



**Name of Article:** Stop! Don't Do Those Crunches!

**Author:** Marlon Familton, CSCS, USA Cycling Expert Coach

Gym time! Time to do core work and that means crunches, right? Sure, if you want to create postural imbalance, core dysfunction and become one of the 85% that experiences low back pain in their life time.

Here are the Top ten reasons why crunches perpetuate dysfunction in the flexor chain of the human body (all the muscles on your front side that pull you into the fetal position) and should be either avoided or severely limited, particularly for athletes and especially for cyclists. This is a bit technical, but I hope it gets you realizing that every exercise you do should have a reason.

1. Crunches do not work the transverse abdominus and are weak in challenging the internal obliques; thus they do not really work the most critical muscles that provide pelvis stability, lumbar spine stability (through the connection to the thoraco-lumbar fascia) and thus help dissipate load from the lumbar spine.
2. Crunches on the floor only allow the body to move through a range of motion of about 30 degrees of flexion, while the spine is designed to extend approximately 45 degrees and so encourages a dysfunctional shortening of the rectus abdominus (6-pack).
3. People often crunch up beyond the range of the rectus abdominus and create faulty recruitment patterns that can be decremental to pelvic stability.
4. People doing crunches usually pull on their head which encourages forward head posture (which leads to all sorts of problems in the cervical region)
5. "Ab Roller" type machines (or a supported head) do not challenge the anterior neck musculature and contribute to muscle imbalances.
6. Crunches on the ball allow a greater range of motion, but people usually support/pull the head, which encourages forward head posture.
7. Few trainers and thus fewer people understand that the muscles in the anterior region of the neck (the suprahyoid and infrahyoid muscles) anchor at the tongue. Failure to place one's tongue securely at the roof of the mouth while performing crunch type exercises without the head being supported will prohibit the anterior neck muscles from participating and thus build a muscle imbalance in the flexor chain of the body.

8. Crunches are typically done for excessive numbers of sets and reps, overworking a phasic muscle that shortens and tightens in response. This will pull the whole body forward into flexion. A shortened Rectus abdominus pulls up on the pelvis potentially placing it into posterior tilt. It also pulls down on the on the rib cage increasing 1st rib angle which causes the shoulders and usually the head to migrate forward. Any postural flexion puts an exaggerated load on the vertebral disks and will lead to disk damage.

9. Typically cyclists, who already spend hours in flexion over their bars, never work to counter the affects of mega crunch workouts by working on extension exercises. " Davis' Law" says that when the ends of a muscle are brought closer together, then the pull of tonus is increased thereby shortening the muscle. This is why cyclists in particular must spend time balancing their body by performing extension movements.

10. Crunches do not teach your body to correctly recruit the muscles of the inner unit that stabilize the lumbar spine: pelvic floor, multifidus, diaphragm and transverse abdominus. And can, in fact, perpetuate "motor amnesia" by the excessive stretching of these muscles when a person employs the brace and bulge strategy commonly displayed when an untrained individual performs crunches. This leads to a higher risk for incontinence (fecal and urinary), vertebral joint injury, sacroiliac joint injury and disk injury.

In short; with the exception of athletes who are at risk of impact to the posterior side of the body by another player (football, soccer, hockey), minimal time and energy should be devoted to the crunch relative to the other three quarters of abdominal musculature. And they're only helpful if done correctly, with the proper intrinsic spinal stability provided by the Inner Unit prior to activation of the Rectus Abdominus.

Look for exercises that work the 'inner unit' which are the transverse abdominis, multifidus, pelvic floor and diaphragm (yes breathing correctly is critical!). It is these muscles that need to be functioning and strong in order to stabilize the pelvis and provide leverage for your legs to pedal hard.

*Marlon Familton is a Certified Strength and Conditioning Specialist through the National Strength and Conditioning Associate, a USA Cycling Expert Level Coach and a C.H.E.K. Certified Golf Biomechanic.*



Contact Us:

[www.peakscoaching.com](http://www.peakscoaching.com)

[info@peascoachinggroup.com](mailto:info@peascoachinggroup.com)

Address: 414 Jackson St. Bedford, VA 24523

Phone: 540-587-9025 fax: 540-586-5715