

## Spine-Friendly Driving

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*Author's Note:* Each patient education article in this column is written to your patients and potential patients. It draws on research documented in *Somatovisceral Aspects of Chiropractic: An Evidence-Based Approach*, co-edited by Marion Todres-Masarsky, DC. Whenever possible, I have updated the material from the textbook with more recent research findings.

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As full-time practitioners in the Northern Virginia suburbs of Washington, D.C. (Vienna, Va.), my partner and I frequently are asked about ways our patients can protect their spines from stress. The following patient education article ties a simple set of spinal hygiene suggestions to some big ideas. Please feel free to use it on your bulletin board, for lay lectures, and for your practice newsletter.

This article also invites your patients to provide some interesting data. If any of your patients respond with usable information, please let me know. Finally, thank you in advance for your referrals if any of your patients visit or move to northern Virginia.

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Many people create spinal stress without being aware of it. One common source of this unnoticed spinal stress is driving with a "heavy foot" on the brake and accelerator pedals. This gives your spine a jerky start-and-stop ride. A related problem is needless working of the steering wheel, instead of driving in a straight or smoothly curving line (depending on the shape of the road). This gives your spine a jagged zigzag ride.

Our recommendation: Make a conscious effort to follow these spine-friendly driving guidelines:

1. Accelerate slowly and smoothly (except when safety demands a sudden burst of speed).
2. Decelerate slowly and smoothly (except when safety demands a sudden stop).
3. Work the steering wheel as little as possible, consistent with the demands of safety.

Here's an added benefit: spine-friendly driving incorporates major components of energy-efficient driving. According to the U.S. Department of Energy ([www.eere.energy.gov/cleancities/fueleconomy/driving\\_tips.html](http://www.eere.energy.gov/cleancities/fueleconomy/driving_tips.html)), energy-efficient driving can improve your gas mileage 5-33 percent. So, spine-friendly driving can lower your expenses at the gas pump, alleviate air pollution and reduce the nation's dependence on imported oil. You will be working on posture, prosperity and pollution control all at once!

It gets even better. Spine-friendly driving is the opposite of aggressive driving. In other words, the spine-friendly driver is at reduced risk of hurting themselves and others in an accident.

One more thing is worthy of mention. In a recent study, two groups of people were asked to move a cursor on a computer screen from one target to another as quickly and accurately as possible.<sup>1</sup> This task is called "movement time", and is a way to study the complex combination of mental attention, reaction time and muscle control required in many everyday activities involving hand-eye

coordination. After the initial testing, the people in one group received a chiropractic adjustment, and the other group simply rested. Then, movement time was measured again. The average improvement in the group receiving the chiropractic adjustment was 9.2 percent, while it was only 1.7 percent for the control group. This difference between the two groups was statistically significant (mathematically unlikely to be the result of random chance). While this is only one study, it adds to a growing body of literature indicating that reaction time, mental focus and muscle control tend to improve after chiropractic adjustments.<sup>2</sup>

While none of these studies directly involved driving, it is reasonable to wonder whether or not improved reaction time, mental focus and muscle control could augment your effort to practice spine-friendly driving.

Why not test this idea for yourself? (Note: This do-it-yourself experiment is most likely to be valid if it has been at least two weeks since your last adjustment.) Practice this spine-friendly driving technique from now on. During the week, before your next visit, check your gas mileage at least once or twice.<sup>3</sup> (If you can manage three readings, the information would be of particular interest.) Then, continue to check your mileage during the week after your adjustment. Let your chiropractor know the results.

### References

1. Smith DL, Dainoff MJ, Smith JP. The effect of chiropractic adjustments on movement time: a pilot study using Fitts Law. *J Manipulative Physiol Ther*, 2006; 29:257-266.
2. Todres-Masarsky M, Masarsky CS, Langhans E. "The Somatovisceral Interface: Further Evidence." In: Masarsky CS, Todres-Masarsky M (Editors). *Somatovisceral Aspects of Chiropractic: An Evidence-Based Approach*, Churchill Livingstone, New York, 2001.
3. To measure miles per gallon, fill your gas tank to the top and record your odometer reading. The next time you fill up, fill your gas tank to the top again, and then record both the new odometer reading and the number of gallons it took to fill your tank. The difference between the new odometer reading and the old one is the number of miles you have driven since the last fill-up. Divide this by the number of gallons, and you will have your mileage in miles per gallon (mpg).

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