

# Foot and Ankle Update

## Casper Orthopedic Associates



### "The Cramping Athlete"

#### Matthew E. Mitchell, M.D.

April 2008

## Muscle Cramps

Cramping muscles are a frequent result of athletic activity. Pain and soreness can last for several days following an acute cramping episode. Between 30% and 60% of triathletes and marathon runners have experienced cramps in their lifetime.

Although

Exercise-associated-muscle-cramping (EAMC) has been attributed to electrolyte

disturbances, scientific data to support this is lacking. A more recent etiology that does have some support is abnormal motor neuron control at the spinal level. Other causes in the athlete must also be considered. These are peripheral neuropathy, drugs, arterial insufficiency, radiculopathy, metabolic myopathies, true electrolyte abnormalities, and certain central nervous disorders (Parkinson's and ALS).

## Treatment of Muscle Cramps

Immediate treatment should consist of passive stretching, cooling of skin temperature (frictional ice massage), and hydration. Athletes with dark urine, mental confusion, or generalized cramps not associated with exercise should be considered for emergency evaluation.

Although potassium supplementation has been recommended to prevent and treat muscle cramping, there is little scientific data to support potassium depletion as a cause of muscle cramping in the athlete.

Prevention of muscle cramping needs to focus on preventing dehydration and muscle fatigue associated with exercise. Athletes should be encouraged to maintain a well-balanced diet, stretch, and to alter exercise regimes in extreme temperatures. Although various drugs have been tried none has consistent scientific support in athletes. Studies have shown a powerful placebo effect reaching 40-50% indicating that psychologic status has a significant effect on the perceived severity of muscle cramping.

## Conclusion

Mainstays of prevention and treatment of muscle cramping should focus on hydration, stretching, and altering workouts in extreme temperatures. At this point, there is little evidence to support specific drug or electrolyte supplementation in the athlete.



Dr. Mitchell is in practice in Casper Wyoming  
email: [mattmitchell@mattmitchellmd.com](mailto:mattmitchell@mattmitchellmd.com)  
website: [www.mattmitchellmd.com](http://www.mattmitchellmd.com)