



Demonstrating Sustainable Nutrition in the NHS

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‘There’s no better protein than meat,’ they said. ‘Dream on,’ they said...



... So, we did.

Charged with the power of curiosity, we asked big questions.

Like: ‘What if you could feed the whole world with a few grams?’

That’s how we invented Quorn and launched an entire category.

But why stop there?

What if we could feed the world with a few grams?

1960: Conventional farming couldn't keep up with the growing population's need for animal protein. Lord Rank had a visionary idea.

'What if we could invent an ingredient that expands? Like bread does when it proves?'



1967: We discovered fusarium venenatum. A revolutionary new source of sustainable source of protein that could feed the world. And grow with it.



1967-83: We put our discovery through its paces – testing, experimenting and pushing the possibilities of our ground-breaking new way of feeding the world.



1983: Our recipe is approved for human consumption in UK.



1983: We start distributing our products in UK.



2001: Quorn is approved in the US.



NOW: We're the only commercial brand to grow mycoprotein at scale.



After 3,000 attempts,
we invented our wonder food...
...and the entire meat-free sector.

Fusarium venenatum is QuornPro's Super Protein.
It's a natural microorganism in the fungi family, similar to yeast.


- High in protein
- High in fibre
- No cholesterol
- Low fat
- 90% lower carbon footprint than beef
- 70% lower carbon footprint than chicken and pork

Dedicated Resource

Understanding the impact of Mycoprotein on the Human body

www.quornnutrition.com


Quorn mycoprotein



Everything you need to know about the unique and nutritious key ingredient: learn how Quorn mycoprotein was discovered, its nutritional profile, and environmental impacts.

[Find out more →](#)


Health topics



Delve into the areas of health and wellbeing where Quorn mycoprotein can make a real difference.

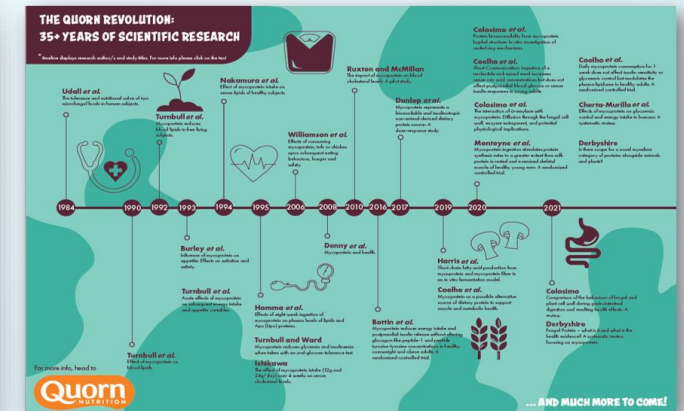
[Find out more →](#)

Research & evidence



Understand the ambition driving our research and explore our published and upcoming research.

[Find out more →](#)



THE QUORN REVOLUTION: 35+ YEARS OF SCIENTIFIC RESEARCH

1984: **Udell et al.** - The discovery and nutritional value of Quorn mycoprotein is first published in a scientific journal.

1985: **Turbull et al.** - The first Quorn product is launched in the UK.

1986: **Burley et al.** - The first Quorn product is launched in the USA.

1987: **Turbull et al.** - The first Quorn product is launched in Australia.

1988: **Hammes et al.** - The first Quorn product is launched in Canada.

1989: **Turbull et al.** - The first Quorn product is launched in New Zealand.

1990: **Turbull et al.** - The first Quorn product is launched in South Africa.

1991: **Turbull et al.** - The first Quorn product is launched in India.

1992: **Turbull et al.** - The first Quorn product is launched in Japan.

1993: **Turbull et al.** - The first Quorn product is launched in South Korea.

1994: **Turbull et al.** - The first Quorn product is launched in Taiwan.

1995: **Turbull et al.** - The first Quorn product is launched in Hong Kong.

1996: **Turbull et al.** - The first Quorn product is launched in Singapore.

1997: **Turbull et al.** - The first Quorn product is launched in Malaysia.

1998: **Turbull et al.** - The first Quorn product is launched in Thailand.

1999: **Turbull et al.** - The first Quorn product is launched in the Philippines.

2000: **Turbull et al.** - The first Quorn product is launched in Indonesia.

2001: **Turbull et al.** - The first Quorn product is launched in Vietnam.

2002: **Turbull et al.** - The first Quorn product is launched in Cambodia.

2003: **Turbull et al.** - The first Quorn product is launched in Laos.

2004: **Turbull et al.** - The first Quorn product is launched in Myanmar.

