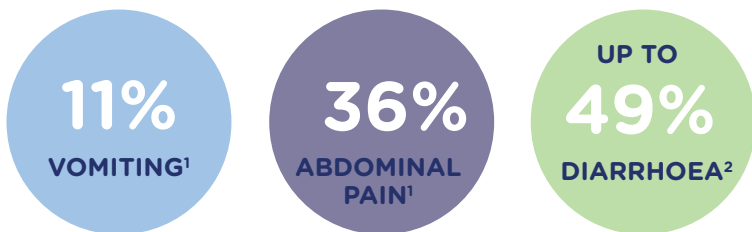


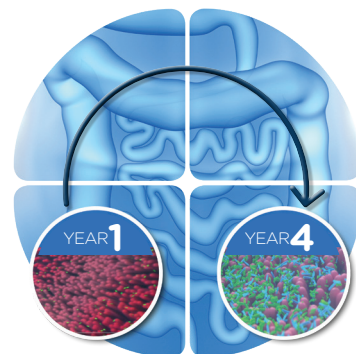
# PROBIOTIC USE WITH ANTIBIOTICS IN KIDS AND ADULTS

Antibiotics are associated with side effects<sup>1-3</sup>

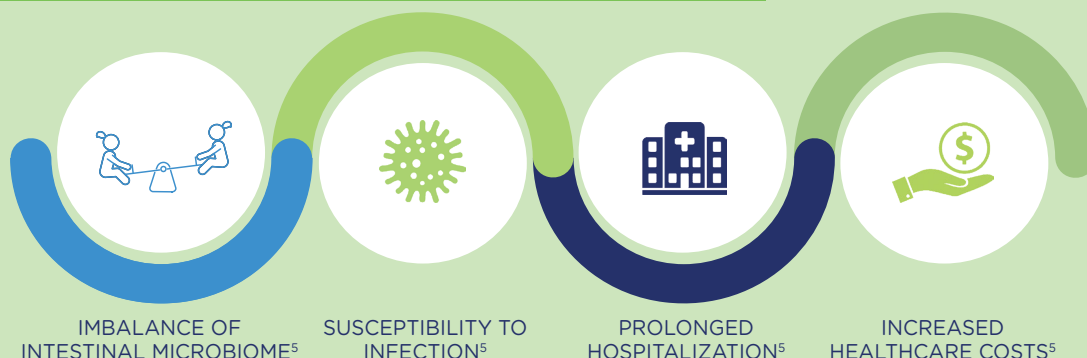


Antibiotic Associated Diarrhoea can occur **during** (early onset) or **2 to 6 weeks after** (late onset) antibiotic treatment<sup>3</sup>

Recovery of microbiota may take up to 4 years after antibiotic exposure<sup>4</sup>



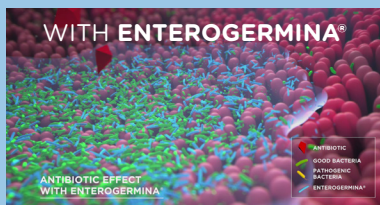
Antibiotic associated diarrhoea may effect patients' quality of life<sup>5</sup>



Probiotics rebalance the microbial flora under antibiotic attack<sup>6</sup>



Microbial flora under antibiotic attack



Microbial flora under antibiotic attack

Resistant to most commonly prescribed antibiotics with no transferability of resistance<sup>\*7,8</sup>



