

Digestive Tract Microbiome Drivers and Mediators in Parkinson's disease (PD) & Irritable Bowel Syndrome with Constipation (IBS-C).



Request for Volunteers

- with PD & their spouses/partners
- with IBS-C
- for a healthy comparison group.

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“The Importance?”

Little progress, despite years of application to what causes certain conditions, demands a rethink. With respect to two clinical conditions, we are stepping back to consider the whole entity, by defining some of the jigsaw pieces and assembling some features, with the aim of putting together the big picture. In each condition, there is compelling evidence for the role of the digestive tract microbiome.

A half-way house to unravelling causation is to understand how to stop a condition in its tracks (*i.e.* turn progression into containment). So, one of these conditions appears self-contained (*i.e.* confined to the digestive tract). In the other, although the major manifestations result from damage to parts of the brain controlling movement, digestive tract symptoms usually precede diagnosis.

“What is the Gut Microbiome?”

Everyone has a community of microbes (microbiome), many of which are beneficial, living in the digestive tract, from mouth to bowel. Imbalance in the different types of microbe may influence some human diseases.

“What are Drivers and Mediators?”

There is growing evidence that imbalance in the digestive tract microbiome contributes to driving both Parkinson's disease (PD) and Irritable Bowel Syndrome with Constipation (IBS-C). This contribution may be brought about (*i.e.* mediated) by products of the abnormal microbiome or by the immune system's response.

“Why target PD, IBS-C and spouses/life partners of people with PD?”

The same sorts of damage, in the same types of nerve cell, are found in the ‘little brain’ of the digestive tract nervous system, as are found in the parts of the brain affected by PD. Indeed, many people with PD also have IBS-C-like symptoms.

People with straightforward IBS-C may have a similar microbiome to those with PD, but be ‘protected’ by their genetic constitution.

Sharing of digestive tract microbiome appears to be a feature of long-term cohabitation. We, thus, also need to understand what is protecting the spouses and life-partners of people with PD.

A healthy comparison group is needed, of course, to demonstrate what potential drivers and mediators are associated with PD and IBS-C.

“What is involved in the study?”

You can volunteer for this study, which involves a doctor taking a sample of blood (25 ml for limited genetic profiling, immune response profiling and microbiome products). You would be asked to provide samples of faeces and saliva. Simple assessments would be made (including of your walking, muscle tone, posture, sense of smell and voice). There are short questionnaires relating to any stomach and bowel symptoms, your sleep, mood and memory and everyday mental tasks. To estimate speed of transit through the digestive tract, you will be asked to swallow tiny radiopaque markers beforehand, and have an ordinary x-ray of the abdomen at the visit.

We will ask people with PD to invite a healthy person, without PD themselves, in their family or household, to volunteer to be part of a comparison group. If this person has a spouse/partner, we would like them to volunteer too.

To assess stability, a random selection of people with PD, their spouses/partners,

with IBS-C, and from the comparison group will be asked to repeat the assessment (bar human genetic profile and digestive tract transit time) after 3 to 4 years.

“What will happen to my tests and results?”

Your donated samples will be processed and sent for laboratory analysis at King’s College London, except for the microbiome analysis. This will be carried out at a world-leading centre, ‘Metagenopolis’, near Paris, which the Director for the King’s College ‘Centre for Host Microbiome Interaction’ also directs.

The overall test results will contribute to a greater understanding of potentially remediable drivers and mediators of PD and of IBS-C. They will enable the design of better targeted medical treatments and life-style modification.

“How can I volunteer for this study?”

You can volunteer by contacting the medical team at King’s College London by email or telephone. A time convenient to you would be arranged for discussion with a doctor on the telephone. If appropriate, you would be sent further information, and details of how to proceed.

“Where can I get more information?”

For more information about the study, please contact:

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Thank you for your time
in reading this.