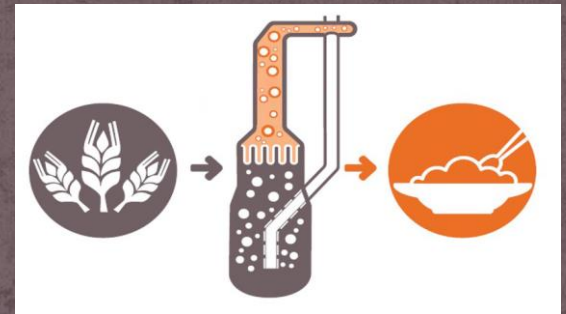


# NUTRITION AND HEALTH BENEFITS OF MYCOPROTEIN

Mycoprotein is a nutritious source of protein. Mycoprotein is made by fermentation from *Fusarium Venenatum* found in nature. The fungus is grown via fermentation, and the resulting mycoprotein is exposed to steaming, chilling and freezing, which results in a meat-like texture, similar to chicken breast when seen under a microscope. Mycoprotein is high in protein, high in fiber, low in saturated fat, and contains no cholesterol.

## Research History

Mycoprotein has decades of food safety history. Thirty years of evidence from research on toxicology, and animal and human feeding studies for nutrition and intolerance (1969 -1985) provided a basis for the novel food protocol of producing mycoprotein.



Gold-standard research and development continues to establish mycoprotein as a protein source with broad spectrum health benefits, and a low impact on the Earth.<sup>1</sup>

### Regulatory Approvals Around The World:

- 1985 UK Ministry Agriculture Fisheries and Foods
- Early 1990's Eire, Netherlands, Belgium and Sweden
- 1996 Switzerland
- 1997 EU Novel Food Regulations now permits sale in all countries of the European Union
- 1999 Norway
- 2002 USA FDA
- 2009 FSANZ (Australia and New Zealand)
- 2013 South Africa
- 2013 Health Canada
- 2016 Philippine FDA
- 2017 Thai FDA

## Nutrition Profile

Mycoprotein is:

- ✓ High in protein
- ✓ High in fiber
- ✓ Cholesterol free

Nutrition Facts		
Serving Size: 4 Nuggets (94g)		
Servings per Container: 3		
Amount Per Serving		
<b>Calories</b>	190	Calories from Fat 70
%Daily Value*		
<b>Total Fat</b>	8g	<b>12%</b>
Saturated Fat	1g	<b>3%</b>
Trans Fat	0g	
<b>Cholesterol</b>	5mg	<b>2%</b>
<b>Sodium</b>	360mg	<b>15%</b>
<b>Total Carbohydrate</b>	21g	<b>7%</b>
Dietary Fiber	3g	<b>13%</b>
Sugars	0g	
<b>Protein</b>	9g	<b>19%</b>
Vitamin A	0%	Vitamin C 0%
Calcium	9%	Iron 3%
* Percentage Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.		
	Calories:	2,000    2,500
Total Fat	Less than	65g    80g
Sat Fat	Less than	20g    25g
Cholesterol	Less than	300mg    300mg
Sodium	Less than	2,400mg    2,400mg
Total Carbohydrate		300g    375g
Dietary Fiber		25g    30g
Calories per Gram		
Fat	9	• Carbohydrate 4
		• Protein 4

## Food Safety

Mycoprotein is a 50-year overnight success. The work to find an alternative protein source began back in the 1960s, with the first mycoprotein-based product coming to market in the United Kingdom in 1985.

People have since been enjoying mycoprotein for decades, as it is now approved by regulatory agencies around the world.

## Quorn Chik'n Nuggets



## Protein Quality<sup>1</sup>

Mycoprotein contains all nine essential amino acids – meaning the body cannot produce them, so they must be obtained through the diet – making it a high-quality protein, comparable to protein sources such as meat or fish.

Mycoprotein has been shown to promote muscle synthesis, which may have relevance in sports nutrition and healthy aging.

## A Natural Source of Dietary Fiber

Mycoprotein is an excellent source of fiber (>5 g per serving), including chitin and beta-glucan.

PROTEIN COMPARISON <sup>2</sup>		
Protein Source	Complete	Incomplete
Mycoprotein	✓	
Chicken	✓	
Beef	✓	
Cheese	✓	
Eggs	✓	
Fish	✓	
Milk	✓	
Soy, tofu	✓	
Beans, black		✓
Beans, garbanzo		✓
Nuts, cashews		✓
Wheat		✓
Rice		✓

FIBER COMPARISON (grams per standard reference serving) <sup>3*</sup>	
Nuts (almonds)	13
Legumes, Black beans (1/2 cup)	8
Mycoprotein (2/3 cup)	5
Bread (whole grain) (1 slice)	2
Brown rice, cooked (1/2 cup)	2
Oats, cooked (1/2 cup)	2
Soy, tofu (1/2 cup)	3
Potato (1 medium)	<1
<i>*rounded to the nearest whole number</i>	

## Food Comparison

Food Comparison (per standard reference serving) <sup>3, **</sup>									
Food Source	cals	pro (g)	total fat (g)	sat fat (g)	fiber (g)	chol (mg)	iron (mg)	Zinc (mg)	B12 (ug)
Mycoprotein (2/3 cup)	110	13	2	<1	5	0	<1	6 mg	n/a
Beef (4 oz)	200	23	11	4	0	73	3	5	3
Chicken (4 oz)	126	23	3	<1	0	74	1	1	<1
Cheese, cheddar (1 oz)	115	6	9	5	0	28	<1	1	<1
Egg, large (1 egg)	72	6	5	2	0	186	<1	<1	<1
Fish, salmon (4 oz)	144	23	5	<1	0	52	<1	<1	5
Milk, whole (1 cup)	149	8	8	5	0	24	<1	<1	1
Soy, tofu (1/2 cup)	181	22	11	2	3	0	3	2	0
Beans, black (1/2 cup)	114	8	<1	<1	8	0	2	1	0
Nuts, almonds (1 oz)	163	6	14	1	3.5	0	1	<1	0
* In the US: No cholesterol= <0.5 g/labeled serving; Low fat= 3 g or less/labeled serving; Low saturated fat= 1 g or less/labeled serving; High fiber= 5 g or more/labeled serving									
** Rounded to the nearest whole number									

## Additional Research

Research suggests that mycoprotein may help maintain healthy blood cholesterol levels. Studies also suggest that mycoprotein may have beneficial effects on blood glucose and insulin, hunger and energy intake. Find a full list of resources and research summaries in the Health and Nutrition Research database online at [www.mycoprotein.org](http://www.mycoprotein.org). For more information, visit [www.quorn.com](http://www.quorn.com) or email [customer.services@quornfoods.com](mailto:customer.services@quornfoods.com).

1. Quorn Sustainable Development Report 2017. Available at [https://www.quorn.us/files/content/Sustainability\\_2017\\_Report.pdf](https://www.quorn.us/files/content/Sustainability_2017_Report.pdf)
2. Institute of Medicine of the National Academies. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids: Protein Quality. 2005(10) 691. Available at <https://www.nap.edu/read/10490/chapter/12#691>.
3. US Department of Agriculture. Agricultural Research Service. National Nutrient Database for Standard Reference Release 28. Available at <http://bit.ly/2jsKkDd>.