Psyllium fiber found to reduce abdominal pain in children with IBS

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'My stomach hurts!' It's probably the oldest trick in the book to try to get out of school, but for some children who have abdominal pain related to irritable bowel syndrome, or IBS, the pain is real and often interferes with activities. A new study by researchers at the USDA/ARS Children's Nutrition Research Center at Baylor College of Medicine and Texas Children's Hospital found that children with these symptoms who take psyllium fiber had a decrease in pain episodes. Their report appears today in *Clinical Gastroenterology and Hepatology*.

Psyllium husk is a natural source of fiber that is similar to the fiber in grains, including oats and barley.

"This appears to be a potentially beneficial treatment for some kids with IBS, but more research is needed to understand how it works, to see if there are ways that we can make it more effective, and to identify which kids might be the most responsive to that treatment," said Dr. Robert Shulman, professor of pediatrics at Baylor and the CNRC.

He and colleagues conducted a randomized, double blind clinical trial in children between the ages of 7 and 18 years with IBS to evaluate whether psyllium fiber helped reduce abdominal pain. During a two-week baseline period, researchers asked children to keep a diary to measure their pain levels.

They also documented stool patterns. Sometimes children with IBS have stools that are more constipated or more diarrheal, so researchers wanted

to see if psyllium fiber helped make their stools more normal. Researchers also collected data on their gut barrier function – how well their gut performed in keeping out things such as allergens and bacteria – and, in a small subgroup, gut bacteria composition. In addition, researchers measured breath hydrogen levels in the children. Normally, when starches and other sugars get into the colon, bacteria break them down, and one of the breakdown products is hydrogen. Studies suggested that production of hydrogen gas is related to pain, so the researchers measured breath hydrogen levels to see if this was the case.

They also measured psychological characteristics prior to the study, because children with IBS may have a certain degree of psychosocial distress accompanying the disorder, so they wanted to see whether those with more or less psychosocial distress responded differently to the treatment.

During the six-week treatment period, children either took the psyllium fiber or a placebo. During the last two weeks of the study, they were asked to keep a diary of their pain and researchers again collected data on their stool patterns, gut barrier function, gut bacteria composition and breath hydrogen levels.

They found that children who took the psyllium fiber had fewer pain episodes than those who received the placebo. While both groups had a decline in the number of pain episodes, the decline in pain episodes in the group that took the psyllium fiber was twice that of the placebo group.

They found that psychological characteristics did not have any influence on whether children responded to the fiber. The fiber had no effect on breath hydrogen levels, gut barrier function measurements or the gut bacteria composition. The proportion of normal stools was the same among both groups.

Shulman noted that because it did not have an effect on these other factors, it's not entirely clear how psyllium fiber works in helping reduce pain.

"What we predicted might have a relationship to its beneficial effects on pain did not turn out," he said.

More information: Robert J. Shulman et al. Psyllium Fiber Reduces Abdominal Pain in Children with Irritable Bowel Syndrome in a Randomized, Double-blind Trial, *Clinical Gastroenterology and Hepatology* (2016). DOI: 10.1016/j.cgh.2016.03.045

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