It’s been estimated that 1.5 million workers in the United States have an occupational health risk of developing vibration-related disorders. Workers in the wall and ceiling industry who use pneumatic tools or engage in repeated movements of the wrist and hands are among the at-risk.

A recent U.S. Bureau of Labor Statistics report showed a 7.2 percent rise in the number of repetitive-motion injuries in the workplace. These injuries include condition such as Hand-Arm Vibration Syndrome and Carpal Tunnel Syndrome. Both can be debilitating.

**Hand-Arm Vibration Syndrome**

Picture a familiar scene: A worker uses as pneumatic tool for hours at time, day after day. There’s little or no padding on the tool handle, and the worker doesn’t wear protective gloves. As the tool gets older, wear and tear on the moving parts increases the vibration. After cumulative use of the tool, the worker notices a whitening of his finger tips and numbness and tingling running up his hands and into his arms.

The worker’s discomfort most often occurs first thing in the morning and whenever his hands are exposed to cold. He may suffer loss of dexterity and tactile sensation due to Hand-Arm Vibration Syndrome.

Fortunately, many tool manufacturers are addressing ways to help minimize this problem by redesigning tools to include vibration-dampening motor mounts and handles. Yet, millions of other hand tools that haven’t been redesigned are being used on a daily basis.

**Anti-Vibration Gloves**

One answer to the HAVS problem is to wear gloves designed to protect the hands from vibration. The ideal energy-dampening material is one that has properties similar to the fat and muscle tissue of the hand. Such a material does exist in the form of visco-elastic, polyurethane, known by the trade name Viscolas.

Viscolas has the ability to stand up to high levels of repeated impacts or vibration over a wide range of frequencies. This unique material has four major properties that make it an excellent choice for protection against vibration:

- Easy distortion; not stiff or rigid.
- Near perfect memory (won’t flatten or bottom out).
- Exceptional energy-absorbing characteristics.
- Ability to cope with stress produced by twisting or turning and steep movements as well as compression.

Gloves padded with Viscolas give workers the protective advantage of having a solid material that acts like a liquid between their hands and the vibrating power tool.

**Carpal Tunnel Syndrome**

In another scenario, a worker uses a
For maximum support, a wrist support with a flexible plastic insert should be selected to limit hand flexing. The insert helps keep the wrist in a neutral position.

trowel above hi head doing drywall work for hours on end. His hands are bent in an awkward position, almost backward at times. After performing this same movement over and over, the worker experiences pain, numbness and tingling caused by repeated over-extension of the wrist. The tendons in the wrist’s narrow tunnel of bone and ligament have pushed against the median nerve and squeezed against the ligament resulting in Carpal Tunnel Syndrome.

Although CTS can be treated medically or surgically, the cost of bilateral carpal tunnel surgery can run in the $3,500 range or higher, according to the Oklahoma Orthopedic and Reconstructive Surgery Center. In some cases, surgery doesn’t cure the symptoms especially if the patient continues the same type of repetitive wrist motions.

**Prevention and Wrist Supports**

The best course of action for CTS is to take steps to prevent the condition from developing, such as taking more frequent breaks from repetitive activity and making sure hand tools and work conditions fit the worker. Wearing a wrist support also can be helpful for workers performing jobs that require the same wrist and hand motion over and over.

Combination neoprene and elastic wrist-supports provide flexible stretch with firm support for workers experiencing early CTS symptoms or for prevention.

For maximum support, a wrist support with a flexible plastic insert should be
selected to limit hand flexing. The insert helps keep the wrist in a neutral position. Extra supportive pressure can be added with a wraparound wrist strap that attaches to the wrist support.

The best course of action for Carpel Tunnel Syndrome is to take steps to prevent the condition from developing, such as taking more frequent breaks from repetitive activity and making sure hand tools and work conditions fit the worker. Wearing a wrist support also can be helpful for workers performing jobs that require the same wrist and hand motion over and over.

All-neoprene wrist supports designed to promote good circulation through firm compression and therapeutic warmth are a good choice to help prevent wrist injuries.

**Industrial Safety Specialists**

Consult with an industrial specialist
before you buy anti-vibration gloves or wrist supports to be sure you’re getting quality products designed to protect two of your industry’s most valuable tools: workers’ hands and wrists. You’ll be glad you did.

About the Author
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