

think! WELLNESS

MIND.BODY.SOUL

IQ, INFECTION QUOTIENT

▪ **BRAIN DRAIN** Frequent stomach infections in early childhood can cause malnutrition and lower IQ

Sanchita Sharma

When it comes to infection control, forewarned is not always forearmed. Now that summer is here and countless bacteria, viruses, fungi and parasites have laid siege on everything we eat or drink, scores of people, especially children, are falling prey to a gaggle of gastroenteritis-causing viruses, bacteria and parasites.

But a little known fact is that stomach infections cause more than just inconvenient runnies. Frequent diarrhoeal infections during the first two years of life impair brain development, shows more than one study.

A longitudinal study of Peruvian children over nine years showed that after adjusting for socioeconomic, schooling and other significant factors, malnutrition and gastrointestinal infection in early childhood lowered brain function in later life, reported *The Lancet*.

Diarrhoeal infections further lower immunity, exposing malnourished children to host of secondary infections, such as tuberculosis and pneumonia.

"Enteric infection is the leading cause of malnutrition of diarrhoea among children aged between one and five years. If its most common symptom, severe dehydration, is not corrected properly, it causes to malnutrition and impaired cognitive development," Dr

Jaydeep Mazumdar, research scientist at National Institute of Cholera and Enteric Diseases, Kolkata.

THREAT PERCEPTION

Every year, over 200 million children under 5 years in developing countries fail to reach their full cognitive

potential, says the World Health Organisation's Commission on the Social Determinants of Health. In India, 46% children are underweight, 38% are stunted and 70% are anaemic, shows data from the National Family Health Survey-3 (NFHS-3), the country's largest survey to provide information on population, health and nutrition from 29 states.

The symptoms for most are fairly similar and include diarrhoea, with or without fever, headache, vomiting and abdominal pain.

THE SOLUTION IS IN YOUR HANDS

Simply washing your hands frequently – use of water and soap or handwash – can inactivate or remove bacteria, viruses and parasites from contaminated hands and lower infection risk substantially.



Always wash your hands...

Before

Before & After



Handling food or eating



Handling sterilised equipment or preparing a feed



Dressing a wound



Giving or applying medication

After



Handling raw food (meat, poultry, fish, eggs)



Using the toilet (or assisting a child to do so)



Changing a nappy



Touching animals or their equipment



Touching blood or body fluids (after coughing, sneezing)



Touching a contaminated surface (used tissue, bin)



Outdoor activities (gardening) or public transport



Using shared desktops or office equipment

Every day, we are under attack from a host of infecting agents

Enteric infections caused by bacteria, viruses and parasites can lead to malnutrition and, if not treated, develop into a vicious cycle of under-nutrition and chronic infection, where the gut's capacity to absorb nutrients is lowered.

BACTERIA

- Enteropathogenic E. coli
- Enterococci
- Shigella dysenteriae
- Salmonella typhi
- Vibrio cholerae
- Campylobacter jejuni
- Staphylococcus aureus
- Yersinia enterocolitica
- Clostridium difficile

PROTOZOA

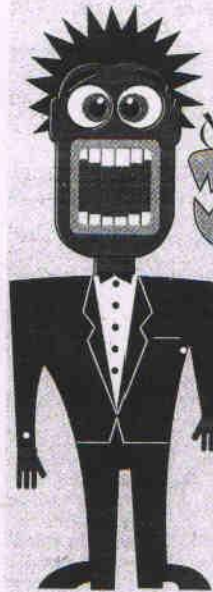
- Giardia lamblia
- Entamoeba histolytica
- Cryptosporidium parvum
- Cyclospora cayentensis

WORMS

- Ascaris lumbricoides
- Enterobius vermicularis
- Trichuris trichiura
- Taenia saginata
- Hookworms (Ancylostoma duodenale & Necator americanus)

VIRUSES

- Rotaviruses
- Noroviruses
- Adenoviruses
- Astroviruses
- Bocaviruses
- Toroviruses
- Coronaviruses



Graphic: PRASHANT CHAUDHARY

and typhoid.

While boiling drinking water for 5 minutes makes it safe, you must also

dry, especially after a swim.

LOWERING RISK

years, reports the *American Journal of Public Health*.

"Most children are not taught health