

## Gut bacteria seems different in people with MS

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The bacteria present in a person's intestines perform a number of vital functions including providing nutrients, producing vitamins and aiding in the digestion of food. Bacteria in the gut are also important in maintaining a healthy immune system. The intestinal bacterial population, known as microbiota (or microbiome), can vary according to a number of factors including diet and genetics. Changes to gut bacteria have been found in some inflammatory conditions and their potential role in MS is an emerging area of research.

A new study from researchers in Japan has looked at the profile of gut bacteria in 20 Japanese people with relapsing remitting MS and compared this with 40 healthy control individuals. Since the bacterial profile can be

variable over time, they also included multiple samples from the same group of healthy people that were taken over a number of months.

Published in [PLoS One](#), the study showed that while gut bacteria was broadly similar to healthy people, 21 species did show differences. In particular, the bacteria belonging to the clostridial species were present in differing amounts. This was true of the single time point comparison as well as the samples taken over time, strengthening the results. However, the bacterial species identified are not the same as those that have previously been shown to be involved with autoimmunity and allergy. This suggests that the bacterial profile in MS may be distinct and may represent a potential target for new therapies.

MS Research Australia has funded a similar study led by [Dr Stuart Smith](#) at Deakin University in Melbourne looking at differences in microbiota in Australian patients and comparing this with control subjects. Since lifestyle factors have such a large influence on gut microbiota, it will be interesting to compare the results of the Australian study with the Japanese results. The Australian study is currently underway and actively recruiting.