

Boosting gut bacteria could help stop elderly from falling ill

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Elderly people could avoid the more frequent colds, coughs and stomach upsets that come with age by taking a daily supplement that boosts gut bacteria and the immune system, new research has found.

Scientists at the University of Reading say the results of a new [randomised controlled trial](#) show the best evidence yet that 'prebiotics' can boost an elderly person's immune system back towards the level of younger healthy adults.

Prebiotics are substances which pass through the [human gut](#) unnoticed, but which feed 'good' bacteria already in the intestine. Unlike probiotics, found in live yoghurt or health drinks, prebiotics do not contain any live bacteria themselves, but help the growth of the billions of bacteria

already living in the gut.

In the latest study, researchers recruited 40 volunteers between the ages of 65 and 80. The randomised, double-blind, placebo controlled cross-over study tested the effect of a prebiotic called BiMuno on gut bacteria, markers of immune function and metabolites.

They found that a daily supplement powder led to the study subjects having a significant increase in [beneficial bacteria](#), called bifidobacteria, in their intestine. It also boosted their immune system, with higher numbers of cells that fight infections and reduce inflammation (which is more of a problem as we age).

Professor Glenn Gibson, who led the study at the University of Reading's Department of Food and Nutritional Science, said: "As we get older, we tend to lose some of the health-protecting bacteria in our gut, which makes us particularly susceptible to infections."

"At this time of the year, many people taking their summer vacation experience traveller's diarrhoea. This can not only ruin your holiday, but prove dangerous for older or vulnerable people."

"These latest results are the strongest yet that [elderly people](#) can benefit from taking prebiotic supplements. This could be one way to help Britain's ageing population stay healthier for longer, potentially saving the NHS money and improving the quality of life of millions of older people."

The results also show how other people with weaker immune systems could benefit, such as people taking antibiotics or those experiencing high levels of stress.

The human clinical trial was carried out at the University of Reading's

Department of Food and Nutritional Science, and was funded by Clasado Biosciences, a spin-out company based on the University's Reading campus.

Scientists are now planning to see how prebiotics could work alongside other therapies for people with inflammatory diseases such as Rheumatoid Arthritis or Inflammatory Bowel Disease (IBD), including Crohn's Disease and Ulcerative Colitis.

It follows research showing how boosting [gut bacteria](#) can not only improve the [immune system](#), but lead to changes in brain biochemistry, as well as targeting conditions such as diabetes, Irritable Bowel Syndrome and obesity.

These latest results have been published in the British Journal of Nutrition.

More information: "Influence of galacto-oligosaccharide mixture (B-GOS) on gut microbiota, immune parameters and metabonomics in elderly persons." *British Journal of Nutrition* DOI: [dx.doi.org/10.1017/S0007114515001889](https://doi.org/10.1017/S0007114515001889)

Provided by University of Reading

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