

## Infectious **diarrhea testing**

Gastric distress? Take action  
and consider testing for infection

# Lack of a specific diagnosis can hinder appropriate treatment—**get the insight you need**

When a patient presents with diarrhea, determine quickly whether it's caused by infection from bacteria, virus, or a parasite.

## A growing problem that may require testing

- In the U.S.: 200-400 million episodes of diarrheal illness annually, nearly 2 million hospitalizations<sup>1</sup>
- For some pathogens, an organism-specific diagnosis is required<sup>1</sup>
- Inflammatory diarrhea may be more severe and require more than simple hydration for the patient
- Early diagnosis of an acute episode of diarrhea can lead to alleviation of symptoms and prevent secondary transmission

## Viral or bacterial infection?<sup>3</sup>

**Viral infections** are the most common cause of acute diarrhea.

- Vomiting is more suggestive of viral illness or illness caused by ingestion of a preformed bacterial toxin

**Bacterial infections** are more often associated with travel, comorbidities, and foodborne illness.

- Symptoms may include fever, tenesmus (urgency to evacuate the bowels), and grossly bloody stool



Testing from Quest Diagnostics helps you know the cause and what to treat.



## IDSA suggested tests for diagnosing cause(s) of infectious diarrhea<sup>1</sup>



**Community-acquired or traveler's diarrhea**  
(especially if accompanied by significant fever or blood in the stool)

*Salmonella*

*Shigella*

*Campylobacter*

*E coli* O157:H7

(if blood in stool, also test for Shiga toxin and refer isolates if toxin positive)

*C difficile* toxins A/B + GDH<sup>2</sup> or the *C diff* Toxin PCR\*

(if antibiotics or chemotherapy taken in recent weeks)



**Nosocomial diarrhea**  
(onset >3 days in hospital)

*C difficile*

Toxin A/B + GDH<sup>2</sup> or the *C diff* Toxin PCR\*

(in suspect nosocomial outbreaks, patients with bloody stools, and infants, also add tests for community-acquired or traveler's diarrhea)



**Persistent diarrhea**  
>7 days (especially if immunocompromised)

Consider parasites:

*Cryptosporidium*

*Cyclospora*

*Isospora belli*

(e.g., O&P exams, antigen tests)

Consider performing inflammatory screen (qualitative fecal lactoferrin)

**If HIV-positive, consider adding:<sup>+</sup>**

*Microsporidia* (gram-chromotype)

*M avium* complex

+ consider also tests for community-acquired or traveler's diarrhea

### \*Notes for *C difficile*:

- Toxin testing is most important clinically but is hampered by lack of sensitivity. To overcome, consider a 2-step method that uses EIA detection of glutamate dehydrogenase (GDH).
- Polymerase chain reaction (PCR) testing appears to be rapid, sensitive, and specific.

## Other IDSA recommendations for the diagnosis of diarrheal illnesses also include:<sup>1</sup>

- Fecal lactoferrin testing can help document inflammation
- Seafood or seacoast exposure: culture for *Vibrio* species
- Persistent abdominal pain and fever: culture for *Yersinia enterocolitica*
- Right-side abdominal pain without high fever but with diarrhea: culture for Shiga toxin-producing *Escherichia coli* (STEC) O157
- There are a variety of tests for parasitic causes of diarrhea, including fluorescence, EIA, acid-fast stains, and other special stains

## Other tests to consider:

*H pylori* (Stool Antigen, Urea Breath); Qualitative Fecal Lactoferrin

Get the infectious disease tests you need to accurately diagnose infectious diarrhea and other GI distress, so you can treat and manage your patients.

# Bacteria, virus, or parasite?

## We'll help you determine the cause

Quest Diagnostics infectious diarrhea testing options can help you arrive at a differential diagnosis efficiently, so effective treatment can begin sooner.

Quest	Quest Test Code*	CPT Code(s)**
<b>Bacteria</b>		
Campylobacter, Culture	4475	87046
Campylobacter Antigen	16302	87449
Clostridium difficile Toxin B, Qualitative Real-Time PCR	16377	87493
Clostridium difficile Toxin/GDH with Reflex to PCR	91664	87449, 87324, 87493
Escherichia coli O157, Culture and Serologic Confirmation	8631	87046
Fecal Lactoferrin, Qualitative, Stool	10156	83630
Helicobacter pylori Antigen, EIA, Stool	34838	87338
Helicobacter pylori, Urea Breath Test	14839	83013
Helicobacter pylori, Urea Breath Test, Pediatric	92491	83013
Salmonella/Shigella/Campylobacter, Culture and Shiga Toxin with Reflex to E. coli, Culture	10108	87045, 87046, 87427
Salmonella and Shigella, Culture	10019	87045
Shiga Toxins, EIA with Reflex to E. coli O157, Culture	30264	87427, 87046
Vibrio, Culture	4489	87046
Yersinia, Culture	4487	87046
<b>Viruses</b>		
Adenovirus, Qualitative Real-Time PCR	16046	87798
Norovirus, EIA, Stool	15544	87449
Norovirus RNA, Qualitative Real-Time PCR	19098	87798
Rotavirus Antigen Detection	706	87425
<b>Parasites</b>		
Cryptosporidium Antigen	90389	87328
Cryptosporidium Antigen DFA	37213	87015, 87272
Cyclospora and Isospora Examination	10018	87015, 87207
Entamoeba histolytica Antigen, EIA	34964	87337
Giardia Antigen, EIA, Stool	8625	87329
Giardia Antigen with Reflex to Ova and Parasites	17297	87329, 87177, 87209
Giardia and Cryptosporidium Antigen Panel	39480	87015, 87272, 87329
Ova and Parasites, Stool, Concentrate and Permanent Smear	681	87177, 87209
Ova and Parasites, Stool, Concentrate and Permanent Smear, 2 Specimens	6653	87177 (x2), 87209 (x2)
Ova and Parasites, Stool, Concentrate and Permanent Smear, 3 Specimens	6652	87177 (x3), 87209 (x3)

\*Test codes may vary by location. Please contact your local laboratory or go to [QuestDiagnostics.com/TestCenter](http://QuestDiagnostics.com/TestCenter) for more information.

\*\*The CPT codes provided are based on American Medical Association guidelines and are for informational purposes only. CPT coding is the sole responsibility of the billing party. Please direct any questions regarding coding to the payer being billed. Reflex tests will be performed at an additional charge.



For more information, speak with your Quest Diagnostics sales representative or visit [QuestDiagnostics.com](http://QuestDiagnostics.com)

### References

- Guerrant RL, Van Gilder T, Steiner TS, et al. Practice guidelines for the management of infectious diarrhea (IDSA guidelines). *Clin Infect Dis*. 2001;32:331-350.
- Clinical practice guidelines for *Clostridium difficile* infection in adults: 2010 update by the Society for Healthcare Epidemiology of America (SHEA) and the Infectious Diseases Society of America (IDSA). *Infect Control Hosp Epidemiol*. 2010;31(5):431-455.
- Barr W, Smith A. Acute diarrhea in adults. *Am Fam Physician*. 2014;89(3):180-189.

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