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## Gastroenteritis - A Global Emergency

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### Short Communication

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#### ABSTRACT

Gastroenteritis affects the stomach and bowel. Early symptoms diarrhea, vomiting, and abdominal cramps. Many research workers have shown the seriousness involved in the disease. But still it is not considered by many of the people as serious diseases which require health authorities attention to prevent or to treat at its early stage. If it is left untreated it continues to become chronic disease.

### GASTROENTERITIS

Infection of the stomach and bowel is called as gastroenteritis. The human body immune system helps in improving the gastroenteritis, which fights against infection. Gastroenteritis should be treated at acute stage if left untreated it becomes chronic and highly infectious. The symptoms are diarrhea, vomiting, and abdominal cramps [1-10].

Different types of gastroenteritis are classified as follows:

1. Viral gastroenteritis
2. Bacterial gastroenteritis
3. Amebic dysentery
4. Bacillary dysentery

The common causes are many; few among them are Norovirus, Bacterial gastroenteritis (*Helicobacter pylori* bacteria), deficiency of vitamin B12, lifestyle (Acidified drinks and spicy food items) and hygiene issues. This can be better cured using home remedies. We can prevent gastroenteritis by making minor modifications in our lifestyle [11-20].

Rare types of gastroenteritis are irritable bowel syndrome, gallstones Crohn's disease, ulcerative colitis, pancreatitis, celiac disease, inflammatory bowel disease and gallstones.

Gastroenteritis related secondarily to other disease condition few among them are stomach conditions, digestive diseases, digestive conditions, intestine conditions, abdominal conditions, child health conditions and conditions involving a foreign body or organism. There are more chances of irritable bowel syndrome after bacterial gastroenteritis.

Including proper diet and maintaining hygienic conditions prevents gastroenteritis. Liquid diet prevents the attack of gastroenteritis during the period of diet [21-50].

Medicinal plants which are believed to have action against gastroenteritis are Chamomile (*Matricaria chamomilla*), Asparagus (*Asparagus racemosa*), Broccoli, Ginger, *Zingiber officinale*, Tamarind, Coconut water, Probiotics, Ajwain or carom seeds, Fennel (*Fenniculum vulgare*), Lemongrass, Amla, Yoghurt, *Glycyrrhiza glabra*, Rhubarb (*Rheum emodi*), *E. officinalis*, Cardamom (*E. cardamomum*), Sandalwood (*S. album*), Liquorice, Rice, Potato, Marigold, Vegetable juice, Sprague powder, Water and Lemon (**Table 1**) [1-70].

Some probiotics which help in improvement of gastroenteritis are *E. coli* 1917, Nissle *L. salivarius*, UCC4331 Lactobacillus and *Bifidobacterium longum*, *Saccharomyces boulardii*. In **Table 1** chemical constituents of medicinal plants were summarized which has pharmacological action against gastroenteritis. The medicinal herbs were proved to have the pharmacological action against gastroenteritis, but few plants are still under the level of preclinical research. Based on traditional medicine most of the plants are used to treat gastroenteritis. All the

countries have different diet style and lifestyle; gastroenteritis is majorly observed with people who have fast life style. In present situation to keep up with the current generation, we need to follow different food timings and this majorly affects the gastrointestinal [55-80].

Various ways to manage gastroenteritis in children are methods of rehydration, refeeding after rehydration, and the use of antidiarrheal agents. Immune electron microscopy in an infectious stool filtrate is used to identify acute infectious nonbacterial gastroenteritis.

In present situation awareness of ayurvedic medicine has increased and this has led to the usage of medicinal herbs in the treatment of gastroenteritis [81-101].

Many research works are going on gastroenteritis few among them are complete genome analysis of a rabbit rotavirus causing gastroenteritis in a human infant; nitric oxide production in acute gastroenteritis in Indian children; A non-enteric adenovirus A12 gastroenteritis outbreak in Rio de Janeiro, Brazil; Determination of Annual Incidence, Age Specific Incidence Rate and Risk of Rotavirus Gastroenteritis among Children in Iran; NetF-positive *Clostridium perfringens* in neonatal foal necrotising enteritis in Kentucky; A patient with typhoid fever, *Giardia lamblia* gastroenteritis and hepatitis E; Monthly Distribution of Norovirus and Sapovirus in viral gastroenteritis in Thailand [1-101].

**Table 1:** Medicinal plants and its chemical constituents.

Medicinal Plant	Chemical Constituents
Chamomile	Bisabolol, chamazulene, apigenin and luteolin
Asparagus	Sarsasapogenin and shatavarin I-IV, 8-methoxy-5,6,4'-trihydroxyisoflavone-7-O- $\beta$ -D-glucopyranoside, curillins G and H
Broccoli	Dithiolthiones, glucoraphanin, indole-3-carbinol, glucosinolates, s-methyl cysteine sulfoxide
Ginger ( <i>Zingiber officinale</i> )	volatile oils, ginger oil, terpene are sesquiterpene hydrocarbons and phenolic compounds, gingerols, Zingerone
Tamarind	High fatty acid and polyphenol, sugar, tartaric, citric and malic acids, and potassium bitartrate, pectin, gum
Coconut water	indole-3-acetic acid, primary auxin, Cytokinins, Gibberellins, Salicylic acid
Ajwain or carom seeds	Thymol, oleic acid, linoleic acid, p-cymene and gamma-terpinene
Fennel ( <i>Fenneliculum vulgare</i> )	Foeniculum vulgare , Apiaceae, Essential oil composition, methyl chavicol, (E)-anethole, fenchone, limonene and $\alpha$ -pinene
Lemongrass	z-citral, borneol, estragole, methyleugenol and geranyl acetate

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