STUDY HIGHLIGHTS
Functional abdominal pain in children

Use of probiotics in the treatment of functional abdominal pain in children – systematic review and meta-analysis

Trivić I, Niseteo T, Jadrešin O, Hojsak I. (2020). European journal of pediatrics, doi: 10.1007/s00431-020-03809-y

Demonstrates reduced pain intensity and increased number of days without pain with *L. reuteri* Protectis in children sufferering from FAP

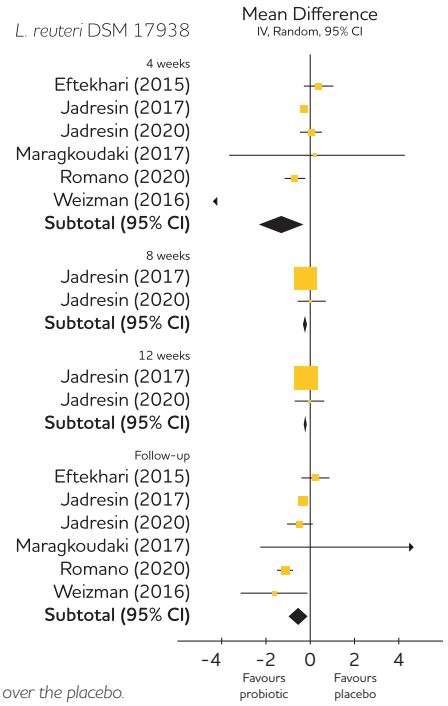
Authors' conclusion

Based on the fact that the primary outcome was not reached, no firm conclusions can be drawn from the meta-analysis. However, the review and meta-analysis suggest that *L. reuteri* DSM 17938 can be effective in reducing the pain intensity and increasing the number of days without pain in children suffering from FAP.

The dose associated with the effect was at least 10^8 CFU/day and was associated with more than 4 weeks probiotic regimes.

No significant benefit was observed for LGG in the treatment of FAP.

Decreased pain intensity with long term use



Forrest plot modified from Trivic, 2020

The boxes show the effect estimates from the single studies, and the diamond shows the pooled result. The vertical line is the line of no effect. The results to the left of the vertical line favour the intervention over the placebo.

Conclusion

- Complete resolvement of symptoms in children with FAP was not reached
- *L. reuteri* DSM 17938 was effective in reducing pain intensity and increasing the number of days without pain in children suffering from FAP
- No effect of LGG in the treatment of FAP
- Further studies investigating specific probiotic strains and their combinations in the treatment of FAP are needed

Further reading

- Weizman, Z., Abu-Abed, J., & Binsztok, M. (2016). *Lactobacillus reuteri* DSM 17938 for the Management of Functional Abdominal Pain in Childhood: A Randomized, Double-Blind, Placebo-Controlled Trial. The Journal of pediatrics, 174, 160–164.e1. https://doi.org/10.1016/j.jpeds.2016.04.003
- Maragkoudaki, M., Chouliaras, G., Orel, R., Horvath, A., Szajewska, H., & Papadopoulou, A. (2017). *Lactobacillus reuteri* DSM 17938 and a placebo both significantly reduced symptoms in children with functional abdominal pain. Acta paediatrica (Oslo, Norway : 1992), 106(11), 1857–1862. https://doi.org/10.1111/apa.13992
- Jadrešin, O., Hojsak, I., Mišak, Z., Kekez, A. J., Trbojević, T., Ivković, L., & Kolaček, S. (2017). *Lactobacillus reuteri* DSM 17938 in the Treatment of Functional Abdominal Pain in Children: RCT Study. Journal of pediatric gastroenterology and nutrition, 64(6), 925–929.
- Jadrešin, O., Sila, S., Trivić, I., Mišak, Z., Kolaček, S., & Hojsak, I. (2020). *Lactobacillus reuteri* DSM 17938 is effective in the treatment of functional abdominal pain in children: Results of the double-blind randomized study. Clinical nutrition (Edinburgh, Scotland), S0261-5614(20)30190-4. Advance online publication. https://doi.org/10.1016/j.clnu.2020.04.019

October 2020

BioGaia AB, Kungsbroplan 3, Box 3242, SE-103 64 Stockholm, Sweden, +46 8 555 293 00, biogaia.com

BioGaia®
Probiotics grounded in evolution
Driven by science