2005: **Turbull et al.** - The first Quorn product is launched in Brunei.

2006: **Turbull et al.** - The first Quorn product is launched in Timor-Leste.

2007: **Turbull et al.** - The first Quorn product is launched in East Timor.

2008: **Turbull et al.** - The first Quorn product is launched in West Bank.

2009: **Turbull et al.** - The first Quorn product is launched in Gaza.

2010: **Turbull et al.** - The first Quorn product is launched in Palestine.

2011: **Turbull et al.** - The first Quorn product is launched in Israel.

2012: **Turbull et al.** - The first Quorn product is launched in Jordan.

2013: **Turbull et al.** - The first Quorn product is launched in Iraq.

2014: **Turbull et al.** - The first Quorn product is launched in Syria.

2015: **Turbull et al.** - The first Quorn product is launched in Lebanon.

2016: **Turbull et al.** - The first Quorn product is launched in Kuwait.

2017: **Turbull et al.** - The first Quorn product is launched in Oman.

2018: **Turbull et al.** - The first Quorn product is launched in Yemen.

2019: **Turbull et al.** - The first Quorn product is launched in Saudi Arabia.

2020: **Turbull et al.** - The first Quorn product is launched in Bahrain.

2021: **Turbull et al.** - The first Quorn product is launched in Qatar.

... AND MUCH MORE TO COME!

Quorn protein builds muscle better than milk protein

Data presented at the European College of Sport Science (ECSS) conference demonstrates mycoprotein is a more effective source of protein to support post exercise muscle building compared to some animal proteins.

https://news-archive.exeter.ac.uk/featurednews/title_723771_en.html

Quorn protein found to lower cholesterol levels in healthy adults

A study from the University of Exeter has found that mycoprotein, the protein-rich food source that is unique to Quorn products, lowers the post absorptive levels of low-density lipoproteins (LDL), commonly known as “bad” cholesterol, more than meat and fish.

https://news-archive.exeter.ac.uk/2020/july/title_807355_en.html



Curious?

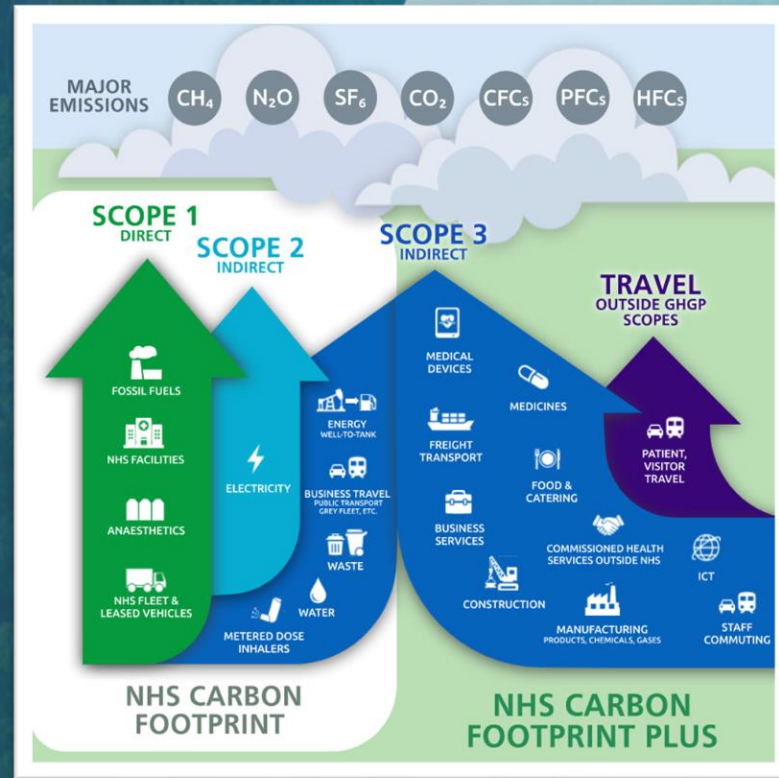
How can Quorn help the NHS to
deliver Healthy sustainable nutrition?

Net Zero by 2045



NHS commitment to net zero 2040

- For the emissions we control directly (the NHS Carbon Footprint), we will reach net zero by 2040, with an ambition to reach an 80% reduction by 2028 to 2032.
- For the emissions we can influence (our NHS Carbon Footprint Plus), we will reach net zero by 2045, with an ambition to reach an 80% reduction by 2036 to 2039.



