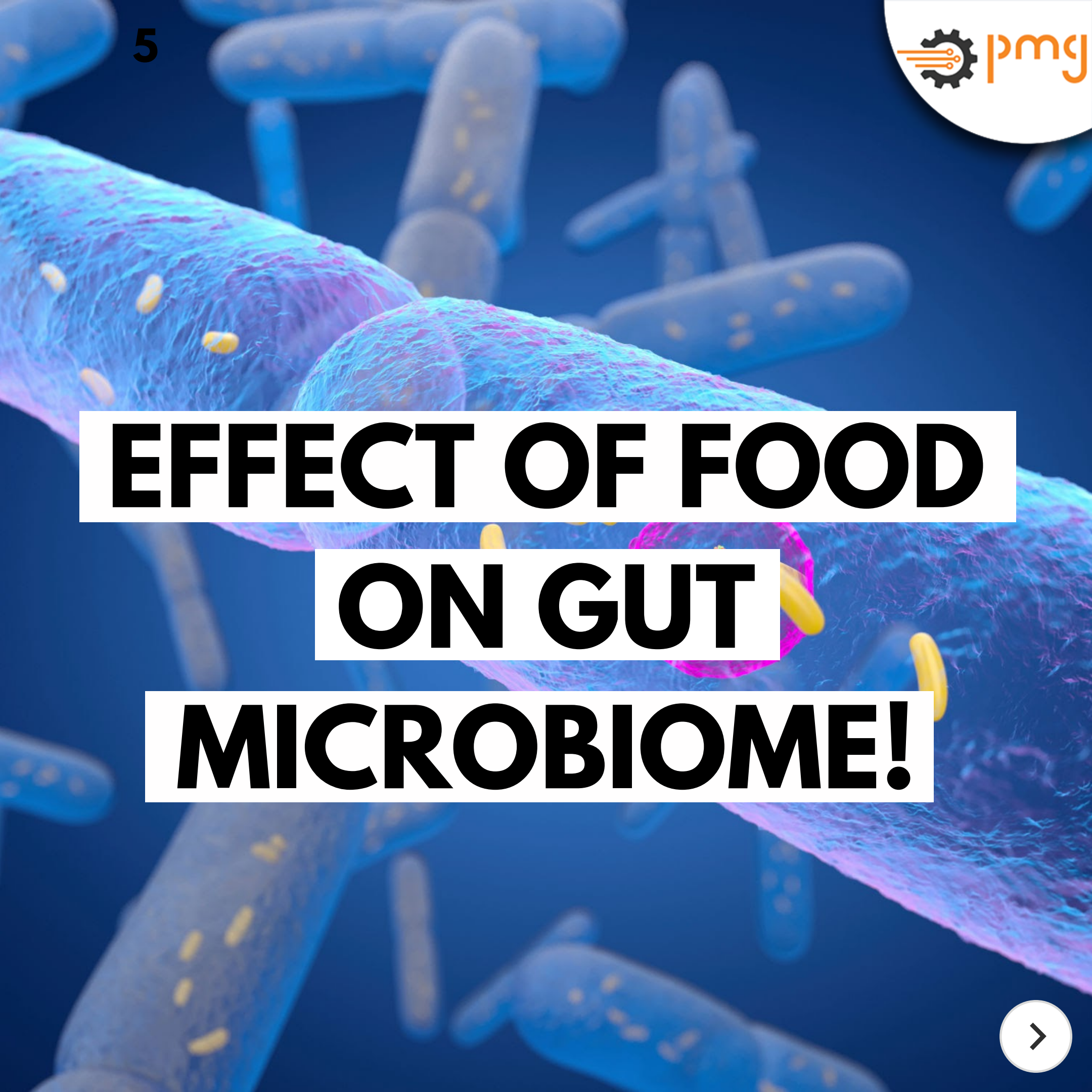


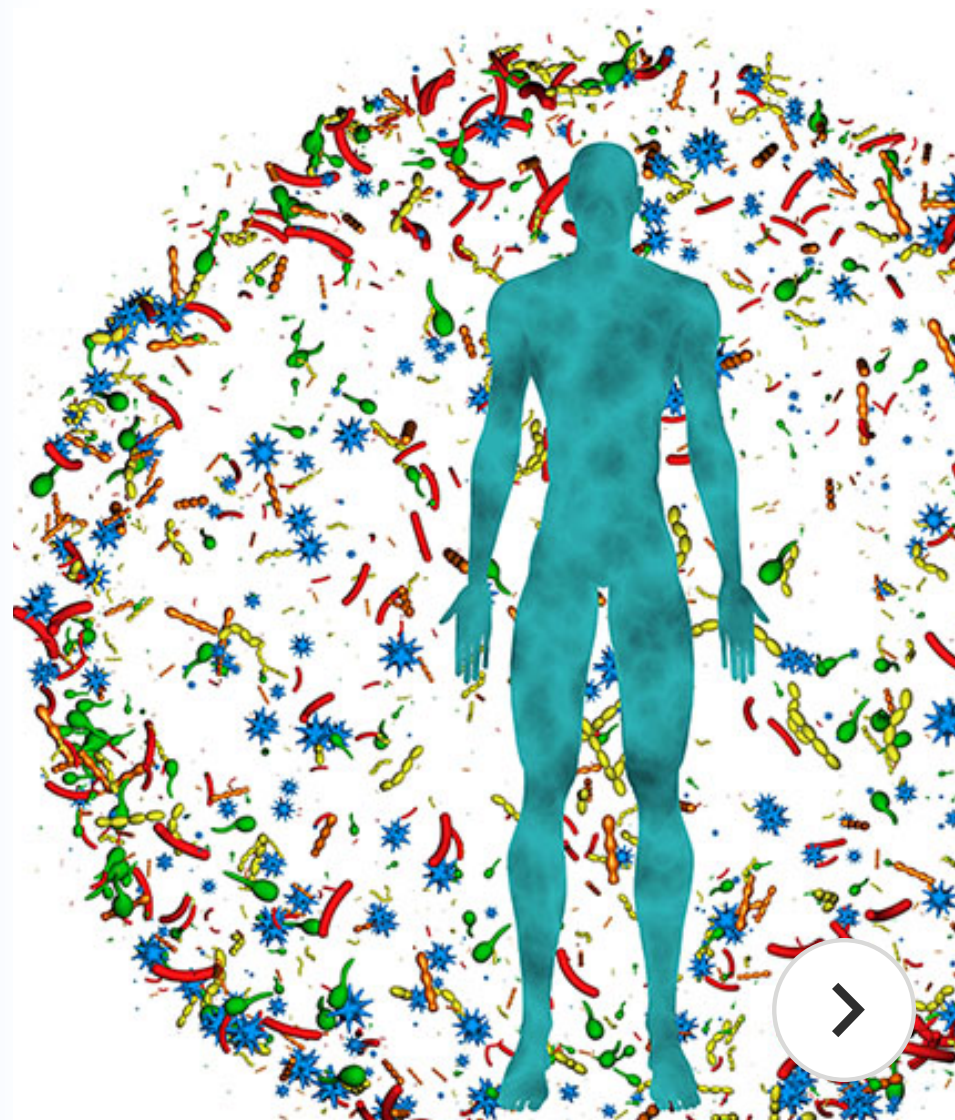
The background of the slide is a vibrant, abstract illustration of a microbiome. It features a large, textured, blue and purple structure resembling a piece of coral or a complex network of fibers. Scattered throughout this structure and the surrounding space are numerous small, yellow, pill-shaped objects, some of which are also embedded within the blue and purple fibers. The overall color palette is dominated by deep blues, purples, and bright yellows.

EFFECT OF FOOD ON GUT MICROBIOME!

WHAT IS MICROBIOME?

