

## Dab on deep heat cream to improve exercise performance

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Deep heat creams widely used by athletes to soothe sore muscles may also boost performance when applied before exercise, according to new research presented virtually this week at the American Physiological



Society's (APS) annual meeting at Experimental Biology 2021.

Researchers at Nanyang Technological University in Singapore studied a small group of male volunteers to determine the effects of deep heat cream on exercise endurance. Each volunteer participated in two trials—one where he applied a <a href="thin layer">thin layer</a> of a commercially available deep heat cream to the muscles of his feet, calves, thighs and buttocks—and another where he applied a placebo cream before each trial workout. The over-the-counter product contained ingredients such as <a href="methyl salicylate">methyl salicylate</a>, menthol, glyceryl stearate, eucalyptus and turpentine oils, lanolin and water. During each trial condition, the participants exercised on a stationary bicycle at 80% maximal effort until they were too tired to continue. The research team measured the volunteers' time-to-exhaustion in both conditions and found the men were able to exercise for an average of about two minutes longer when using the deep heat cream.

"Application of deep heat [cream] may help <u>elite athletes</u>, recreational and/or sports enthusiasts to improve their aerobic performance," said Govindasamy Balasekaran, Ph.D., first author of the study. "More studies are needed to explore the benefits of application of deep <u>heat</u> on exercise performance for both [sexes] and analyze the physiological mechanisms behind the improvement."

## Provided by Experimental Biology

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