

# Negative emotions influence brain activity during anticipation and experience of pain

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Neuroticism — the tendency to experience negative emotions — significantly affects brain processing during pain, as well as during the anticipation of pain, according to a new study in *Gastroenterology*, the official journal of the American Gastroenterological Association. Neuroticism tends to be higher in patients with irritable bowel syndrome (IBS), and is a risk factor for chronic, unexplained pain in IBS.

"Patients who have high expectations of pain may have a harder time coping with the actual source of pain, as is often seen in patients with irritable bowel syndrome," said Steven J. Coen, PhD, of the Wingate Institute of Neurogastroenterology and lead author of this study.

Researchers of this study observed higher levels of [neuroticism](#) associated with [brain](#) activity during anticipation of pain in regions of the brain responsible for emotional and cognitive pain processing. During pain, however, activity in these regions was reduced. This behavior may help explain the greater incidence of those with higher neuroticism attending outpatient pain clinics and being at greater risk for developing chronic pain conditions.

"Previous research has shown that there is a connection between a patient's emotions and their perceived levels of [pain](#), especially in gastrointestinal disorders," explained Dr. Coen. "Our study shows a patient's state of mind should be noted by their physician and taken into account when determining treatment regimens — both behavioral and pharmacologic."

**More information:** For more information on IBS, please read the AGA brochure "Understanding Irritable Bowel Syndrome" at [www.gastro.org/patient-center/ ... table-bowel-syndrome](http://www.gastro.org/patient-center/...table-bowel-syndrome)

Provided by American Gastroenterological Association

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