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Water vs electrolyte drink: Which is better for cramps?

By: [Nicole Madigan](#) in [News, Top Stories](#) March 18, 2019 0

A new study has revealed that drinking water can actually contribute to muscle cramps, as opposed to preventing them, as previously thought.

The new research from Edith Cowan University's School of Medical and Health Science proves that rather than being caused by dehydration, the real reason for painful muscle contractions is a lack of electrolytes.

The research was prompted by lead researcher Professor Ken Nosaka's own experience of muscle cramps, experienced during and after playing tennis.

The study involved 10 untrained men running on a treadmill in a heated room, until they lost two per cent of their body weight through sweat.

Fifty per cent of those men were randomly selected to be given a drink of pure water, while the other half drank water containing electrolytes.

The following week, those same men repeated the exercise, but were given the opposite drink. Soon after, an electrical stimulation was applied to their calves to induce a muscle cramp.

The lower the frequency of electrical stimulation required to induce muscle cramp, the more the person is susceptible to them.

Nosaka said the result of the experiment proved that drinking pure water after exercise increased the susceptibility to muscle cramp, while drinking fluid containing electrolytes caused a significant reduction.

He said the likely reason for this was that drinking pure water dilutes the electrolytes already in the body fluid.

"When we exercise, we sweat out fluid that contains electrolytes. So when we replace this lost fluid with pure water, we are actually diluting the electrolytes in our system which causes muscle cramp," he said.

While experts have long known that electrolytes are vital to muscle function, the study was the first to show that they also contribute to reducing or even preventing muscle cramps.

"There have been many theories proposed as to what causes muscle cramps in the past but this is the first time that we have conclusively shown that electrolyte depletion is the primary cause of muscle cramps."

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Nosaka said a follow up study is in the works, design to examine what concentration of electrolytes are needed to protect against muscle cramps after exercise, along with how muscle cramps affect sleep for elderly and pregnant women.

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