

Provider Guidelines for Differential Diagnosis*

For the clinician or other health care provider attending to an athlete afflicted with muscle cramping during training or competition, in an effort to determine the appropriate treatment, it is important to consider the clinical signs and symptoms, as well as the surrounding setting and circumstances and time course leading up to the onset of cramps. Without the advantage of a complete physical, health history, or individual test results, and assuming there is no other underlying pathology or ischemic disorder, certain distinguishing characteristics can help in the immediate onsite diagnosis.

- Comparatively sudden-onset exertion-related muscle cramping that is localized (e.g., affecting solely the calf), constant, asymmetric, and responsive to passive stretching and massage is highly likely to have been prompted by muscle overload and fatigue.

– Physical Therapy Evaluation

- Reported or observed fasciculations or slight cramping that progressively developed over a longer period of time to more severe and widespread (often bilaterally) intermittent muscle spasms suggest exertional heat cramps. Profuse sweating and a salt residue on the skin or clothing (although not always visible) and other signs and symptoms of dehydration further implicate the presence of a significant water or sodium deficit.

– Sweat Test

On-site Treatment: If the athlete is treated for exertional heat cramps with an oral high-salt solution or intravenously, massage and icing can still be applied to assist in relaxing the muscles and relieving some of the spasms. It is also important to recognize that an athlete can experience both types of muscle cramping concomitantly; however, the underlying causes and effective treatments of these separate problems are different.

* BERGERON, M.F. Muscle cramps during exercise: is it fatigue or electrolyte deficit? *Current Sports Medicine Reports*, 7(4): S50-S55, 2008.



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