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Gastroenteritis and its Effect Locally and Globally on General Health and its Complications

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Abstract

Gastroenteritis is a common and often self-limiting inflammation of the gastrointestinal tract, primarily affecting the stomach and intestines. It is characterized by symptoms such as diarrhea, vomiting, abdominal cramps, nausea, and sometimes fever. The condition can be caused by a variety of infectious agents including viruses (e.g., norovirus, rotavirus), bacteria (e.g., *Escherichia coli*, *Salmonella*, *Shigella*), and parasites (e.g., *Giardia lamblia*). Non-infectious causes, such as medications, toxins, and food intolerances, may also trigger gastroenteritis.

Gastroenteritis is a leading cause of morbidity worldwide, particularly in low- and middle-income countries where sanitation and access to clean water may be limited. It disproportionately affects children under five years and the elderly, who are at higher risk of dehydration and its complications. In children, rotavirus is a major causative agent, while norovirus is more common in outbreaks among adults, especially in communal settings such as nursing homes and cruise ships.

The health impact of gastroenteritis ranges from mild discomfort to severe illness requiring hospitalization. Dehydration, the most serious complication, can result in electrolyte imbalances, renal impairment, and even death if untreated. In chronic cases or repeated infections, particularly in malnourished populations, gastroenteritis may contribute to impaired growth and cognitive development in children.

Prevention strategies include improving sanitation, hand hygiene, safe food preparation, and vaccination—most notably against rotavirus. Management is primarily supportive, focusing on rehydration through oral or intravenous fluids. In some bacterial or parasitic cases, antimicrobial therapy may be indicated.

Overall, gastroenteritis remains a significant public health concern globally. Effective prevention, early recognition, and prompt management are critical to reducing its burden and preventing long-term health consequences, especially in vulnerable populations. Ongoing efforts to improve access to clean water, nutrition, and healthcare are essential in mitigating the impact of this disease.