

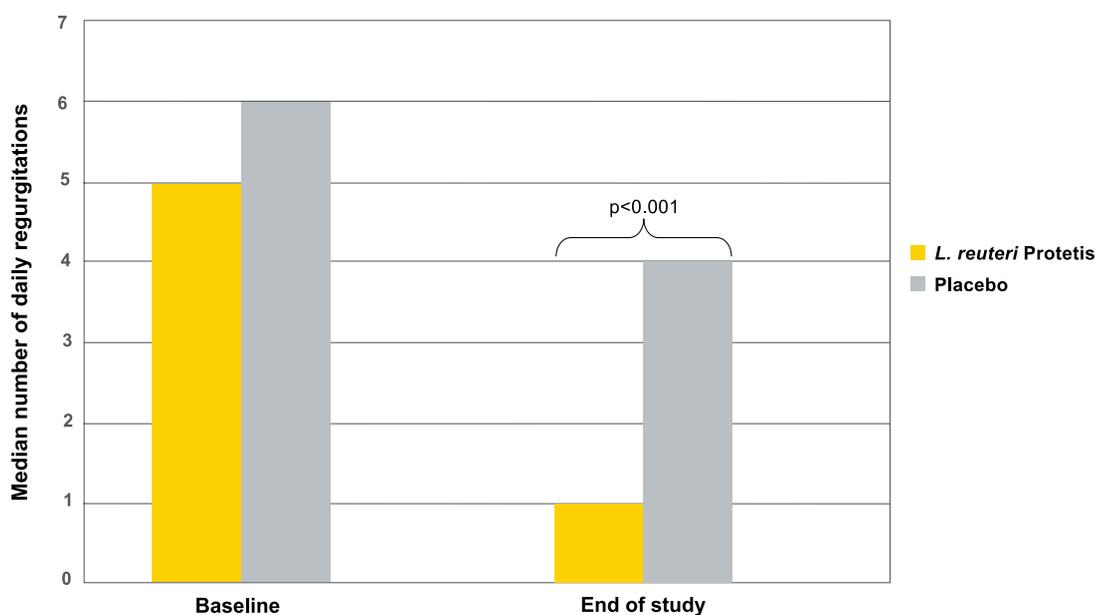
***Lactobacillus reuteri* Protectis reduced regurgitation and improved stomach emptying in infants**

This trial investigated the effects of a probiotic on the frequency of regurgitation and gastric emptying time in infants younger than four months with functional gastroesophageal reflux (GER). In the double-blind, placebo-controlled, parallel-group trial 42 formula-fed infants were consecutively randomised to supplementation with either *L. reuteri* Protectis (DSM 17938, 1×10^8 CFU), in the form of oil suspension, or placebo once daily for 30 days. 34 infants completed the study, 19 infants receiving probiotics and 15 placebo.

The number of episodes of regurgitation were recorded by the parents each day. Gastric emptying time was recorded using real-time ultrasound at baseline and at the end of the study. The gastric emptying rate was expressed as percent reduction in antral cross-sectional area at time 0 to 120 minutes after meal ingestion. The change (delta) in gastric emptying rate was calculated as the difference in the percentage gastric emptying rate values before and after the intervention.

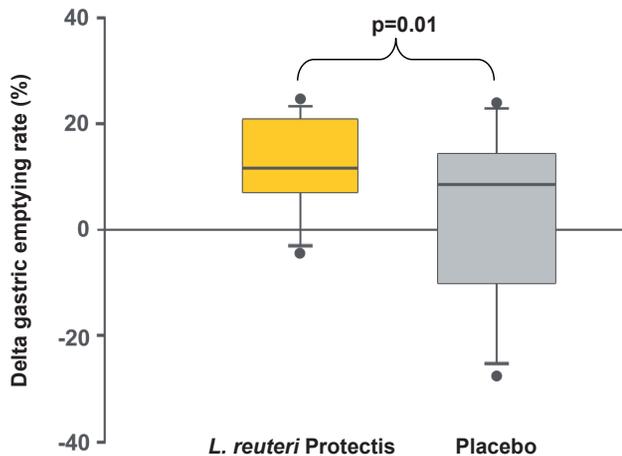
In the group supplemented with *L. reuteri* Protectis the median number of regurgitation episodes per day was reduced by 80 % compared to 33 % in the placebo group. During the last week of supplementation episodes of regurgitation were 75 % fewer in the probiotic group compared to placebo ($p < 0.001$). Median fasting antral area was significantly reduced and the delta in gastric emptying rate was significantly increased (both $p = 0.01$) compared to placebo. In the total group of subjects there was a positive correlation between the frequency of regurgitation and the basal antral area ($r = 0.53$, $p = 0.004$).

***L. reuteri* Protectis reduced regurgitation by 80 percent**



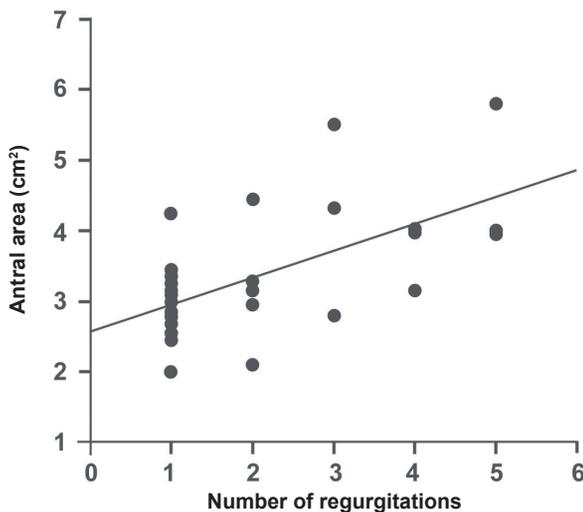
In infants with functional gastroesophageal reflux (GER) supplementation with *L. reuteri* Protectis significantly reduced the median number of daily episodes of regurgitation ($p < 0.001$) compared to placebo.

Significantly increased gastric emptying rate



The emptying of the stomach was recorded at baseline and at the end of the intervention period. In each infant, the gastric emptying rate was expressed as percentage reduction in antral cross-sectional area from time 0 to 120 minutes after meal ingestion. The change (delta) in gastric emptying rate was calculated as the difference in the percentage gastric emptying rate values before and after the intervention. Statistical analysis using the Mann-Whitney rank sum test showed a significant difference between the groups ($p=0.01$).

More efficient stomach emptying correlated to fewer regurgitations



At the end of the intervention period a positive correlation between fasting antral area and frequency of regurgitation was shown for the total group of infants (the number of regurgitations corresponded to the episodes counted on the day of recording gastric emptying). Spearman correlation test: $r=0.53$, $p=0.004$.

REFERENCE

Indrio F, Riezzo G, Raimondi F, Bisceglia M, Filannino A, Cavallo L, Francavilla R. (2010). *Lactobacillus reuteri* accelerates gastric emptying and improves regurgitation in infants. European Journal of Clinical Investigation, published online 26 November, doi:10.1111/j.1365-2362.2010.02425.x

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