

Protein supplements work for women, but not men, during fasted carb-restricted training

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Consuming a protein supplement, specifically protein hydrolysate, during carbohydrate-restricted training was helpful for improving training intensity in women, but not in men.

That's according to new research which will be part of a presentation this week at The Physiological Society's Annual Conference Physiology 2021.

Most [nutrition guidelines](#) for athletes are based on research in men only. This study, by Tanja Oosthuyse and her colleagues, emphasizes that this shouldn't be the case, because nutritional research findings in men don't always apply to [women](#).

While the [protein supplement](#) helped training intensity in women, it did not improve training intensity and instead resulted in modest negative effect in men. It made exercise feel harder for them because their bodies were working harder to break down the supplement, as compared to when they were drinking just plain water.

The conclusion from this research is that women should ingest [protein](#) supplements during fasted [carbohydrate](#)-restricted exercise, while men should be aware that it will increase their perception of effort.

Future studies need to determine whether ingesting protein hydrolysate supplements during carbohydrate-restricted training over a longer time frame of weeks or months will be beneficial.

In this study, the researchers did not consider menstrual phase. Follow up studies are needed to determine whether the improved training intensity when ingesting a protein hydrolysate compared with placebo-water is specific to menstrual phase.

Commenting on the study, first author Tanja Oosthuyse said that "the application of the findings from our study are purely for the specialized training tactic of overnight fasted carbohydrate-restricted exercise that aims to enhance [training](#). Racing nutrition, however, is very different and at the moment guidelines are standard for both men and women. We

need to specify potential differences so that both men and women can train and race at the highest possible caliber."

More information: Tanja Oosthuysen et al, Carbohydrate-Restricted Exercise With Protein Increases Self-Selected Training Intensity in Female Cyclists but Not Male Runners and Cyclists, *Journal of Strength and Conditioning Research* (2021). [DOI: 10.1519/JSC.0000000000004046](https://doi.org/10.1519/JSC.0000000000004046)

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