Stability Ball Sit Ups

Why Not Sit Ups

Do it Right!

Exercises you Should Do

BOTTOMLINE: THEY PUT THE BACK INTO A FLEXED TENSIONED POSITION. These compressive force on the spine when bent in flexion can squeeze a bent disc's nucleus to the point that it bulges, pressing on nerves and causing back pain, and potentially leading to a herniated disc.

Crunches on Ball

Stuart McGill, a renowned back specialist and professor emeritus at the University of Waterloo, has conducted extensive research on the biomechanics of the spine and the impact of various exercises on back health. In his book "Ultimate Back Fitness and Performance," he discusses the potential risks and benefits of crunches on a gym ball and sit-ups. According to McGill, both exercises can be problematic for the back, particularly if done improperly or in excess. In his research, he found that repetitive spinal flexion, which is the primary movement involved in crunches and sit-ups, can lead to disc damage, especially when combined with compression loading, such as the weight of the head and neck. McGill recommends that individuals with back pain or a history of back problems avoid these exercises altogether. For those without back issues, he suggests performing them sparingly and with proper form, such as maintaining a neutral spine and avoiding excessive forward flexion .Instead of focusing solely on abdominal exercises, McGill recommends incorporating a variety of exercises that promote core stability and strength, such as planks, bird dogs, and side bridges as well as Stir the Pot (see left). These exercises involve less spinal flexion and are less likely to cause disc damage or other back injuries.

YES **Stir the Pot**

Excerpt from McGill: The traditional approach to training abdominal muscles involves sit-ups or curl-ups on a gym ball, which may not be the best exercise for the rectus abdominis muscle. This muscle has transverse tendons that interrupt the contractile components, giving the "6-pack" look, but it is not designed for optimal length change. Instead, it functions as a spring, which is important to prevent the oblique muscles from splitting it apart during contraction. Additionally, people rarely flex their rib cage to their pelvis in sport or everyday activity. Rather, they stiffen the wall and load their hips or shoulders. When performed rapidly, such as in a throw or movement direction change, the rectus functions as an elastic storage and recovery device, and it stiffens to efficiently transmit the power generated at the hips through the torso when lifting weights. Individuals who actively flex their torso, such as cricket bowlers and gymnasts, suffer from high rates of spine joint damage and pain. Therefore, performing curl-ups over a gym ball may replicate injury mechanics without enhancing athleticism or performance. A better exercise would be a plank with elbows on the ball, followed by a "stir the pot" motion to enhance the torso/abdominal spring and spare the spine. This exercise can be a much superior alternative for most people, even if clients expect the use of a gym ball.