

Quorn protein on par with animal sources

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Quorn's products contain a fungi-based protein source called Mycoprotein.

Credit: Quorn Foods

Protein found in Quorn meat-free foods may be just as good for muscles as animal proteins, new research suggests.

Food labelling usually lists [protein](#) as a simple number, but some proteins have better "[bioavailability](#)" than others - meaning more can be used by the body.

Animal proteins like milk are known to have high bioavailability, making them an excellent source of building blocks for muscles.

Researchers from the University of Exeter compared [milk protein](#) with Mycoprotein - the fungi-based protein source found in Quorn foods - and found "equivalent" bioavailability.

The study was a collaboration between Quorn Foods and the University of Exeter, and the university scientists say more research is now needed to see if the high bioavailability of Mycoprotein translates to beneficial effects, equivalent to animal proteins, on [muscle](#) tissue for various different groups of people.

"In the last decade or so, nutritional research has led to more and more people - including athletes and older people - being advised to consume more protein than the standard recommended daily allowance," said first author Mandy Dunlop, of the University of Exeter.

"At the same time, government and societal concerns about the sustainability and environmental effects of producing animal-based proteins like meat and dairy products have been growing.

"Quorn's Mycoprotein is produced with far less impact on the environment, and our research shows the bioavailability of its protein is equivalent to that of milk."

Consuming protein results in an increased availability of amino acids and insulin in the blood, leading to "muscle [protein synthesis](#)" (muscle building) in the hours after eating.

Extensive research has been done on animal proteins, many of which have high bioavailability, and these are often recommended to people who need extra protein to maintain or remodel muscle tissue.

Many plant proteins have lower bioavailability - but the researchers say bioavailability in Quorn's Mycoprotein is "very good".

"Indeed, though milk protein was digested more quickly, the overall availability of amino acids derived from Mycoprotein over a four-hour period following a meal was equivalent to the same amount of protein derived from milk," said senior author Dr Benjamin Wall.

"We concluded that Mycoprotein provides a very bioavailable dietary protein source, and speculate that it would be an effective source of protein to support muscle building in a variety of populations.

"This study also took a dose-response approach such that the data give us some direction for how much protein individuals should consume within a meal depending on whether they are looking for sufficient, or optimal, effects on [muscle tissue](#); though definitive conclusions on this will require further work, especially to translate to longer-term effects on health and/or performance."

The paper, published in the *British Journal of Nutrition*, is entitled: "Mycoprotein represents a bioavailable and insulinotropic non-animal-

derived dietary protein source: a dose-response study."

More information: *British Journal of Nutrition*, [DOI: 10.1017/S0007114517002409](https://doi.org/10.1017/S0007114517002409)

Provided by University of Exeter

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