

Can probiotics help ward off flu?

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University of Reading researchers are recruiting volunteers for an important new study aiming to discover whether probiotics boost the immune system of older people.

Ageing dramatically affects immune function, and this partly explains the increased susceptibility to infection in older individuals. In the UK, about 600 people per year die from seasonal flu. The flu vaccination is offered by the NHS free of charge to those aged 65 or over, but it has been estimated that 30-50% of [older adults](#) will not have a sufficient immune response to provide protection against the flu.

With her research team Professor Parveen Yaqoob, from the University's Department of Food and Nutritional Sciences, is leading the PRIMAGE study, investigating the effects of pre and [probiotics](#) on the response to the [flu vaccine](#) in young and older volunteers.

Professor Yaqoob said: "Probiotics are beneficial bacteria which are known to influence gut health and immune function, while prebiotics are a carbohydrate which provides a food source to these beneficial bacteria when they reach the gut. We want to see if boosting the immune system with a mixture of both will help make the flu vaccine more effective."

For the first study, which begins this September, volunteers need to be men and women between the ages of 65 and 85 who are willing to receive the flu vaccination and attend four appointments at the University over eight weeks between September and December 2010. Participants will be provided with a pre- and probiotic mixture to take

daily for eight weeks, and be given the [influenza](#) vaccination in the fourth week of the study.

In January 2011 the same study will be conducted but with men and women between the ages of 18 and 35.

The researchers will measure the level of [antibodies](#) specific to the flu vaccine in the volunteers' blood samples, allowing them to assess whether volunteers had an adequate immune response to protect them against [flu](#). This will give the team a measure of how strong their response was.

Professor Yaqoob continued: "Previous research has suggested that prebiotics and probiotics can improve immune function, and that they are particularly beneficial in older people, although it is not yet clear why. This study will help us to understand exactly how pre- and probiotics affect the immune system and why there seems to be greater benefit for older people."

Volunteers should be generally healthy, although they will be assessed on a case-by-case basis, and will be asked to provide blood and other samples at study visits.

Provided by University of Reading

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