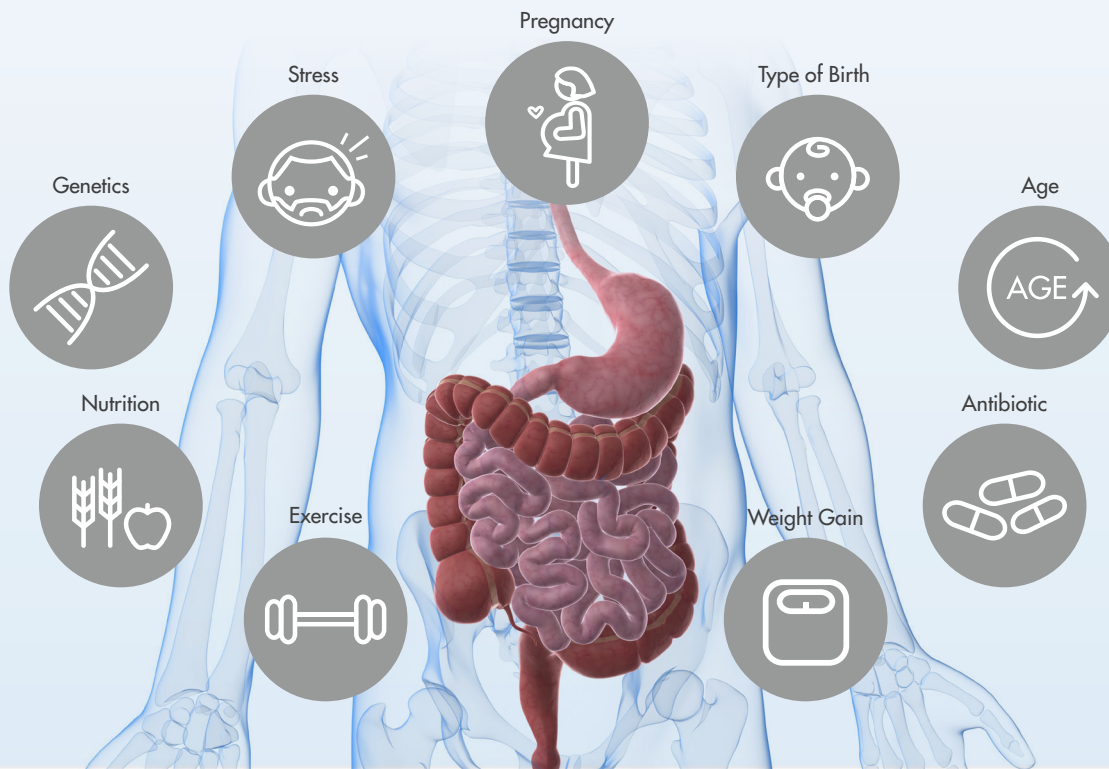


LOOKING FOR A COMPETITIVE EDGE?

PROBIOTICS LINKED TO EXERCISE PERFORMANCE

FACTORS INFLUENCING GUT MICROBIOTA



Over the years, we have learned what we do or what we are exposed to also influences our gut microbiota. Gut microbiota can influence a number of health factors: genetics, stress, exercise, nutrition, age and more. As ongoing research gains interest and momentum, there are many reasons to consume probiotic and prebiotic supplements.

WHAT IS KNOWN ABOUT GUT MICROBES AND HEALTH CONDITIONS?

