

# Syndromic Testing for Gastrointestinal Infections

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International Foundation for Gastrointestinal Disorders ([www.iffgd.org](http://www.iffgd.org))

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## What are Gastrointestinal (GI) infections?

Gastrointestinal (GI) infections, food poisoning, or gastroenteritis are common around the world. The Centers for Disease Control and Prevention (CDC) estimates that there are approximately 48 million cases in the U.S. every year. This can lead to hospitalizations and ER/office visits with a significant cost burden.

The symptoms of GI infections vary depending on the microbe causing the infection. Diarrhea, stomach pain or cramps, nausea and vomiting, loss of appetite, and fever are all common symptoms. Depending on what caused the infection, some people may even have blood in their stool. The cause of GI infections could be viruses, bacteria, fungi, or even parasites. Some bowel infections have milder symptoms and go away on their own. While others could cause severe symptoms or even be life-threatening. It's important to determine the cause of the infection to receive proper treatment.

## What are the available methods to diagnose GI tract infections?

There are several methods used to diagnose GI infections. Your healthcare provider will determine the most appropriate diagnostic method based on your symptoms, medical history, and other factors. This decision is complex and will depend on the suspected cause of the infection and the available resources. Here are some common methods of diagnosis:

- **Stool culture:** This method involves culturing a stool sample in the laboratory to identify the presence of microbes that can cause disease.
- **Stool antigen tests:** These tests detect the presence of specific antigens produced by bacteria.
- **Stool PCR tests:** Polymerase chain reaction (PCR) tests amplify and detect the genetic material (DNA or RNA) of the microbes in the stool sample.

## The Centers for Disease Control and Prevention

(CDC) is a national public health institute in the United States. It is a United States federal agency, under the Department of Health and Human Services, and is headquartered in Atlanta, Georgia.

CDC's Role:

- Detecting and responding to new and emerging health threats
- Tackling the biggest health problems causing death and disability for Americans
- Putting science and advanced technology into action to prevent disease
- Promoting healthy and safe behaviors, communities, and environment
- Developing leaders and training the public health workforce, including disease detectives
- Taking the health pulse of our nation

- **Serologic tests:** These tests detect the presence of antibodies produced by the immune system in response to infection by specific microbes.

Most of these diagnostic tests may take days to identify the exact cause of the infection, which can delay treatment. However, it is important to know the cause of the infection prior to prescribing an antibiotic because of the increasing rate of antimicrobial resistance.

## What is Syndromic Testing?

A symptom is a part of a disease that presents in the patient (example: diarrhea), while a sign is a part of a disease that a healthcare provider can detect (example: jaundice). A syndrome is a group of signs and symptoms that usually happen together. Syndromic Testing can look for a wide range of infections at the same time.

Syndromic testing could be used to find out what caused the GI infection by testing one stool sample for bacteria, viruses, and parasites at the same time. Syndromic testing can help healthcare providers choose the right treatment,

avoid unnecessary antibiotic use and improve patient outcomes.

### How is syndromic testing for GI infection performed?

Typically, a stool sample is collected from the patient. The sample is then examined for various infectious microbes, including bacteria, viruses, parasites, and fungi. Normally, test results are available within an hour, allowing healthcare providers to initiate treatment promptly.

### What are the advantages of syndromic testing for GI infections?

There are several benefits to testing for GI infections based on symptoms:

- Syndromic testing can give results within an hour.
- Finding the specific microbe causing an infection quickly and treating it immediately can improve outcomes for patients and stop the spread of infectious diseases.

### What are the downsides with GI infection syndromic testing?

Syndromic testing for GI infections could have some limitations, such as:

- False positives: Sometimes, syndromic testing will show that a person has an infection when they do not.
- Syndromic testing can only find the specific infectious agents it is designed to detect and may not be able to find all possible causes of an infection.
- Cost: When compared to traditional diagnostic tests, syndromic testing can be pricey and is not always covered by insurance.

### Conclusion

Syndromic testing for GI infections is a useful diagnostic tool that can quickly find the specific microbe causing the infection based on the symptoms shown by the patient. If you have any questions about syndromic testing for GI infections and whether this is the right test for you, please talk to your healthcare provider.

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### About IFFGD

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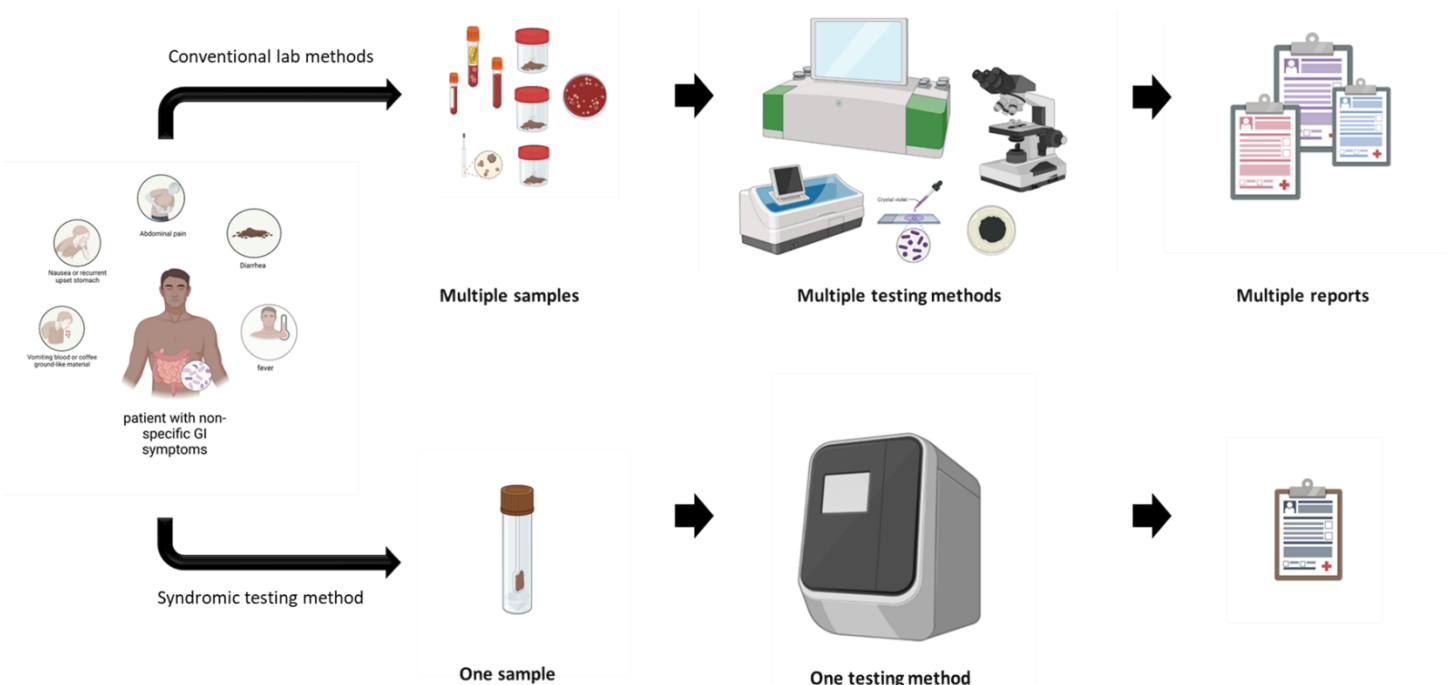
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