

Ergonomics for Hort/Landscape Services



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The Landscape and Horticultural Services industry has been targeted by OSHA as one of seven industries with high injury and illness rates for focused enforcement activity, with OSHA's goal being to reduce the rates of workplace fatalities, injuries and illnesses in these industries. One area identified by OSHA as a risk for the Nursery and Landscape industry are "sprain and strain" injuries that can result from the manual handling of landscaping tools and materials. Here are some ergonomic principles to keep in mind.

Lifting

There are multiple hazards associated with lifting. Some loads are too heavy to lift even under ideal lifting conditions. Factors that increase the risk of injury include reaching to access and lift a load, frequent repetition of lifting motion, lifting for long periods of time, and twisting and bending of the torso. Frequent repetition or lifting for long periods of time leads to muscle fatigue, ultimately resulting in poor lifting technique. Twisting and bending pull the back out of its normal alignment and can pinch or alter the discs, making them more susceptible to bulging, rupture, overexertion and strain. Lifting techniques to prevent injury include:

- Use approved lifting devices whenever feasibly possible.
- Keep the load directly in front of you and close to the body.
- Avoid any or all twisting of the torso, and minimize bending by keeping the load between shoulder and thigh height.
- Avoid lifting any excessively heavy loads. For most people, anything over 50 to 60 pounds is too heavy. If lifting

conditions are less than ideal (i.e. twisting or bending, frequent repetition, etc. is required), the maximum load that is considered "too heavy" should be reduced.

Vibration

Repeated use of vibratory equipment, including hand tools and lawnmowers, can damage blood vessels and reduce

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nutrient flow to the hand. Loss of circulation can lead to tissue and nerve damage, along with hypersensitivity to cold. Some prevention techniques include:

- Use handle wrappings or sleeves that suppress vibration, as well as vibration-dampening gloves.
- Use vibration isolation between tool and attachment to isolate or minimize vibration whenever possible.
- Avoid extended use of vibratory machinery.

Repetitive Motion

Performing hand-intensive tasks with a bent wrist, either up and down or side to side, creates considerable stress on the tendons and their sheaths. Prolonged repetitive hand work, such as prolonged use of hand shears for trimming, can lead to tendonitis, tenosynovitis, and carpal tunnel syndrome.

- Keep the wrist as straight as possible while performing finger-intensive tasks.

- Use appropriately designed hand tools that enable the wrist to remain neutral.

- Use power tools to perform highly repetitive motions whenever feasibly possible.

- Provide tools with handles that are appropriately sized for the user.

- Redesign or alternate tasks, or alternate hands to perform tasks so that muscles are not used for prolonged periods.

Push/Pull Operations

Injury to the knees and ankles can occur when significant force must be exerted to push heavy loads, or push even moderate loads across uneven surfaces. An example is trees being transported on tree carts to planting holes. Some solutions include:

- Use machinery or push/pull aides whenever possible.
- Break down large loads into several loads, and/or use a buddy system.
- Be sure the travel path is free from debris.
- Wear shoes with good grips to avoid slips.

Shannon DeCamp is Client Services Manager for TechneTrain, Inc. This is only an overview of ergonomic safety. For more information, visit www.technetrainonline.com for a full line of training programs and reference manuals on OSHA compliance requirements for the landscape industry, or contact TechneTrain, Inc. at (800) 852-8314. Members may order products directly from ANLA at a discounted price.