

Lab-tested diagnosis needed when treating patients with persistent diarrhea

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Persistent diarrhea, which is diarrhea that lasts at least 14 days, is an illness typically caused by parasites or bacteria and requires accurate diagnosis in order to determine what treatment to give, according to Herbert L. DuPont, M.D., director of the Center for Infectious Diseases at The University of Texas Health Science Center at Houston (UTHealth) School of Public Health.

In a literature review published today in *JAMA*, the *Journal of the American Medical Association*, DuPont advised medical practitioners to be alert when diagnosing persistent versus acute diarrhea in patients. It is common for doctors not to focus on how many days their patients have had diarrhea, he added.

Persistent diarrhea from some causes can result in serious nutritional disorders and malnutrition, according to the Centers for Disease Control and Prevention.

"I'd like to educate doctors about the importance of taking the history and assessing duration of illness. For [acute diarrhea](#), the lab has a minimal role, restricted to patients passing bloody stools. If a patient has had diarrhea for two weeks or more, the doctor should focus on the cause of the disease through laboratory testing, with an emphasis on parasites," DuPont said.

Acute diarrhea lasts less than two weeks and is typically caused by viruses or toxins. Persistent diarrhea is most commonly caused by

bacteria or parasites, including Giardia, Cryptosporidium and Cyclospora. Less common parasites are Entamoeba Cystoisospora belli, Dientamoeba fragilis, Strongloides stercoralis and microsporidia. These parasites, which can be detected in laboratory testing, can be contracted through food, water or from other people and are commonly picked up while traveling.

A new testing method called multiplex polymerase chain reaction (PCR) was developed within the past year. This simultaneous, single test identifies unique DNA sequences to detect a panel of causes of diarrhea. Two platforms have been approved by the Food and Drug Administration for use and UTHealth School of Public Health researchers, led by Zhi-Dong Jiang, M.D., Dr.P.H., were involved in the testing process for these platforms..

Previously, researchers would culture bacteria from a stool sample and examine it for isolated bacteria. For parasites, they would either look under a microscope or, for three of the parasites, use commercial enzyme immunoassays. Both methods were only able to identify a small number of parasites.

"These new tests are easy to use, are capable of detecting a broad range of pathogens and represent a significant improvement over culture-based diagnostic approaches. The technology needs to be more widely available. Diagnosis is critical when treating persistent diarrhea," DuPont said.

Antimicrobial therapy can be useful for many patients with persistent diarrhea, but a lab-established diagnosis is necessary for treatment, according to DuPont. Nitazoxanide is a drug that treats a broad spectrum of [parasites](#) and can be used as treatment for patients with persistent diarrhea who test negative for a pathogen in the lab.

Provided by University of Texas Health Science Center at Houston

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