

Cramping? Why does it happen?

I was asked the other day by an athlete why they get cramp and what reasons cramping occurs. It got me thinking so thought I would write up my ideas and some of the evidence I have found.

(mlive.com)



The evidence would suggest that cramping occurs for one of two reasons;

1. Electrolyte/fluid imbalance
2. Strength deficit or muscle overuse pattern

In addition, it could occur as a combination of the above two factors. Have a watch of the video below to watch cramping at its most extreme.

Whilst there are many ways to aid point 1 via good hydration, nutrition and recovery strategies probably less emphasis is applied to point 2 and in particular muscle overuse patterns.

Firstly to identify strength deficits/imbances we must test muscle strength. Any deficiencies should be addressed appropriately.

On the other hand however, we must consider movement patterns and understand the way in which athletes move may be contributing to their symptoms.

For example, the movement of hip extension is a common cause for hamstring overload/overuse in some individuals. Those individuals who are 'hamstring dominant' i.e. they use their hamstrings as the primary driver for hip extension are likely to encounter muscle overload. Any activity involving hip extension (walking, running, squatting,

jumping) if the hamstrings are the primary driver and not the gluteal muscles, muscle fatigue and thus overload may occur.

This less efficient movement pattern could lead to induced muscle cramping if the hamstring group reach their muscle loading limit. This loading limit may be reached in one extended exercise event or be the result of a cumulative load gained over a period of time.

To reduce the incidence of such incidents we can look at it one of two ways. Either we increase the muscle loading capacity of the hamstring group via training or improve and retrain the athletes movement pattern.

In my experience movement pattern retraining will engage a longer term solution and therefore is the most advantageous avenue for intervention.

Thanks for reading.

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