

Akkermansia muciniphila

Akkermansia muciniphila is one of the many genus of bacteria that makes up the human gut mucosa microbiome. Making up about 1-5 % of the total gut microbiome, it plays a role in maintaining the overall health of the gut. Akkermansia specializes in breaking down mucins into short chain fatty acids, which are glycoproteins that form the protective mucosal layer in the gut. In this sense, Akkermansia is beneficial to us in maintaining good gut mucosal turnover rate, providing food to our friendly bacteria in the form of short chain fatty acids, and promoting positive weight and triglyceride management.

It is important to note that although Akkermansia was discovered in 2004, only recently has the spotlight been cast on this friendly bacterium. New data suggests equivalent efficacy to Lactobacillus/Bifido blends, such as Floragen™, in A1C and LDL cholesterol improvement, and superior improvement in Triglycerides and weight loss. Akkermansia has also demonstrated a positive impact on “Leaky Gut” syndrome, but like most of the claims associated with Akkermanisa, more data is required to provide solid standing for these claims of benefit.

Because Akkermansia exists and thrives in the gut mucosal lining, it cannot be found or supplemented naturally through food sources. With that being said, “Ecosystem analogy” suggests having an active life, healthy relationship to sleep, and a diet diverse in fruits and vegetables to feed the other friendly bacteria that work alongside Akkermansia, which inadvertently increase the levels of Akkermansia. “Ecosystem analogy”

Akkermansia and metabolic health

As a stimulant to a fasting hormone, GLP-1, Akkermansia shows potential aide in the management of:

- Diabetes (blood sugar and A1C%)
- Weight loss
- Triglyceride management

Akkermansia and Gut Health

- Leaky gut syndrome (tight cell junctions)
- Irritable Bowel Disease (IBD) with patient levels of Akkermansia known to be low in cell count.

Available formulations of Akkermansia and Combination Recommendations

Products:

- MucT™ is a once daily Pasteurized *Akkermansia muciniphila* supplement available via “The Akkermansia Company”

- Akkermansia from “Codeage” includes prebiotics which help feed the bacteria and promote cell number growth.

Benefits in 1-3 months, as studies thus far have recorded, is a reasonable check point for someone to determine if Akkermansia is right for them. Side effects of Akkermansia may include an exacerbation of IBS/IBD due to excessive mucosal line thinning which may pose a risk for increased inflammation and opportunistic infections if too much Akkermansia is taken.

Although current knowledge of Akkermansia and its benefits have yet to be fully defined, patients are still welcome to trial this potentially helpful probiotic. Available products exist in both the live and pasteurized form. The pasteurized form may be more beneficial as this form is more stable than the live product when it passes through stomach acid. Other forms available may be packaged with prebiotics or along with other helpful “gut bugs” such as Bifidobacterium or Lactobacillus

Resources:

Cani, P. D., Depommier, C., Derrien, M., & Everard, A. (2020). Akkermansia muciniphila: A newcomer in the human gut microbiota. *American Journal of Physiology-Endocrinology and Metabolism*, 318(4), E480–E491. <https://doi.org/10.1152/ajpendo.00425.2019>

Codeage. (n.d.). *Akkermansia muciniphila probiotics synbiotic supplement*. Retrieved February 5, 2025, from <https://www.codeage.com/products/akkermansia-muciniphila-probiotics-synbiotic-supplement>

The Akkermansia Company. (n.d.). *Homepage*. Retrieved February 5, 2025, from <https://www.theakkermansiacompany.com/>

YouTube. (2023, February 5). *Understanding gut microbiota: The role of Akkermansia* [Video]. YouTube. <https://www.youtube.com/watch?v=c656V9omekw>

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