

**What's your gut got to do with it? you may ask, regarding your psoriasis. Apparently, quite a lot, according to new published data in *Science Translational Medicine* by the Inflammatory Arthritis Microbiota Consortium, based at the Kennedy Institute of Rheumatology.<sup>1</sup>**

The study looked at the human microbiome, which is the term for a group of bacteria and microorganisms that play a vital part in our body's function but which in some instances can be harmful. Imbalances can cause problems, not least bloating, indigestion and diarrhoea. There has already been a link made between the microbiome and IBS (irritable bowel syndrome).

In the study, stool (poo) samples were analysed from 221 individuals with rheumatoid arthritis, ankylosing spondylitis or psoriatic arthritis and 219 healthy controls. The aims were to see whether what was in the gut bacteria of those with inflammatory conditions was linked to higher levels of inflammation.

The study results found that those with inflammatory arthritis shared similar alterations to the make-up of their gut bacteria, which has suggested that there is some link with or influence on inflammation in humans.

The researchers feel that the work has expanded the understanding of what likely role changes in the gut have on those with inflammatory arthritis.

Regardless of whether gut bacteria are associated with higher levels of inflammation, it needs to be remembered that the vast majority of people developing psoriatic arthritis have pre-existing psoriasis.

While studies have suggested that smoking, obesity and heavy alcohol consumption may make existing psoriasis worse, their relationship to psoriatic arthritis is unclear.



A recent large study<sup>2</sup> examined whether these factors may increase the risk of psoriatic arthritis in a large population of patients with pre-existing psoriasis.

Using the U.K. Clinical Practice Research Datalink between 1998 and 2014, researchers identified 90,189 people with psoriasis, 1,409 of whom subsequently developed psoriatic arthritis.

They then examined the association between changes in body mass index (BMI), smoking habits and reported alcohol consumption in relation to the risk of developing psoriatic arthritis.

Results showed that being overweight or obese significantly increased the risk of developing psoriatic arthritis. Indeed, those with a BMI of 35 (obese class II) or above were 2.5 times more likely to develop psoriatic arthritis than those with a normal body weight.

Importantly, reducing BMI over a 10-year period was associated with a reduction in the risk of developing psoriatic arthritis compared with weight remaining constant over the same period. There was an increased risk with moderate alcohol consumption but not with heavy consumption, but no association with smoking.

## References:

1. Alterations in the gut microbiome implicate key taxa and metabolic pathways across inflammatory arthritis phenotypes Thompson, et al. Published 26 July 2023 <https://www.science.org/doi/10.1126/scitranslmed.abn4722>
2. Reference: Green A, Shaddick G, Charlton R, et al. Modifiable risk factors and the development of psoriatic arthritis in people with psoriasis. Br J Dermatol 2020; 182: 714-720