NHS Carbon Footprint
6.1 million tonnes in 2020

NHS Carbon Footprint Plus
24.9 million tonnes in 2020



Meat costs *the earth*.
More Meat, More Problems...

Meat is expensive, it doesn't just cost our health or our bottom line – it costs the earth.

91% of the amazon rainforest destruction is a result of animal agriculture

70% of all available fresh water is used in animal agriculture

69% of consumers say they are trying to lead an environmentally friendly lifestyle

22% of the global populations is vegetarian, with this set to rise another 12% in the UK alone by 2030

1 in 3 children are overweight or obese by the time they leave primary school.

Economical

- Primary beef has seen the highest average price increases for value products, up by 17%. (Kantar, 12 w/e 12 June 2022)
- Food Inflation is forcing caterers to consider cheaper ingredients or remove from menus, which impacts nutritional value.

Environmental

- Total emissions from global livestock is 7.1GT CO₂e that's more than the total Global emissions from Transport.
- If you replace just 20% of worlds Beef Consumption with microbial protein you could halve global deforestation by 2050.

Health

- Obesity costs the NHS a massive £6 billion annually and this is set to rise to over £9.7 billion each year by 2050.
- Too much red meat is linked with high calories and cholesterol, and in turn, increases risk for cardiovascular disease.
- We need to increase our dietary fibre intake by 50%. National food strategy.

Quorn *PRO*
Powered by Curiosity

Let`s Meat Halfway

What`s next?

A bit of meat. A bit of meat free protein.
It's the best of both worlds and the best for the world.
Welcome to the 50:50 approach.

By reducing the meat content of your dishes by 50% and supplementing with QuornPro you will be having a hugely positive impact on the planet: less carbon emissions, less water usage, less deforestation - **all in all less meat means a greener approach - in every way.**
Better for diners. Better for the environment. Better for your bottom line.

You don't have to drop meat to make a difference. Just switch to the 50:50 approach: Tasty. Healthy. Lower Carbon. Save money, and the planet.

Tastes good, does good.



46% Lower Carbon

Footprint compared to beef! And a whopping 92% when you choose Quorn only.

Quorn **PRO**

Meat in the middle Cottage Pie



- Low sugar
- Low salt
- Low fat
- High in protein
- High in fibre
- High in vitamin A

EU Label Values Per 100g

SUGGESTION	PER 100G	%RI	PER SERVING	%RI
Energy(kJ)	293 kJ	3%	1366 kJ	16%
Energy(kcal)	70 kcal	4%	327 kcal	16%
Fat	2.7 g	4%	13 g	19%
of which saturates	1.2 g	6%	5.8 g	29%
Carbohydrate	6.1 g	2%	29 g	11%
of which sugars	3.1 g	3%	14 g	16%
Fibre	2.5 g	10%	12 g	48%
Protein	4 g	8%	18 g	36%
Salt	0.21 g	4%	0.96 g	16%



[Download Recipe](#)



*Comparison uses UK sourced Red Tractor Beef mince containing a maximum 20% Fat content. Calculation based on 467g portion as at 5/5/23

Meat in the middle Cottage Pie with Root Crush



1.9
kg CO₂e

476g Portion
327 Calories
1925g Co2e
18g Protein
12g Fibre

SUGGESTION	PER 100G	%RI	PER SERVING	%RI
Energy(Kj)	293 kJ	3%	1366 kJ	16%
Energy(kcal)	70 kcal	4%	327 kcal	16%
Fat	2.7 g	4%	13 g	19%
of which saturates	1.2 g	6%	5.8 g	29%
Carbohydrate	6.1 g	2%	29 g	11%
of which sugars	3.1 g	3%	14 g	16%
Fibre	2.5 g	10%	12 g	48%
Protein	4 g	8%	18 g	36%
Salt	0.21 g	4%	0.96 g	16%



31%

Reduction in Sat Fat



46%

Reduction in Co2e



48%

Increase in Fibre



- Low Fat
- Low Sugar
- Low Salt
- High in Fibre
- High in Protein
- High in Vitamin A
- Source of Chloride



Royal Free London
NHS Foundation Trust

Larry Rosenthal

Catering Manager

Royal Free London Property Services Ltd

Royal Free Hospital

Our Trust has pledged to support the NHS in their carbon reduction targets. Each department and person is committed to support that effort. In catering we are looking at everything we can do to help. The Quorn 50/50 scheme has worked well for us and we have had good up take and feedback from our restaurant customers.

