



## Neck and Back Pain in the Pool

BY KERRI KRAMER, MSPT AND DR. STEVEN BERKEY

The shoulder is a notorious site for overuse injury in swimmers. However, the neck and back are also susceptible to repetitive trauma, particularly if stroke technique is subpar, or if musculoskeletal imbalances exist. Two commonly asked questions from triathletes are "Can I still swim if I have hurt my neck/back?" and "How can I avoid injury in the pool?"

### Swimming with a painful neck or back: Good or bad?

Aquatic therapy is a noninvasive method of treatment for a wide range of physical conditions, including back pain. In some cases, it is favored over traditional therapy options because of the low-impact qualities. Land-loving endurance athletes tend to rely more on cross-training with swimming, to maintain aerobic and strength levels during periods of injury. Given these positive qualities, the unique stresses associated with swimming are commonly overlooked.

The neck and back are incredibly susceptible to injury with poor stroke technique. The transitional zones of the spine, including the base of the neck, lower back, and thoraco-lumbar junction, represent the unions of very mobile sections with more rigid sections of the spine. These areas are at particular risk for stress fatigue and more serious injuries. A triathlete with

pain in these locations should strongly consider the integrity of their stroke before continuing to swim as a form of rehabilitation. USASwimming.org recommends walking in waist- to chest-deep water in a pool as a sound option for triathletes with back problems.

### How can neck and back pain be avoided in the pool?

Swimming is a low-impact sport and reduces joint compression. Proper technique and alignment will put you in an excellent position to maintain a healthy spine and increase your longevity in triathlon. The following tips are specific to freestyle and will help you avoid injury in the pool.<sup>2</sup>

1. Keep your head in line with a long axis through your spine. Many swimmers over rotate their heads and side bend in order to breathe to the side. This can cause enormous strain on the neck and lead to pain, as well as arm numbness and tingling.
2. Look down at the pool floor (or slightly ahead). Lifting your head up creates compression of the joints in your neck and may lead to hyper-extending the lower back.
3. Maintain good body rotation along the axis. The lower spine should not twist while swimming.
4. Breathe to both sides. From an injury prevention standpoint, breathing to one side can increase the neck musculature on that side and will leave an imbalance.

Remember that poor posture during the day will predispose you for neck and back pain. Sitting slouched in front of a computer, for example, will promote a forward head, rounded shoulders, and an increased curvature in your mid-back. This postural alignment will create extra strain at the transitional areas mentioned above, and your streamlined position will be compromised. Core strengthening will also help to maintain spinal alignment and improve your swim technique.

Remember, swimming is generally a safe form of cross-training for the triathlete. However, keep the above criteria in mind to assist in the determination of a strategy to continue exercising safely during or after a back injury.

### References:

1. [www.usaswimming.org](http://www.usaswimming.org)
2. Paris, Stanley V. "The Spine and Swimming". Spine: State of the Art Reviews- Vol. 4, No. 2 may 1990. Philadelphia, Hanley & Belfus, Inc.

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