desk. Placing the tablet on your lap may help with this.

### Easy to get used to

The study also showed that their subjects became used to using the pen tablet very quickly: "In our study, the pen-tablet showed more than 100 percent speed proficiency of the conventional mouse operation in 150 minutes' initial learning process (30 minutes by 5 sessions)."

-----

Source: Kotani, Kentaro, and Ken Horii. (Dept. of Systems Management Engineering, Kansai University) "An Analysis of Muscular Load and Performance in Using a Pen-tablet System", ([http://www.jstage.jst.go.jp/article/jpa/22/2/22\\_89/\\_article/-char/en](http://www.jstage.jst.go.jp/article/jpa/22/2/22_89/_article/-char/en)) *Journal of Physiological Anthropology and Applied Human Science* 22 (2): 89-95, 2003.

### Product Review

"Wacom Intuos3 Can Help You Prevent Surgery", (<http://internationalpress.com/index.php?file=wacomreview>)

*International Press*, 2006.10.27

© International Press Association - internationalpress.com

- The above accounts were unsolicited submissions by users of Wacom pen tablets and Wacom has made no attempt to verify or substantiate these accounts. Wacom makes no representation, promise or guarantee that Wacom products will cure or prevent, in whole or in part, mouse-induced repetitive stress symptoms, injuries or conditions. Individual results may vary. Always obtain competent medical advice to determine the most appropriate treatment for your specific situation.