

DIARRHEAL DISEASES

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Acute diarrhea is one of the most commonly reported illnesses in the United States, second only to respiratory infections. Worldwide, it is the leading cause of mortality in children younger than four years old.

Definition

An abnormal looseness of the stool, changes in stool frequency, consistency, urgency and continence.

ACUTE DIARRHEA

What is Acute Diarrhea?

An increased number of stools or looser form than is customary for the patient, lasting less than 2 weeks, and often associated with abdominal symptoms such as cramping, bloating, and gas. Although often mild, acute diarrhea can lead to severe dehydration as a result of large fluid and electrolyte losses.

What causes acute diarrhea?

Acute, watery diarrhea is usually caused by a virus (viral gastroenteritis.) Medications such as antibiotics and drugs that contain magnesium products are also common offenders. Recent dietary changes can also lead to acute diarrhea. These including intake of coffee, tea, colas, dietetic foods, gums or mints that contain poorly absorbable sugars. Acute bloody diarrhea suggests a bacterial cause like *Campylobacter*, *Salmonella* or *Shigella*. Traveling to developing areas of the world can result in exposure to bacterial pathogens common in certain areas. Eating contaminated foods such as ground beef or fresh fruit can cause diarrhea due to *E.coli* 0157:H7.

Most episodes of acute diarrhea resolve quickly and without antibiotic therapy with simple dietary modifications. See a doctor if your feel ill, have bloody diarrhea, severe abdominal pain or diarrhea lasting more than 48 hours.



What tests are needed to diagnose acute diarrhea?

In patients with mild acute diarrhea, no laboratory evaluation is needed because the illness generally resolves quickly. Your doctor may perform stool cultures or parasite exams if your diarrhea is severe or bloody or if you traveled to an area where infections are common.

How is acute diarrhea treated?

It is important to take plenty of fluid and salt to avoid dehydration. Milk and dairy products should be avoided for 24 to 48 hours as they can make diarrhea worse. Initial dietary choices when refeeding should begin with soups and broth.

Anti-diarrheal drug therapy can be helpful to control severe symptoms, and includes bismuth subsalicylate and antimotility agents such as loperamide. These, however, should be avoided in people with high fever or bloody diarrhea and in children because the use of antidiarrheals can lead to complications of hemolytic uremic syndrome in cases of Shiga toxin E coli (E coli 0157:H7).

Your doctor may prescribe antibiotics if you have high fever, dysentery, or moderate to severe traveler's diarrhea.

CHRONIC DIARRHEA

Although most episodes of diarrhea are acute and completely resolve, diarrhea may persist and be associated with abdominal pain or other symptoms. If diarrhea lasts more than two weeks, we call it chronic diarrhea. It is important to notice if the diarrhea stools are bloody, oily (fatty) or watery, which can help your doctor arrive at the most likely cause of your symptoms.

What causes chronic bloody diarrhea?

Chronic bloody diarrhea is most likely due to Inflammatory Bowel Disease (IBD). These include ulcerative colitis or Crohn's disease. Pain with defecation suggests rectal inflammation. Tell your doctor if you have a family history of IBD, have unintentional weight loss, fever, abdominal cramping or decreased appetite, which might suggest a diagnosis of IBD.

Other less common causes include ischemia of the gut, infections, radiation therapy and colon cancer or polyps.



What causes chronic oily or fatty diarrhea?

Maldigestion or malabsorption syndromes are the cause of fatty stools. Tell your doctor if you experience bulky, greasy or very bad smelling stools. Chronic pancreatitis is a cause of pancreatic insufficiency, which leads to maldigestion and fatty stools. Alcohol abuse is a common cause of chronic pancreatitis in the United States. Other causes of chronic pancreatitis include cystic fibrosis, hereditary pancreatitis, trauma to the pancreas and pancreatic cancer.

Biliary tract obstruction, cholestatic liver disease, and bacterial overgrowth can also lead to maldigestion problems. Gluten sensitive enteropathy (celiac disease, celiac sprue) is the most common small bowel disease causing fat malabsorption. Additional common causes of malabsorption in the United States are other small bowel mucosal diseases or surgical resection of the small bowel. Whipple's disease, tropical sprue and Zollinger-Ellison syndrome are very uncommon conditions that can lead to malabsorption.

What causes chronic watery diarrhea?

There are many causes of watery diarrhea, including carbohydrate malabsorption such as lactose, sorbitol, and fructose intolerance, intestinal infections or Irritable Bowel Syndrome. Certain medications such as NSAIDs, antacids, antihypertensives, antibiotics and antiarrhythmics can cause diarrhea in some people.

Symptoms of abdominal bloating and excessive gas after consuming dairy products suggests lactose intolerance. This condition is more common in African-Americans and Asian-Americans. Certain soft drinks, juices, dried fruits and gums contain sorbitol and fructose, which can lead to watery diarrhea in people with sorbitol and fructose intolerance.

Intestinal infections such as giardiasis, opportunistic infections in someone with HIV (cryptosporidiosis, microsporidiosis, etc.) can cause chronic watery diarrhea. Diabetes mellitus may be associated with diarrhea due to nerve damage and bacterial overgrowth; this occurs mainly in patient's with long-standing, poorly-controlled diabetes.

Irritable Bowel Syndrome (IBS), is a condition often associated with frequent stools, alteration in bowel habits, and abdominal pain. These symptoms are key features of this syndrome, though many with IBS have constipation rather than diarrhea. Emotional or physiologic distress can worsen IBS symptoms. IBS is recognized as a motility disorder where no anatomic or organic diseases are found to account for the symptoms.



Basic Tests for Evaluation of Chronic Diarrhea

Your doctor will want to further assess etiologic factors or complications of diarrhea by obtaining several tests. These include: a blood count to look for anemia and infections, an electrolyte and kidney function panel to assess for electrolyte abnormalities and renal insufficiency, and albumin to assess your nutritional status.

A stool sample may help define the type of diarrhea. The presence of fat, occult blood, and white blood cells will help determine if a watery, inflammatory, or fatty diarrhea is present. A bacterial culture and ova/parasite studies of a stool specimen will also help determine if an infectious etiology is present.

What Radiographic and Endoscopic testing is available for evaluation of chronic diarrhea?

Radiographic studies are not routinely performed in the evaluation of chronic diarrhea, as findings seen in radiographic studies are fairly non-specific, but occasionally can be helpful. These can include an upper GI series or barium enema. Ultrasound and CT scan of the abdomen can be helpful to evaluate the pancreas or other intra-abdominal organs.

Endoscopic examination of the colon with flexible sigmoidoscopy and colonoscopy is more specific than radiographic studies in detecting the etiology of chronic diarrhea, as this allows direct examination of the bowel mucosa and the ability to obtain biopsies for microscopic evaluation as is endoscopy for evaluation of the upper GI tract. Double-balloon enteroscopy and capsule endoscopy are sometimes used to examine the mucosa of the small intestine that lies beyond the reach of conventional endoscopies.

What's the treatment of chronic diarrhea?

This depends on the etiology of the chronic diarrhea. Often, empiric treatment can be provided for symptomatic relief, when a specific diagnosis is not reached, or when a diagnosis that is not specifically treatable is reached. Whether to empirically treat with antibiotics for treatment of enteric pathogens prior to initiation of an extensive workup is the decision of the health care provider.

Antimotility agents and opiate antidiarrheal drugs are the most effective agents for the treatment of chronic diarrhea. They reduce symptoms as well as stool weight. Finally, in an effort to avoid becoming dehydrated from a chronic diarrhea process, oral hydration should be encouraged.