1. An altered gut microbiota has been associated with a number of unhealthy conditions and syndromes.
2. **Diet type** affects the various microbiota including obesity.¹ Higher-quality diets like Mediterranean and South Beach are rich in vegetables, fruits, unprocessed grains, fish, and seafood are considered better for you, while “Western” type diets (fried, breaded and processed foods) are bad for your waistline.
3. The gut microbiota needs to have a variety of bacteria, because loss of variety has been linked to an increasing number of conditions such as behavioral disorders, gastrointestinal conditions, and immune and allergy disturbances. Obesity and overweight influences bring on certain associated inflammatory and metabolic disorders.¹

EXERCISE REALLY DOES INCREASE VARIOUS GUT BACTERIA

Hot off the newswire: exercise has been confirmed to increase gut microbial diversity in humans. Increasing gut microbe diversity refers to having a large variety of types of bacteria in the gut. This seems to be an important factor in the relationship between supporting a healthier immune system and better metabolic factors.¹ Many factors influence the microbes that inhabit your gut, and it is interplay of these that make your gut biome unique and hopefully healthy. New research is shedding light on these relationships.¹



THE LINK BETWEEN EXERCISE PERFORMANCE AND DIET

Athletes undertaking sporting events and elite performers were found to rely on different diets than the average person. In the study, rugby players and non-athletes were evaluated. The rugby players were compared to non-athletes with both a low and high body mass index (BMI) to observe possible differences. It was found that the rugby players consumed higher quantities of calories, protein, fat, carbohydrates, sugar and saturated fat per day than the non-athletic group.¹

While “meat and meat products” were the top contributors of dietary protein across all groups, supplements were the second highest (15 percent) contributor to protein in athletes, but did not add considerably to protein consumption in normal groups.¹

Protein accounted for considerably more of the total energy intake (22 percent) of athletes than others.¹ The largest difference in athletes vs. non-athlete groups showed athletes ate more fruits and vegetables, while non-athlete groups ate more snacks.¹

A strong correlation was found between the protein consumption and the microbial diversity as their gut microbes were analyzed. Although research is new in the area of exercise performance and probiotic and prebiotic consumption, it is showing that differences exist.¹

THE LINK BETWEEN ENDURANCE EXERCISE AND PROBIOTICS

A recent study by Mach and Fuster-Botella analyzed 18 studies and concluded that probiotics may help with endurance exercise.² An ergogenic role is anything that gives you a mental or physical edge while exercising or competing. Although the researchers do not specifically identify an ergogenic role of probiotic therapy, the studies show signs of how probiotics enhance immune function, neutralize free radicals and normalize gut mucosal permeability, “which might improve performance in athletes undergoing intense physical training. Thus, probiotic supplementation could act as an indirect ergogenic aid.”²

ATHLETES AND NON-ATHLETES CAN BENEFIT FROM DIGESTIVE+++

DIGESTIVE+++ contains the probiotic *Lactobacillus** sporengens, (now called *Bacillus coagulans*). It was renamed by the biologists because it is a spore forming *Lactobacillus* bacteria. It survives digestion and storage conditions optimally, so when you consume the caplets they're viable and make it through your digestive tract to positively influence the microbial flora in your gut. Prebiotics in DIGESTIVE+++ have been shown to support *Bifidobacteria*** which is beneficial bacteria. When your gut is inhabited by good microbes it competitively inhibits bad bacteria.

Laminine® provides a source of easily digestible amino acids and proteins in addition to its unique categories of growth and cell stimulating factors from the unique LifePharm egg (LFAE). Supplementing with amino acids and easily assimilated proteins as found in the Laminine formula have numerous functions in the body, one being to help build muscle mass especially when consumed around the workout time.

Whether you're an athlete or a non-athlete, adding DIGESTIVE+++ and Laminine to your regimen could rev up your exercise endurance and improve your general health.



Learn more about DIGESTIVE+++

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

DEFINITIONS

**Lactobacillus*: bacterium that produces lactic acid from the fermentation of carbohydrates.

***Bifidobacterium*: a healthy group of gut bacteria that normally live in the intestines.

REFERENCES

1. Clarke S, Murphy EF, O'Sullivan, Lucey AJ, Humphreys M et al. Exercise and associated dietary extremes impact on gut microbial diversity. *Gut* 2014;63;1913-1920.
2. Menayang A. Endurance exercise and gut Microbiota? A review explores the relationship. www.nutraingredients-usa.com