

# Common bowel problem linked to chili pepper pain receptor

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People with irritable bowel syndrome have a higher than usual number of chilli pepper pain receptors, according to a new study published tomorrow (Wednesday 11 June).

The research, published in the journal *Gut*, could lead to new therapies for the estimated one in five UK adults who have irritable bowel syndrome (IBS), a painful condition which is poorly understood. Symptoms of IBS include abdominal pain, bloating, and bowel problems such as constipation or diarrhoea.

The new research shows that people with IBS have higher than usual levels of nerve fibres expressing the pain receptor TRPV1, responsible for causing a burning sensation when people eat chilli peppers. The study's authors, from Imperial College London, hope that doctors could treat the pain that people with IBS experience by targeting and blocking this receptor.

People with severe pain from IBS are currently treated with opiates, which can have serious side-effects. Painkillers such as paracetamol and ibuprofen tend to offer little relief. New painkillers to target TRPV1 are currently being developed by pharmaceutical companies and the new findings suggest that such drugs could tackle some of the symptoms of IBS.

The researchers believe their findings may explain why some people's IBS symptoms worsen after eating spicy food. They also suggest that the

presence of more nerve fibres expressing the TRPV1 pain receptors might mean that people with IBS are more susceptible to pain.

Professor Subrata Ghosh, one of the authors of the study from the Division of Medicine at Imperial College London, said: "IBS can seriously affect people's quality of life and our new study could explain some of its symptoms. At the moment patients don't have a lot of options for managing their condition and the treatments we can offer can give disappointing results. We hope that our findings will lead to better treatments to help people with IBS."

Professor Praveen Anand, an author of the study from the Division of Neuroscience and Mental Health at Imperial College, added: "Up to 50 pharmaceutical and biotech companies world-wide are developing drugs that block the chilli pepper receptor TRPV1, and our published studies on this receptor in a number of chronic pain and hypersensitivity conditions provide hope for millions of suffering patients."

The researchers reached their conclusions after comparing biopsies of colon tissue taken from 23 patients with IBS and 22 controls, recruited from the Gastroenterology clinics and the endoscopy department at Imperial College Healthcare NHS Trust. The biopsies were studied in the Division of Neuroscience and Mental Health at Imperial College London.

Source: Imperial College London

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