Customers do not feel forced as we offer vegetarian and meat dishes alongside the 50/50. Meat eaters have been willing to try it and have been pleased both with the taste, the dietary benefits and the feeling that we can make a difference for sustainability without having to give anything up. The response has been overwhelmingly positive.

Where can you find Meat Halfway?

Saving Carbon...

NHS
Royal Free London
NHS Foundation Trust

NHS
Nottingham University Hospitals
NHS Trust

NHS
Sheffield Teaching Hospitals
NHS Foundation Trust

NHS
East Lancashire Hospitals
NHS Trust
A University Teaching Trust

Still on the fence...

NHS
The Royal Wolverhampton
NHS Trust

NHS
The Newcastle upon Tyne Hospitals
NHS Foundation Trust

NHS
Sandwell and West
Birmingham Hospitals
NHS Trust

NHS
University Hospitals
Birmingham
NHS Foundation Trust

NHS
Lancashire Teaching
Hospitals
NHS Foundation Trust

NHS
County Durham
and Darlington
NHS Foundation Trust

Meat Halfway

Less Meat, less Problems.

- Reduces saturated fat, calories, cholesterol and increases fibre
- Powered by Mycoprotein. A complete protein source with all 9 essential amino acids and high bio availability.
- Saves carbon and costs less
- Gives customers the tastes and textures they expect without compromise

Replacing 20% of the global beef consumption could *halve deforestation by 2052*

The *water footprint of QuornPro Mince* is *12x less than Beef Mince*.

Carbon footprint of Quorn Mince is *95% lower than Beef Mince*.

A plant-based diet *reduces the risk of heart disease by 40%*

Consumption of less meat is associated with *decreased rates of obesity* in both children and adults



Thank you!



Ellie Janes

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1. NHS requires 1 billion Trees a year to sequester 25 Million Tonnes of CO₂e

Average carbon sequestration per tree absorbs about 25 kg of CO₂ annually. So when you own a tree, you can track the carbon captured over its whole lifetime! In the end, most of the figures put forward should be taken with great care, but they give an average range of 10 to 40kg of CO₂ absorbed per tree per year over a lifetime.

<https://ecotree.green/how-much-co2-does-a-tree-absorb>

2. Recent studies from Exeter University indicate that our protein source, not only builds muscle tissue faster than Whey protein, but it could also even help to lower cholesterol.

https://news-archive.exeter.ac.uk/featurednews/title_723771_en.html

https://news-archive.exeter.ac.uk/2020/july/title_807355_en.html

3. The NHS is the world's first health organisation to commit to Net Zero by 2045

<https://www.supplychain.nhs.uk/news-article/one-year-on-from-the-net-zero-report>

4. Animal agriculture is responsible for up to 91% of Amazon destruction.

<https://www.cowspiracy.com/facts>

[Margulis, Sergio. "Causes of Deforestation of the Brazilian Amazon". World Bank Working Paper No. 22, 2003](#)

[Tabuchi, Hiroko, Rigny, Claire & White, Jeremy. "Amazon Deforestation, Once Tamed, Comes Roaring Back". New York Times, February 2017 \(New\)](#)

[Bellantonio, Marisa, et al. "The Ultimate Mystery Meat: Exposing the Secrets Behind Burger King and Global Meat Production". Mighty Earth \(New\)](#)

[Oppenlander, Richard A. Food Choice and Sustainability: Why Buying Local, Eating Less Meat, and Taking Baby Steps Won't Work. Minneapolis, MN : Langdon Street, 2013. Print.](#)

5. 70% of all available fresh water is used in animal agriculture

<https://www.openaccessgovernment.org/devastating-water-footprint-animal-agriculture/163485/#:~:text=While%20we%20and%20a%20think,ant%20of%20all%20freshwater%20reserves>

6. 65% of adults and 1 in 3 children leaving primary school in UK are classed as either overweight or obese.

<https://fingertips.phe.org.uk/profile/national-child-measurement-programme#:~:text=In%20England%20in%202013,most%20deprived%20groups%20in%20society>

7. Too much red meat 65% of adults and 1 in 3 children leaving primary school in UK are classed as either overweight or obese.

<https://www.ox.ac.uk/news/2021-07-21-red-and-processed-meat-linked-increased-risk-heart-disease-oxford-study-shows>

8. 69% of consumers say they are trying to lead an environmentally friendly lifestyle

<https://nielseniq.com/global/en/insights/education/2023/growing-importance-placed-on-sustainability-when-choosing-brands-in-asia-pacific#:~:text=Consumers%20feel%20the%20impact%20of,adopting%20a%20more%20sustainable%20lifestyle>