

# Diarrhea

### A common health problem in infants and children

Leading to 5 Lakh deaths globally, around 1.2 lakh of them from India.<sup>1</sup>



Affecting ~4/10 of Indian children.<sup>2,\$,\*</sup>

#### Diarrhea and gut health status



Digestibility issues<sup>4</sup>

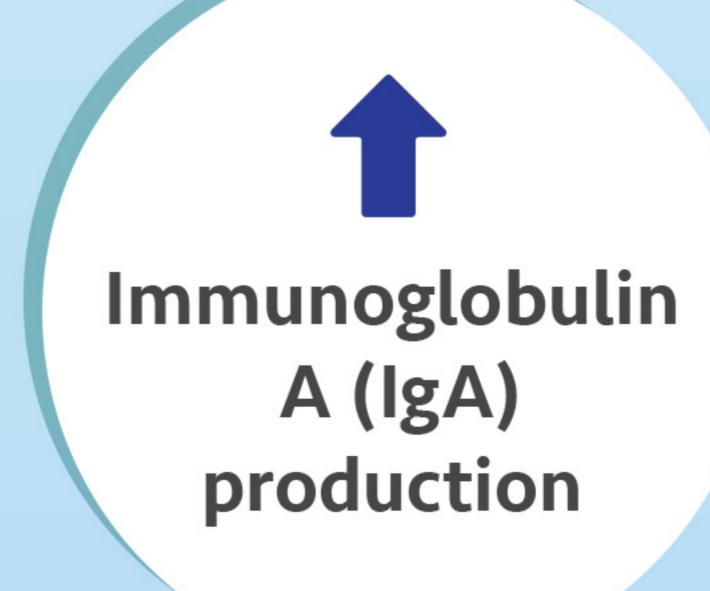
Long-term growth faltering due to nutrient deficiency<sup>5,6</sup>

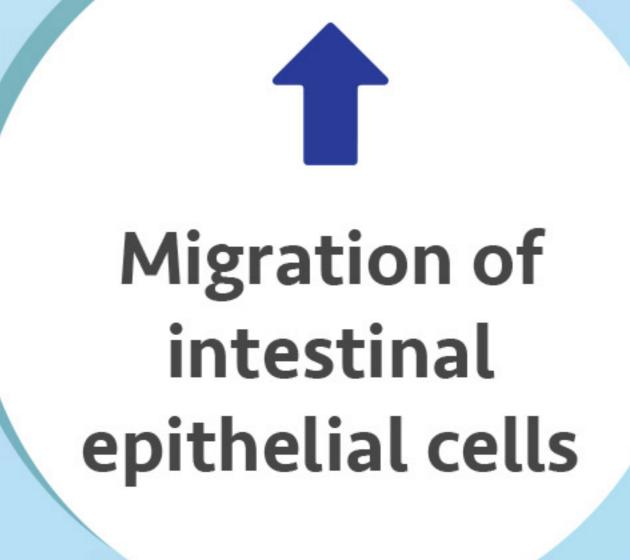


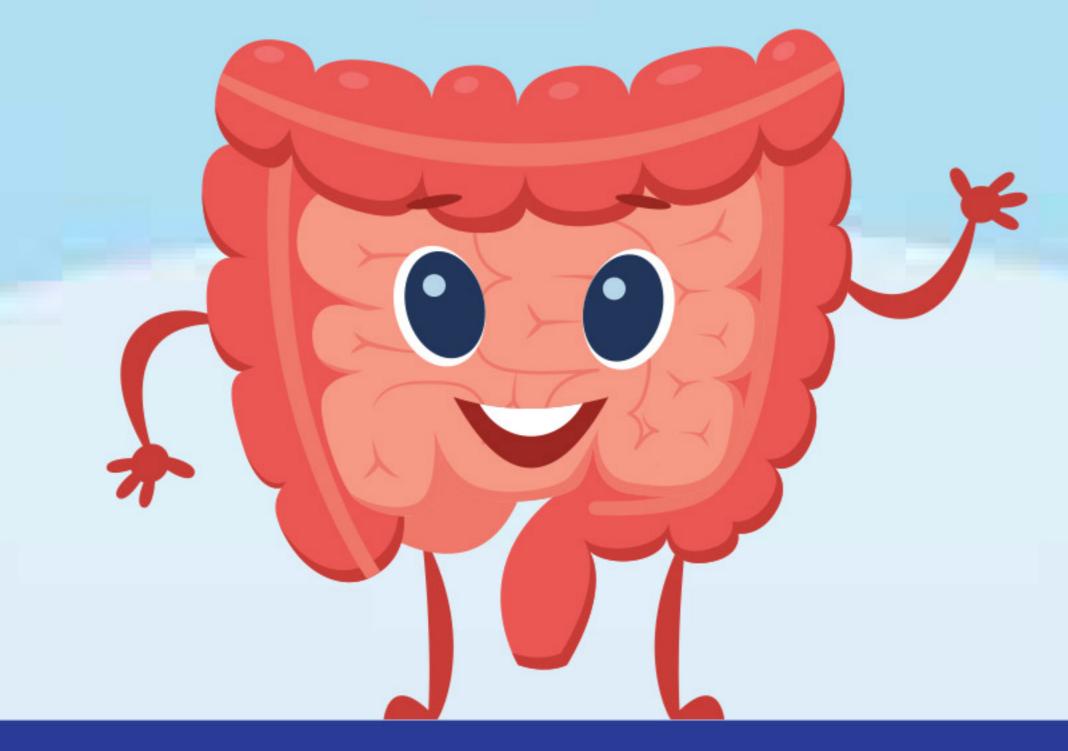
Troublesome symptoms like stomach ache, bloating^,7,8

## Restoration of GI tract requires<sup>9,10</sup>









Gut benefits of

## Casein in diarrhea

Digestibility

High vs. soy protein<sup>11,##</sup>

Influence on gut

Mucus, IgA production and cell migration<sup>9,10</sup>

Empties slowly from stomach leading to a slow and prolonged appearance of amino acids in the blood 12

Long-term benefits

Stimulates muscle protein synthesis in turn helps to overcome weight loss due to malnutrition<sup>13</sup>

GI: Gastro Intestinal

§ Time-series cross-sectional study was conducted from January to December 2018 among 553 under-five children to assess seasonal variation of diarrheal diseases and its association with the drinking water quality in a resettlement colony of Delhi. The prevalence of diarrhea was 40.7% and was highest during the rainy season (67.6%)2 \*<5 years of age2 ^bloating, stomach ache and flatulence.7,8 #relative to baseline (after washout of dairy products)12,## Digestibility rate was highest for formulations with a higher proportion of caseins (formulation with whey: casein ratio -2:8) vs. soy protein ^^An animal study conducted in young male Sprague-Dawley rats showed that casein protein exhibits a stronger effect on bone architecture vs. Whey protein. Casein-re-fed animals having a greater bone cortical thickness in both the short and long term in Greater bone strength in rats re-fed casein.15

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