

the human organism and the environment. Thus any dysfunction of the GI tract can cause significant problems with the exchange of fluids, electrolytes, and nutrients.

## Disorders of Motility

### Diarrhea

Diarrhea is a symptom that results from disorders involving digestive, absorptive, and secretory functions. Diarrhea is caused by abnormal intestinal water and electrolyte transport. Worldwide, there are an estimated 1.7 billion episodes of diarrhea each year (Walker, Rudan, Liu, et al, 2013). The incidence and morbidity of diarrhea are more prominent in low-income countries, such as areas of Asia and Africa (Walker, Rudan, Liu, et al, 2013), and among children younger than 5 years old (Liu, Johnson, Cousens, et al, 2012). In the United States, approximately 370 children younger than 5 years old die of diarrhea and dehydration each year (Esposito, Holman, Haberling, et al, 2011).

Diarrheal disturbances involve the stomach and intestines (gastroenteritis), the small intestine (enteritis), the colon (colitis), or the colon and intestines (enterocolitis). Diarrhea is classified as acute or chronic.

**Acute diarrhea** is defined as a sudden increase in frequency and a change in consistency of stools, often caused by an infectious agent in the GI tract. It may be associated with upper respiratory or urinary tract infections, antibiotic therapy, or laxative use. Acute infectious diarrhea (infectious gastroenteritis) is caused by a variety of viral, bacterial, and parasitic pathogens (Table 22-5).

**TABLE 22-5**  
**Infectious Causes of Acute Diarrhea**

Agents	Pathology	Characteristics	Comments
<b>Viral</b>			
<b>Rotavirus</b> Incubation: 48 hours Diagnosis: EIA	Fecal–oral transmission Seven groups (A to G): Most group A virus replicates in mature villus epithelial cells of small intestine,	Mild to moderate fever Vomiting followed by onset of watery stools Fever and vomiting generally abate in approximately 2	Most common cause of diarrhea in children younger than 5 years old; infants 6 to 12 months old most vulnerable; affects all ages; usually milder in children older than