Picking Up Bad Vibrations

The Beach Boys may have picked up good vibrations with their hit song in 1966, but occupational vibration exposure is no day at the beach. Symptoms of occupational vibration exposure may appear subtle at first, but can escalate into serious health complications over time. As a result of over-exposure to occupational vibrations, some workers develop lasting pain in their hands which prevents them from performing their jobs.

What's at Stake?

Hand-arm vibration syndrome (HAVS) is localized pain caused by working with vibrating tools. It can lead to permanent numbness of fingers and muscle weakness. It may also affect the nerves in your hands and arms, causing changes in sensory perception and a weakened grip over time.

Vibration exposure has also been known to cause Reynaud's Phenomenon, also known as 'white finger syndrome.' White finger syndrome is triggered by cold weather or by touching a cold object. The fingers become cold, pale, and uncomfortable as blood vessels in the hand quickly narrow and prevent blood flow. The duration of symptoms can last a few minutes or a few hours. When the blood vessels dilate again, the affected worker can experience pain.

Whole body vibration (WBV) occurs when the entire body is subjected to vibration from a floor, machinery, or a vehicle. The most common side effect is long-term back pain.

Who is at Risk?

Any worker who uses vibrating pneumatic, gasoline powered, or electrically powered tools, including powered hammers, chain saws, sanders, grinders, drills, hedge trimmers, and jackhammers, is at risk. Whole body vibration syndrome occurs with excessive exposure to vibration from trucks, farm vehicles, or heavy equipment.

Vibration injuries can occur in a variety of industries, including construction, engineering, healthcare, horticulture, and automotive repair.

What Can Go Wrong?

A professional landscaper is hired to maintain the grounds of an extensive naval base. He uses various vibrating tools, including a hedge trimmer and string trimmer, for several hours each day. Over time, he begins to experience numb fingers and weakened muscles in his hand after work. Eventually, he is diagnosed with HAVS. His irreversible condition prevents him from working with his hands and he loses his job as a landscaper.

What Are the Symptoms?

You might be at risk for HAVS if you experience:

- Difficulty picking up small objects, such as nails or screws;
- Tingling or numbness in the fingers after using vibrating equipment;
- White fingers after being exposed to cold temperatures; or,
- Muscle or joint pain in the hands or arms.

How to Protect Yourself:

- Arrange your work schedule so that vibrating tools and non-vibrating tools can be used alternately throughout the day.
- Every hour, take a short break from the source of vibration.
- Don’t grip a vibrating tool too tightly. Allow the tool to do the work for you.
- Maintain tools and machines in proper working order. Blunt cutting tools or unbalanced rotating parts can produce excessive vibration.
- Use vibration isolators and damping techniques where applicable. Determining the correct type and quantity of damping material for certain machinery should be left to authorized and trained personnel. If you are concerned about

excessive vibration from a tool or machinery, talk to your supervisor.

- Ensure that you and your co-workers are using the most appropriate tool for the job. Using a less-effective tool for a particular task may generate more vibration and require more time to finish the job.
- Ask your employer for information on vibration levels generated by the various pieces of equipment you use.

Final Word

You can prevent HAVS and WBV, but they are difficult to treat once they are diagnosed and the results are often irreversible. Prevent occupational vibration by using the right tools and limiting your exposure to excessive vibration.