

Playing Games

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Do you or your kids play computer games? We really hate to spoil the fun, but playing computer games has been shown to increase your chances of developing repetitive strain injury, or RSI. RSI results when repeated movements damage tendons and muscles. The problem has become so prevalent that the medical community has actually coined new terms to describe RSI attributed to computer games:

Nintendo thumb *noun*. A repetitive stress injury that causes swelling at the base of the thumb due to overuse of video games. ^{1, 2, 3}

Nintendinitis and **ulcerative Nintendinitis** are terms used in the medical community to describe thumb tendon strains and lesions of the palm resulting from overuse of interactive games. ^{4, 5}

- Nintendinitis was described in 1990 by a physician whose houseguest, a 35-year-old woman, took over the kid's new Nintendo game. ⁶ The houseguest, who had not previously played nintendo, remained riveted to the set for 5 straight hours, pressing a button with her thumb over and over again. The next day she experienced excruciating pain and tenderness in her thumb.
- During the year of 1998, physiotherapist Wendy Emberson visited schools and examined children who played video games regularly. She found thumb injuries in 15% of the children and bad posture in almost all of them. ⁷

Most injuries reported in the literature are, sadly, cases of children as young as 9, who have become so deeply engrossed in interactive games that they spend many hours playing without taking a break. Because of the increased emphasis on computers and sports, especially baseball, tennis, and weight lifting, medical practitioners are beginning to see an increase in RSI among children and teens. RSI may also occur in kids who play musical instruments as well. If you have kids, be aware of their physical limitations. Listen if they complain of pain or other physical problems. Respond by determining the source of the problem and cutting back on the activities that are injuring them.

If you use the computer during the day and then go home to play computer games, you are stressing a similar set of tissues. To decrease your chances of developing RSI set a timer by the computer and do not allow yourself or your children to play longer than 45 minutes at a time. If you have spent time involved in repetitive, stressful activities (such as working at the computer, in the lab or in the garden, or driving a lot), you should consider watching a movie or going for a walk rather than sitting down to play a video game. Give your tissues a chance to recover from the day's work!

The problem is very real. So real that Nintendo issues warnings in their multilingual precautions for all of their games.^{9,10} Nintendo doesn't want you to hurt yourself because then you'll stop buying games or worse, you might sue them! The SRI Ergonomics Program staff do not want you to hurt either. So please, read and heed these rules:⁸

- **Take a 10 to 15 minute break every hour**, even if you don't think you need it and change positions frequently.
- Use a neutral grip when holding the game controller or mouse, that is, your wrist is straight rather than being bent in any direction.
- The keyboard should be high enough so that your wrists are parallel to the keyboard.
- If your hands, wrists or arms become tired or sore while playing, stop and rest them for several hours before playing again.
- If you continue to have soreness or discomfort during or after play, listen to the signals your body is giving you. Stop playing and consult a doctor. Failure to do so could result in long term injury.
- If your hands, wrist or arms have been injured or strained in other activities, use of your system could aggravate the condition. Before playing, consult a doctor.

(Note: your family doctor is not trained to treat RSI. Please refer to our self-help webpage, <http://working-well.org/ctd.html>, and our list of qualified practitioners, primarily in the San Francisco Bay Area, http://working-well.org/ctd_resources.html .)

As a final note, there are several other maladies associated with computer games that we have not covered in this article since they do not directly relate to ergonomics. One of the more severe ones, also covered in the Nintendo manuals under "precautions", is Nintendo epilepsy.^{5,9,10} In addition, the new 3-D video games are not appropriate for children under the age of 7 because their eye muscles are still developing and it could cause vision damage.¹⁰ You should be aware that epilepsy can be triggered by video games among susceptible people. Read the precautions in the Nintendo manuals and follow all guidelines...and make sure your kids do too!!

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