

# Healthy movement leads to a healthy spine

Keeping the backbone in neutral position requires some effort, but it will go a long way for avoiding painful wear and tear

**DWIGHT CHAPIN**  
HEALTH ADVISOR

Back pain is second only to upper-respiratory illness as a cause for visiting a physician. Up to two-thirds of Canadians will experience low-back symptoms at some point in their lives. For most people, back trouble is the end result of daily habits and repetitive activities done in compromising postures. Overcoming back pain is complicated. There is no silver bullet, because back pain is an individual, unique experience. The choices you make and the movement patterns that you repeat day after day have a direct impact on how well or how poorly your body moves. Sleeping posture, time spent sitting, what and when you eat, dehydration, body composition, exercise patterns, general flexibility, repetitive movements and how you

manage your stress all affect mobility. Enjoying a healthy spine starts with an understanding of how the spine is built and how it moves. The spinal column is both beautiful and complex in its design. It is made up of 24 bones, called vertebrae. The vertebrae are stacked like blocks on top of one another with cushions called discs in between to help absorb shock and load. For every disc, there are also two spinal joints between vertebrae. The joints help to guide motion. A healthy spine has three natural curves, giving it an "S" shape when viewed from the side. With these curves maintained, a position called neutral spine, the spine is most resilient to wear and tear. This is the position we are designed to move from. Avoiding back pain or effectively managing an ongoing episode requires

that you do so. An impressive network of muscles and ligaments that surround the spine provide it with the strength and support to hold this optimal position. Learning how to properly engage these muscles, while maintaining neutral spine as you move, is a skill that requires practice. To become familiar with your neutral spine position, begin by standing in front of a long mirror. Place your hands on the crests of your pelvis, just below your waistline. Imagine a string pulling you from the top of your head toward the ceiling. Align your ears over your shoulders, keeping your shoulders back and your hips, knees and ankles lined up vertically. Avoid locking your knees. Your stance should be comfortable and not rigid. Now, roll your pelvis forward then backward, experimenting with your pain-free range of motion in both directions. It is

common that you may notice a larger pelvic tilt one way or the other. Find the position where your pelvis is half-way between the two extremes. Hold this position and pay close attention to the muscle action required in this posture. Your spine is now in a neutral position. Learning how to maintain this position when in motion is the next step. For those new to this concept, here is an easy exercise to help you practise the technique. Lie on your back on a mat with your knees bent and your feet hip-width apart. Tilt your pelvis forward and backward, as described above. Settle into the midway position or your neutral spine posture. Maintain this position with a gentle contraction of your core muscles as you slide your right foot along the mat away from your body – slowly straightening your leg. Continue to slide your foot forward until

your ability to maintain a neutral spine is challenged or you reach full extension of your leg, then return the foot to the start position. Breathe deeply while repeating five times on both sides. Our bodies will actually put up with a fair amount of poor movement and unhealthy lifestyle choices before breaking down. However, it is unwise to test the limits of this ability. For a healthier spine, start paying attention to your movement and spinal hygiene with the same discipline and daily practice as you do your teeth. For the multitaskers, hold neutral spine as you brush. Dr. Dwight Chapin, B.Sc(H), D.C., is the clinic director of High Point Wellness Centre in Mississauga, team chiropractor for the CFL's Toronto Argonauts and on-site clinician for employees of The Globe and Mail. Follow him on Twitter @HighPtWellness.

# Heavy exercise linked to lower sex drive in men

**GRETCHEN REYNOLDS**

Men who exercise strenuously may have a lower libido than those whose workouts are lighter, according to one of the first studies to scientifically delve into the relationship between men's workouts and their sex lives. For years, scientists and active people have debated whether and how exercise affects sexual desire and human reproduction. But most past studies have centred on women. Typically, this research has found that when some female athletes, such as marathon runners, train intensely for many hours a week, they can develop menstrual dysfunctions. These problems seem caused by hormonal imbalances related to physical stress and frequently affect a woman's interest in sex and her ability to conceive. But such dysfunctions are rare and usually resolve after the athlete lightens her training load. Less is known about the effects of exercise, especially heavy exercise, on men's libidos and fertility. There have been hints that, in moderate amounts, physical activity increases the male body's production of the hormone testosterone, which theoretically should increase sex drive. Other small studies, on the other hand, have suggested that lengthy and gruelling training may blunt the levels of testosterone in a man's bloodstream both immediately and over the long term. But those studies examined only hormone changes related to exercise, which can be measured easily, and not differences in sexual emotions and behaviour, which are tougher to quantify.



