

# An organic cause for a functional gastrointestinal disorder

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How many times patients with gastrointestinal disorders have been told "There is nothing wrong, nothing organic, it's all you head". But the pain is real. Now their complaints find a new light in a study published in the current issue of Psychotherapy and Psychosomatic.

Functional dyspepsia (FD) is a prevalent [functional gastrointestinal disorder](#) (FGID) defined by chronic epigastric symptoms in the absence of organic abnormalities likely to explain them. Comorbidity with mood and anxiety disorders as well as with other FGIDs and functional somatic syndrome (FSS) is high. FD is characterized by abnormal regional cerebral activity in cognitive/affective pain modulatory circuits, but it is unknown which neurotransmitter systems are involved.

The authors aimed to assess and compare in vivo cerebral cannabinoid-1 (CB1) receptor availability between FD patients and age-, gender- and BMI-matched healthy controls (HC). Twelve FD patients and 12 matched HC were investigated using [positron emission tomography](#) (PET) with the CB1receptor radioligand [18F]MK-9470. Nine of the patients received a second PET scan after a naturalistic follow-up period of  $36 \pm 9.6$  months (range: 25.2-50.4 months).

Results showed that FD patients had significantly higher CB1 receptor availability in the cerebral regions involved in (visceral) nociception (brainstem, insula, [anterior cingulate cortex](#)) as well as in the homeostatic and hedonic regulation of food intake [hypothalamus, (ventral) striatum] (p

Although these findings need replication in larger samples, they suggest that the abnormal brain activity in several of these regions, previously demonstrated in FD, may be due to a sustained endocannabinoid system dysfunction, identifying it as a potential novel target for treatment and warranting further studies to elucidate whether it is also a feature of other FGIDs or FSSs.

**More information:** "Increased Cerebral Cannabinoid-1 Receptor Availability Is a Stable Feature of Functional Dyspepsia: A [18F]MK-9470 PET Study." *Psychother Psychosom* 2015;84:149-158  
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