



MASTER GARDENER PROGRAM

THINKING SAFE AND GREEN



**AGRICULTURE AND NATURAL RESOURCES
ENVIRONMENTAL HEALTH AND SAFETY**

#26

AVOIDING STOOPED POSTURE

Information given here is intended for use by program representatives, master gardeners, and those they train.



Example showing a relatively straight back associated with good shoveling posture.

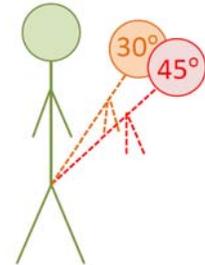
In a 2008 survey of the University of California Master Gardener Program, respondents indicated the posture of more than 250 Master Gardeners was repeatedly or constantly stooped either at weekly or monthly intervals when pursuing gardening activities.

Information from the National Institute for Occupational Safety and Health indicates stooped posture is closely associated with a high incidence of low back disorders, including injuries to muscles, nerves, discs, and ligaments of the low back. The following provides information about how to prevent lower back disorders by avoiding stopped posture when gardening.

Stooped Posture Risks

Risk of lower back injuries proportionally increases as the amount of forward bending and time spent in a stooped posture increase. In general, injury risk may be estimated as follows⁽¹⁾:

- Moderate Injury Risk is associated with the back bent forward more than 30 degrees for more than two hours per day.
- Significant Injury Risk is associated with the back bent forward at more than 30 degrees for more than four hours per day.
- Significant Injury Risk is associated with the back bent forward at more than 45 degrees for more than two hours per day.



Avoiding Stooped Posture

- Always use tools, such as hoes, rakes, and shovels, with handles that have an adequate length to prevent excessive (more than 30 degrees) forward bending. Replace hoes, rakes, and shovels with broken or short handles.
- Where possible use benches, tables, or other equipment to raise the work to waist height and reduce the need to bend your back or grow plants in raised beds.
- Take frequent breaks. Switch or rotate tasks to relieve or reduce muscle fatigue or stress in the back.
- When picking up an object, keep your back straight and lift with your legs. Never bend at the waist to pick up an object. See Thinking Safe and Green note #9 for additional information about safe lifting practices.
- Avoid bending your back as you complete gardening tasks. Look for other alternatives to stooping. For example, use a weed trimmer rather than stooping to pull weeds by hand.
- Intermittent or occasional kneeling and squatting may be considered alternatives to stooping. However, caution should be taken assure kneeling or squatting does not result in knee injuries. Kneepads can be used to protect the knee from sharp objects or inflammation of the kneecap.
- Consider using a rolling garden scooter to work garden beds or sit on a mat instead of kneeling.

(1) Stooped posture risk estimates from The Center for Construction Research and Training web page available at: <http://www.cpwrcconstructionsolutions.org/carpentry/hazard/972/install-and-finish-flooring-stooped-postures.html#>