CEPHALOSPORIN ✓

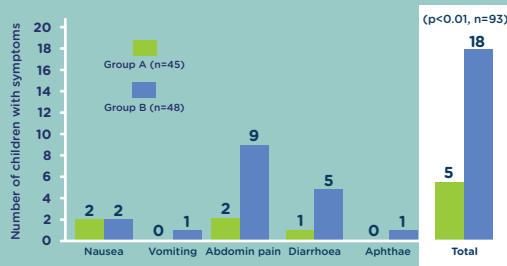
MACROLIDES ✓

PENICILLIN ✓

Resistant ✓ = Yes

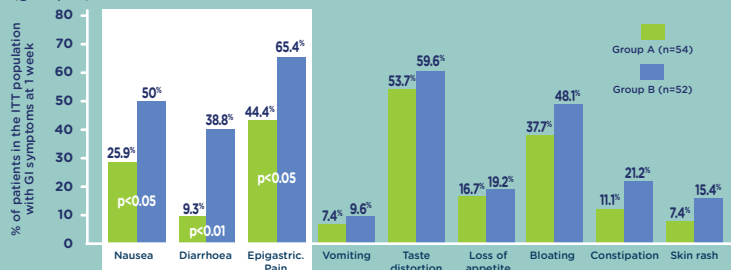
Enterogermina<sup>®</sup> *Bacillus clausii* prevents antibiotic-associated digestive side effects in kids and adults<sup>9,10</sup>

Incidence of GI symptoms in children treated with antibiotics and *Bacillus clausii* (formerly *B. subtilis*) (A) and antibiotics alone (B)<sup>11</sup>



Enterogermina<sup>®</sup> has a favourable safety profile and excellent tolerability approved with clinical usage<sup>12</sup>

Frequency of GI symptoms at one week in adults treated with triple antibiotic therapy (amoxicillin, clarithromycin & rabeprazole) and *Bacillus clausii* (group A) or placebo (group B)<sup>12</sup>



Posology



Once-daily dose  
in convenient liquid format<sup>9,10</sup>

Enterogermina<sup>®</sup>  
BACILLUS CLAUSII  
WORLD'S N° 1 PROBIOTIC<sup>13</sup>

\* Unique 4-strain combination ensures broad antibiotic resistance with no risk of transferability to other bacteria  
 1. McFarland LV *et al.* Comparison of pediatric and adult antibiotic-associated diarrhea and *Clostridium difficile* infections. *World J Gastroenterol.* 2016; 22: 3078-3104. 2. Cai J *et al.* Comparative efficacy and tolerability of probiotics for antibiotic-associated diarrhea: Systematic review with network meta-analysis. *UEG* 2018;6:169-80. 3. Guarino A *et al.* European Society for Pediatric Gastroenterology, Hepatology, and Nutrition/European Society for Pediatric Infectious Diseases Evidence-Based Guidelines for the Management of Acute Gastroenteritis in Children in Europe: Update 2014. *J Pediatr Gastroenterol Nutr.* 2014;59:132-152 4. Lange K *et al.* Effects of Antibiotics on Gut Microbiota. *Dig Dis* 2016;34:260-268. 5. Agamenone V *et al.* A practical guide for probiotics applied to the case of antibiotic-associated diarrhea in The Netherlands. *BMC Gastroenterol.* 2018;18:10. 6. Benoni G *et al.* Antibiotic administration and oral bacterial therapy in infants. *Chemioterapia Vol III, N° 5* 1984. 7. Abbrescia A. *et al.* Antibiotic Sensitivity of *Bacillus clausii* Strains in Commercial Preparation. *Clinical Immunology, Endocrine & Metabolic Drugs* 2014; 1:102-110. 8. Lopetuso LR. *Bacillus clausii* and gut homeostasis: state of the art and future perspectives. *Expert Rev Gastroenterol Hepatol.* 2016;10:943-8. 9. Enterogermina SmPC 2 billion 10. Enterogermina SmPC 4 billion 11. Puddu M *et al.* Clinical experience with *Bacillus subtilis* in children treated with antibiotics *Pediatrica Internazionale (International paediatrics)* Issue 6/1980. 12. Nista EC *et al.* *Bacillus clausii* therapy to reduce side-effects of anti-*Helicobacter pylori* treatment: randomized, double-blind, placebo controlled trial. *Aliment Pharmacol Ther* 2004;20:1181-88. 13. Nicholas Hall & Company DB6 OTC probiotic by volume April 2019.