

# Relief from Early CTS Symptoms with Night-time Splinting

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The findings of a recent study by a team of researchers with the University of Michigan Health System, show that night-time splinting can effectively improve hand and wrist discomfort for active workers with early symptoms of carpal tunnel syndrome (CTS).

While CTS is a common work-related disorder and a major cause of impairment and disability in the workplace, the use of initial medical treatment protocols for the disorder (wrist splints, modification of hand activity, medication, diuretics, and steroid injections) have widely varied across the United States and Western Europe, says lead author Robert A. Werner, M.D., MS, professor in the Department of Physical Medicine and Rehabilitation at the University of Michigan Health System.

Workers with CTS have more lost work time than any other work-related injury. Additionally, CTS is frequently misdiagnosed and there's very little scientific research to show which initial treatments are actually the most effective for those with symptoms of CTS, says Werner.

The first line of conservative treatment for CTS, both from doctors and self-prescribed, is typically nocturnal splinting. Splinting, Werner says, reduces stress on the peripheral nerve in the wrist, allowing it to heal and avoids awkward wrist positions as a person sleeps. It is not recommended for active daytime use because it may cause additional strain on the wrist.

To determine the effectiveness of nocturnal splinting, Werner and his colleagues studied 112 active workers at a midwestern automotive assembly plant with symptoms consistent of carpal tunnel but who had not sought medical treatment.

As part of the randomized controlled study, 63 study participants were fitted with a custom wrist-hand splint that maintained the wrist in a neutral posture overnight and were instructed to wear the splint at night for a period of six weeks. This group, along with the remaining 49 participants, also viewed a 20-minute video on CTS and how to reduce ergonomic stressors at work and home.

After the six week trial, about half of the splinted group reported significant improvement in their symptoms, with one participant reporting complete relief of symptoms. Compared to the group assigned to just watch the video, the splinted group had significantly decreased hand, wrist, elbow, and forearm discomfort after three months.

Despite relief from non-steroidal anti-inflammatory drugs and other home remedies, Werner says using a custom fit or store-bought splint for night-time use is the best first

line of defense when symptoms of carpal tunnel begin. Splinting, he notes, has minimal effect on those with advanced carpal tunnel.

Source:

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