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SPINE & SPORTS: Gym exercises that may be doing you more harm than good

Every day that I am in the gym, I force myself to ignore people doing blatantly bad exercises that are detrimental to their spines. In the past I've confronted them and offered advice. Sometimes I got an appreciative "thank you!" and sometimes I got an apathetic "don't bother me!" These days I just mind my own business.

There's a huge list of exercises that people do that are useless at best and outright dangerous at worst. I will highlight some common offenders.

Seated rotary torso machine: This is a bad device because in the seated position it places the lumbar spine in a loaded-up position. There is no help from butt and thigh muscles in dispersing the weight of the torso on the spine. The lower spine bears the entire weight of the torso and then twists, grinding at the discs like a mortar-and-pestle.

Sit-ups, ab crunches and ab machines: These load the lumbar spine into flexion, causing the bones to squash and compress the intervertebral-fibrocartilage discs, ultimately causing them to crack and bulge. Seated ab machines make matters even worse since all the weight of the torso presses on the disc. Bones are hard, and discs are not. Just like you can only bend a wire hanger back and forth so many times before it breaks, the same goes for our discs. It's a matter of time.

Standing torso side-bending left and right while holding a weight in one hand: The muscles of the side of the torso are designed to brace and stabilize the spine and not to bend the spine back and forth. Remember the wire hanger thing? Same idea.

Upright rows: These place undue stress on the shoulder joint, putting the shoulder in the same position used to test for joint impingement. This exercise repetitively impinges the ball against the socket of the shoulder joint. It is not natural or biomechanically efficient way to lift up objects.

Cybex Arc Trainer: What were the engineers thinking? The arms and legs move homolaterally on this contraption. In other words, when the left leg glides forward on the pedal, the left arm also moves forward on the handle, and vice versa. This is contrary to normal physiology and human kinetics. Try walking around the block like this, with a left leg, left arm and a right leg-right arm stride. Besides feeling awkward, your attempt to walk normally after stopping will be bungled, and it might take several steps to reestablish normal crossed extensor stride. We are wired to move in a "crossed extensor" pattern, left arm and right leg forward, and vice versa. To do the opposite actually causes dysfunctional muscle firing.

Supine double leg lifts: These repetitively shear the last intervertebral disc of the lumbar spine. Again, remember that wire hanger thing? An even worse variation of this exercise is when one person stands at the head end of the other person who is lying on their back (supine) while tossing the other person's legs back towards the ground. I want to hand out my card to these people and inform them that they'll need me at some point. A strong core, stable shoulders and good cardio fitness each fare quite well without these bad exercises.

Stay tuned for my follow-up article on safe and effective back exercises.

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