A recent study of 1,100 physically active adult males found a clear pattern between long or intense workouts and lower libidos. OLIVIA HARRIS/REUTERS

So for the new study, which was published last month in Medicine & Science in Sports & Exercise, researchers at the University of North Carolina in Chapel Hill decided to ask active men about their sex lives. They began by developing a questionnaire based on earlier psychological research into men's sexual behavior that asked, for instance, how often they thought about and engaged in sex. The scientists also created a separate questionnaire with detailed queries about exercise habits, including how often and intensely the men worked out each week. A final set of questions asked about general health and medical histories. Then the researchers contacted running, cycling and triathlon training groups, university athletic departments, and publications targeted at endurance athletes and asked them to alert members and readers to the questionnaires, which were available online.

Almost 1,100 physically active adult men completed all of the questions. Most were experienced athletes who had participated for years in training and competitions. The scientists used their responses to stratify the men based on the extent and intensity of their workouts. They wound up with groups whose weekly exercise was short, moderately lengthy or quite prolonged, and separately whose weekly exercise was light, moderate or extremely intense. It was possible, of course, for

someone to be in the top or bottom of both of these categories, meaning that their workouts were both long and intense or light and short. But the scientists wanted to examine each of those aspects of a workout separately, so did not track such overlaps. They also categorized the men according to their answers about their sex lives, creating groups with relatively high, moderate or low libidos. Finally, they compared the men's exercise habits to their reported interest and engagement in sex. And there were clear patterns. The men whose exercise routines were moderate or light in intensity or duration were far more likely to report moderate or high libidos than were the men whose workouts were especially prolonged or intense, even after the researchers controlled for age. (Older men tend to report less interest in sex, although not by much.) In effect, strenuous exercise "was associated with lower libido," said Anthony Hackney, a professor of exercise physiology and nutrition at the University of North Carolina who led the study. Of course, this was a small sample of men who voluntarily

chose to complete a personally intrusive survey. It is impossible to know whether they were truthful or representative of the rest of their gender. This type of study also cannot tell us whether too much exercise causes low libido, only that the two are linked. And it did not examine why strenuous exercise might dampen libidos. But Hackney speculates that physical fatigue and lower testosterone levels after exhausting exercise likely play a role. He and his colleagues hope to soon mount experiments that directly track exercise, hormone levels and libidos to learn more about their interactions. They also aim to learn more about whether the intensity of the workouts or duration has the greater effect on male sex drive. Perhaps most important, he hopes eventually to pin down at what point exercise might start to lower some men's libidos. Both moderate and light physical activity were associated in this study with relatively high libidos, he pointed out. "But there does seem to be a potential tipping point," after which more exercise may blunt desire. New York Times News Service

# Pregnancy upon pregnancy

**C. CLAIBORNE RAY**

**QUESTION**

Can a woman have two fetuses in different stages of development in the uterus at the same time?

**ANSWER**

It is possible for a second fertilization to occur when one pregnancy is already progressing. The condition is called superfetation and, while it is fairly often seen in mammals, including cats, only a few case studies have been reported in humans. A French report of one apparent case, published in 2008 in The European Journal of Obstetrics & Gynecology and Reproductive Biology, said that a review of the scientific literature had found fewer than 10 such reports up to that time. "Superfetation is defined by

the fertilization and the implantation of a second oocyte in a uterus already containing the product of a previous conception," the report said. In this case, each fetus had a separate amniotic sac. The difference in their size was obvious in the first trimester of pregnancy and continued, leading the doctor to offer superfetation as a diagnosis. Ordinarily, the release of eggs ceases once a woman is pregnant and the hormonal and physical changes of pregnancy work together to prevent another conception. If a second pregnancy does later occur, it often results in a risky premature birth. But in at least one U.S. case, in Arkansas in 2009, both children were born healthy by cesarean section, although they were conceived more than two weeks apart. New York Times News Service

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