



# HYDRATE For Performance

By Kristen Miller ATC

Adequate fluid intake is essential to optimal performance in the classroom and on the playing field. Fluids enable your body to work at maximum efficiency and minimize injury.

Everyone, no matter their activity level, should consume approximately 80 oz. of water per day. (There is also large amounts of water in the solid food we eat). This is the average amount of water the body normally loses each day. Producing large amounts of light colored urine is the best way to know that you are adequately hydrated and are consuming sufficient amounts of water. The amount and timing of water intake are also important to optimize athletic performance and recovery. These are some fluid intake recommendations for before, during and after exercise:

- 16 oz. or more two hours before exercise
- 8 oz. ten minutes before exercise
- 4-8 oz. every 15-20 minutes during exercise
- 16 oz. or more after exercise (16 oz. for every pound lost)
- Sports drinks with electrolyte replacement are only necessary and beneficial when:
  - Continuous exercise is greater than an hour
  - Exercise is endurance (i.e. soccer, cross country)
  - The exercise environment is hot and humid
  - You have sweated profusely (1 pound lost = 80-100 mg of potassium and 400-700 mg of sodium)

If adequate fluids are not consumed, dehydration can easily occur resulting in a marked decrease in performance. The onset of dehydration is quicker with a cold or flu, with some medications like antihistamines, with the consumption of caffeine, and when wearing heavy clothing in warm/humid weather.

- At just 3% of body weight lost of water, muscle endurance decreases
- At 4-6% of body weight lost:
  - Dramatic decreases in muscle endurance occur
  - Decreases in muscle strength
  - Heat cramps
  - Muscle spasms
- Over 6% of body weight lost:
  - Severe heat cramps
  - Heat exhaustion
  - Heat stroke
  - Potentially Death

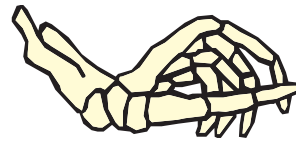
The take home message is that the proper consumption of water surrounding athletic contests is crucial to avoid dehydration and optimize performance. The timing and amounts of water consumption are both important. Water is still the best fluid replacement choice and staying properly hydrated has a more significant effect on performance than any other fancy energy drinks or pills. Just drink water.

# “Wrist Sprains” May Be A Hidden Fracture

By Ted Hirschfeld ATC

The scaphoid (also known as the navicular) bone is the most commonly fractured carpal bone in the wrist in young high school-aged athletes. This injury usually occurs from falling on the outstretched hand. Often, the athlete mistakenly believes that he/she just sprained his/her wrist. Scaphoid fractures can be problematic because a delay in diagnosis and treatment can lead to non-healing of the fracture, avascular necrosis of the scaphoid (dying and collapse of the bone), early arthritis and chronic wrist pain.

The scaphoid is a biomechanically important carpal or wrist bone, located under the “anatomical snuff box” or the triangular depressed area at the base of the thumb when placed in the “hitch hiker’s” position.



Because the blood supply to the scaphoid is limited, the bone has difficulty healing once fractured (broken). If the fracture is not immobilized early and/or displaces (separates), the fracture does not heal and sometimes, the blood supply to a portion of the bone may be disrupted resulting in avascular necrosis, collapse and resorption of the dead portion.

To make the diagnosis, x-rays of the wrist are taken. Unfortunately, the fracture is often not visible on the first x-rays, but may show up on an x-ray up to 2-4 weeks later. Many patients require a bone scan or MRI to make the diagnosis.

Once a fracture is suspected, the patient is placed in a cast which includes the thumb until a definitive diagnosis can be made by MRI, bone scan or complete resolution of symptoms combined with negative repeat x-rays. If the bone has a non-displaced (non-separated) fracture, the cast is continued for at least six weeks and radiographic evidence of healing. If the fracture is displaced (separated), surgery is required to reduce (put together) the fracture and allow healing.

To ensure proper treatment and a good outcome, athletes must report all painful wrist injuries to their certified athletic trainers or team physician.



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