

diarrhea in children 6 to 54 months old. These children have loose stools, often with undigested food particles, and diarrhea lasting longer than 2 weeks' duration. Children with CNSD grow normally and have no evidence of malnutrition, no blood in their stool, and no enteric infection. Poor dietary habits and food sensitivities have been linked to chronic diarrhea. The excessive intake of juices and artificial sweeteners such as sorbitol, which is a substance found in many commercially prepared beverages and foods, may be a factor.

Etiology

Most pathogens that cause diarrhea are spread by the fecal–oral route through contaminated food or water or are spread from person to person where there is close contact (e.g., daycare centers). Lack of clean water, crowding, poor hygiene, nutritional deficiency, and poor sanitation are major risk factors, especially for bacterial or parasitic pathogens. Infants are often more susceptible to frequent and severe bouts of diarrhea because their immune system has not been exposed to many pathogens and has not acquired protective antibodies. Worldwide, the most common causes of acute gastroenteritis are infectious agents, viruses, bacteria, and parasites.

Rotavirus is the most important cause of serious gastroenteritis among children, with 28% of all cases causing fatality ([Walker, Rudan, Liu, et al, 2013](#)). The virus is spread through the fecal–oral route or by person-to-person contact, and almost all children are infected with rotavirus at least once by 5 years old ([Yen, Tate, Patel, et al, 2011](#)). Rotavirus is the most common cause of diarrhea-associated hospitalization, with an estimated 2.3 million hospitalizations occurring worldwide in children younger than 5 years old ([Yen, Tate, Patel, et al, 2011](#)).

Salmonella, *Shigella*, and *Campylobacter* organisms are the most frequently isolated bacterial pathogens in the United States ([Scallan, Mahon, Hoekstra, et al, 2013](#)). These organisms are gram-negative bacteria and can be contracted through raw or undercooked food, contaminated food or water, or through the fecal–oral route. Among children younger than 5 years old, *Salmonella* occurs in approximately 617 out of 100,000 children; *Campylobacter* occurs in 409 out of 100,000 children; and *Shigella* occurs in 312 out of 100,000 children ([Scallan, Mahon, Hoekstra, et al, 2013](#)). (See also [Intestinal Parasitic Diseases, Chapter 6](#).)