

Tips for Better Spine and Brain Health

Like most Montanans, Michael Copeland, M.D., of Northern Rockies Neurosurgeons enjoys physical activities but also takes measures to avoid brain and spinal cord injuries, which can cause permanent impairment, paralysis, and sometimes death.

At the most basic level, Copeland advises anyone who has had previous back or other serious medical problems to check with his or her physician before undertaking any rigorous activity. He also urges people in general to take extra caution by heeding the following “Do’s and Don’ts” to ensure healthy backs and heads.

Helmets

“It’s simple. Helmets work,” Copeland said. “A helmet can be the most cost-effective protection available. It’s an absolute must-have for certain sports and pastimes.” Copeland urges helmets for any speed-related activity such as bicycling, motorcycling, horseback riding and high-country skiing.

Seatbelts

Summer is party season, and even the most law-abiding citizens can become innocent victims of an alcohol-related highway accident. “It’s true that most serious injuries from car accidents are caused by drunk driving,” Copeland said. “Buckling your seatbelt is the absolute best insurance you can have against severe injury.”

Horseback Riding

Copeland says many people are surprised to learn that horseback riding carries a higher injury rate than motorcycle riding. Most injuries result from falling off horses, which can lead to severe and sometimes fatal injuries.

Do:

- Wear hard-shell helmets while riding. Fasten the helmet securely and replace it after significant impact. For those concerned about fashion, Copeland recommends cowboy hats with hard-helmet linings, available at most western specialty stores.

- Check for properly matched boot-stirrup combinations. Use stirrup-release catches on saddles to prevent catching your foot in the stirrup and being dragged by the horse.

Don't:

- Amateur riders should not attempt jumps or daredevil stunts. Some well-trained horses are safer than others, but no horse is 100 percent safe.
- Rely entirely on body-protecting gear, such as the KevlarT Body Protector, to protect the spine from injury. Although such gear may help with less serious injuries, it's wise to take other safety precautions as well.

Swimming

Diving is the cause of most serious spinal injuries to swimmers. They occur even at slow speeds if the head strikes firmly against the pool bottom or side.

Do:

- Know the shape of the pool bottom and the water depth before you dive or slide headfirst.
- Plan your path to avoid submerged obstacles, surface objects or other swimmers.
- Test the diving board for its spring before using.
- When you dive down, steer upwards to avoid plunging to the bottom.
- Dive straight ahead – not off the side of a diving board.

Don't:

- Mix drinking and diving.
- Dive into an above-ground pool.
- Dive into a pool not meeting a "diving pool" standard of 8 feet or less.
- Dive or slide headfirst in the shallow part of the pool.
- Dive across the narrow part of pools.
- Run and dive.
- Dive from any place that is not specifically designed for diving.
- Engage in horseplay on diving or sliding equipment.
- Use diving equipment as a trampoline.
- Perform a back dive in backyard pools; keep the dives simple.
- Dive or slide headfirst at or through objects such as inner tubes.
- Put diving or sliding equipment on a pool that wasn't designed for it.
- Swim or dive alone.
- Dive into unfamiliar bodies of water.

Trampolines

Trampoline somersaults, falls, and collisions often result in crippling injury, paralysis, or death from spinal cord injury. The Foundation for Spinal Cord Injury Prevention, Care, and Cure recommends the following tips:

Do:

- Make sure there is adequately trained supervision. The United States Gymnastics Safety Association (USGSA) required qualified instructors to, among other things, complete a two-day certification clinic sponsored by the USGSA.
- Use only in well-lighted areas.
- Consider using a surrounding net.
- Place the trampoline jumping surface at ground level.
- Make sure supporting bars, strings and surrounding landing surfaces have adequate protective padding.

Don't:

- Allow children to jump onto the trampoline from high objects.
- Allow more than one participant on the trampoline at any time.
- Practice jumping without a trained spotter.
- Attempt somersaults or high-risk maneuvers without supervision and instruction or protective equipment, such as a harness.
- Allow children to jump without adult supervision at any time.

Home repair & lifting

Improper lifting of heavy objects causes many back injuries. “A surprising number of serious spine injuries occur at home when people least expect it,” Copeland said. When lifting or moving a load:

Do:

- Always bend at the knees – never at the waist.
- Keep the object close to your body.
- Get a good grip on the object.
- Divide a heavy load into several smaller ones, if possible.
- When lifting below chest level, keep your lower back curve locked in position. When lifting above chest level, tighten your abdomen to place less of the load on your spine.
- Make sure your footing is secure. Whenever possible, use a cart or dolly to carry the object.
- Divide a heavy load into several smaller ones, if possible.

Don't:

- Lift over your head or over an obstruction, if possible.
- Twist your body.
- Lift objects that obscure vision and footing.
- Jerk the load; lift smoothly and slowly.
- Move the object by pulling it; push it instead.
- Try to be Superman — if the load is too heavy for solo lifting, get help.

Gardening

Around the house, it's good to know your strengths and limitations, vary your activities, and take regular breaks, advises Copeland. Simple back strains from daily chores such as gardening are often the trigger that develops into serious injury. One key tip: keep your back protected when you stand up from a sitting or crouched position. Others:

Do:

- Rise by straightening your legs at the knees, not by lifting your torso at the waist.
- Lift dirt and plants by letting your arms, legs and thighs carry the load: bend and straighten at the knees instead of the back and hips.
- Lift loads close to the body and handle smaller, more manageable loads at a time.
- Carry objects close to your body. Keeping the load close to your center of gravity reduces risks of neck and back strains.
- Use long-handled tools to provide leverage and help avoid stooping while raking, digging, pushing or mowing.
- Switch hands frequently during prolonged raking, hoeing or digging. Repetitive motion on one side may produce postural misalignments and pain, including muscle spasms in the neck, shoulder and lower back.

Don't:

- Work too long in one position, especially one that is awkward or unusual. This can reduce circulation, restrict mobility, and promote strain injuries.