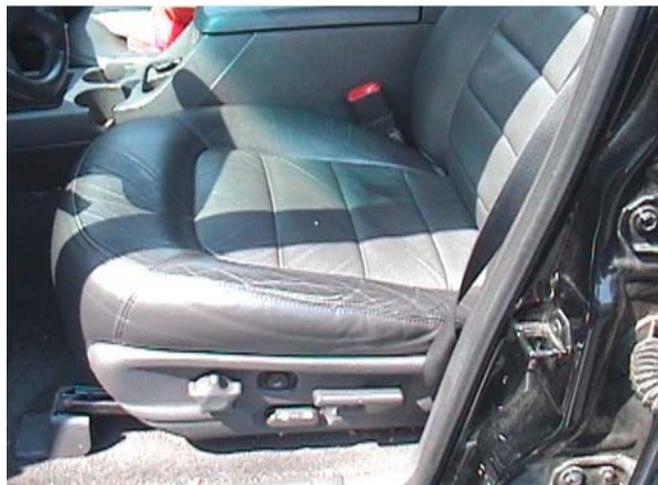




Hamstring, Buttock, Back, Neck Pain and the Car Seat

I frequently hear from my patients that their hamstring started hurting after they ran a marathon or that their back pain developed after they went body surfing at the beach. After closer questioning I discover that the problem did not occur during the marathon or while body surfing, but that it occurred afterwards during the long car drive home.

What I have commonly observed is that the drivers' seat in an automobile frequently becomes worn out and lopsided. The left side of the driver's seat pan (the side nearest the door) becomes compressed to a greater degree than the cushion near the console (under the right buttock). The worn out car seat pan is more significant in older cars, cars which are higher off the ground, and in cars which have carried drivers who are large and wide abeam. When I investigate to see if the car seat pan is lopsided, I look for wrinkles on the car seat pan and then I compress down on the left side of the car seat pan and compare the feel to when I compress the right side of the car seat pan.



If the seat pan of a car seat is not level (from side to side) it can lead to a tilting of the pelvis. When this happens it can affect the alignment of the pelvis, hips, spine, shoulders and head. This of course becomes problematic if you are sitting in lopsided car seat for extended periods of time.

A lopsided car seat pan can alter the pressure distribution into the pelvis in a variety of ways, depending on how compressed the cushion is and how the individual compensates or adapts to this imbalance. It could result in greater pressure being borne on the left buttock and less on the right, or visa versa. If the right buttock is bearing more compressive stress, the left buttock may be subjected to increased tensile stress.



When the spine deviates into right side bend, the left side of the low back is stretched leading to left low back pain or the right side of the low back is compressed/pinched leading to right low back pain. When the spine side bends it is often mechanically linked with a rotation of the spine along a vertical axis. If the spine is aligned in right side bend there often is also a rotation of the trunk to the right relative to the pelvis. This may contribute to pain on the right and/or left side of the low back.

If the left pelvis is lower than the right, it can lead to the right shoulder girdle being lower than the left thereby contributing to right neck or arm pain. If the left pelvis is lower than the right it may lead to the neck/head position of left side bending, or the individual may compensate by positioning the head and neck in relative right side bend in order to keep the eye sockets horizontal.

If hip, buttock, back, shoulder, neck and head pain occurs after long car trips, it may be related to sitting in a lopsided car seat. There is a relatively simple correction for this problem, the use of a small pillow or towel under the left pelvis. The pillow or towel needs to be just thick enough under just the left buttock to level the pelvis. The size of the pillow or towel will vary according to the degree of compression of the car seat pan and the

weight of the individual. Car seat pans frequently have contoured shapes or flanges which can either complicate or simplify the shaping of the pillow or towel correction. Sometimes shaping the towel to replicate the shape of the seat pan flange is all that is needed. Usually the degree of cushion compression and fatigue on the left side of the car seat pan will vary from front to back, with the greatest compression and fatigue on the portion closest to the vertical back rest. If you are not yet ready to replace your car and you spend a great deal of time in that car, you can measure and cut a piece of upholstery foam in a wedge shape for a simple correction. Just by using a tape measure and an electric carving knife or band saw, a custom shaped wedge can be easily fabricated.

The wedge is not permanently placed on the seat but needs to be placed under the left buttock after you sit in the car seat and then it needs to be removed before you get out of the car, otherwise it slips out and falls to the ground. Currently prefabricated car seat cushions, back supports and lumbar rolls do not address the problem of a lopsided car seat pan. It is difficult to commercially manufacture a prefabricated wedge that will match the variety of contours and shapes of various car seats.

So if you are one of the many who experience pain after long drives, be sure to check to and identify if your car seat is level from side to side.