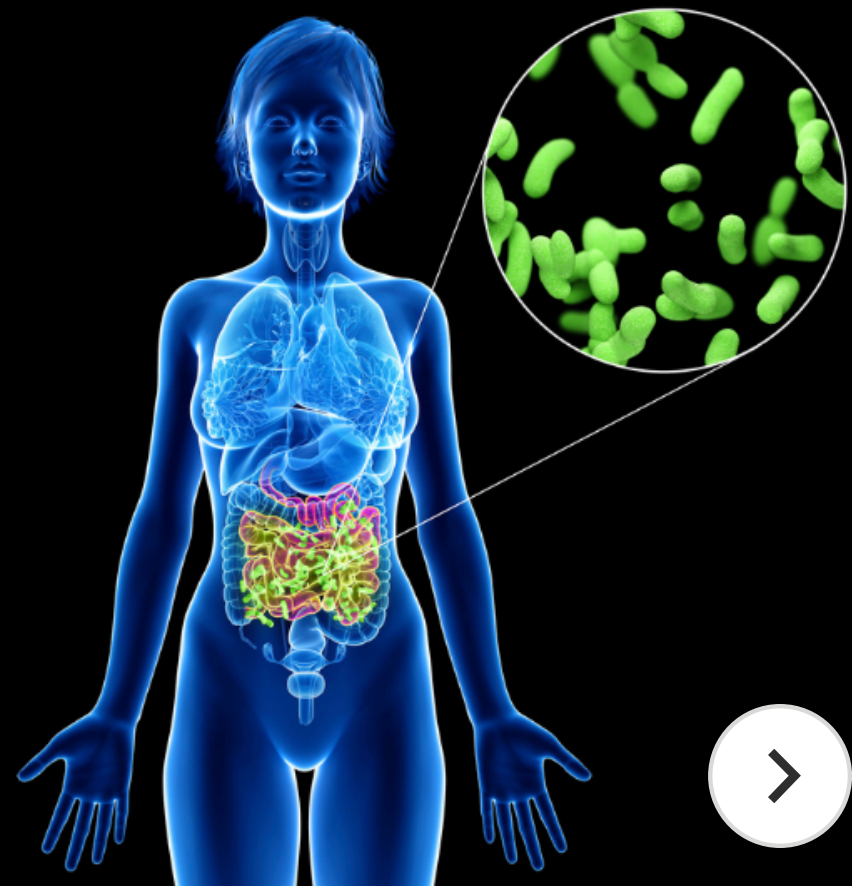
Microbiome inside the bodies, **consists of trillions of microorganisms (also called microbiota or microbes)** of thousands of different species.

These include not only bacteria but fungi, parasites, and viruses. In a healthy person, these **“bugs” coexist peacefully**, with the largest numbers found in the small and large intestines but also throughout the body.



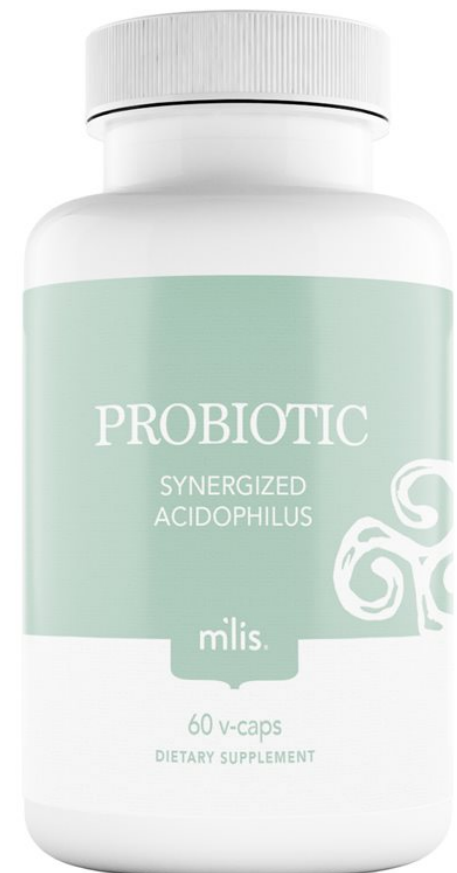
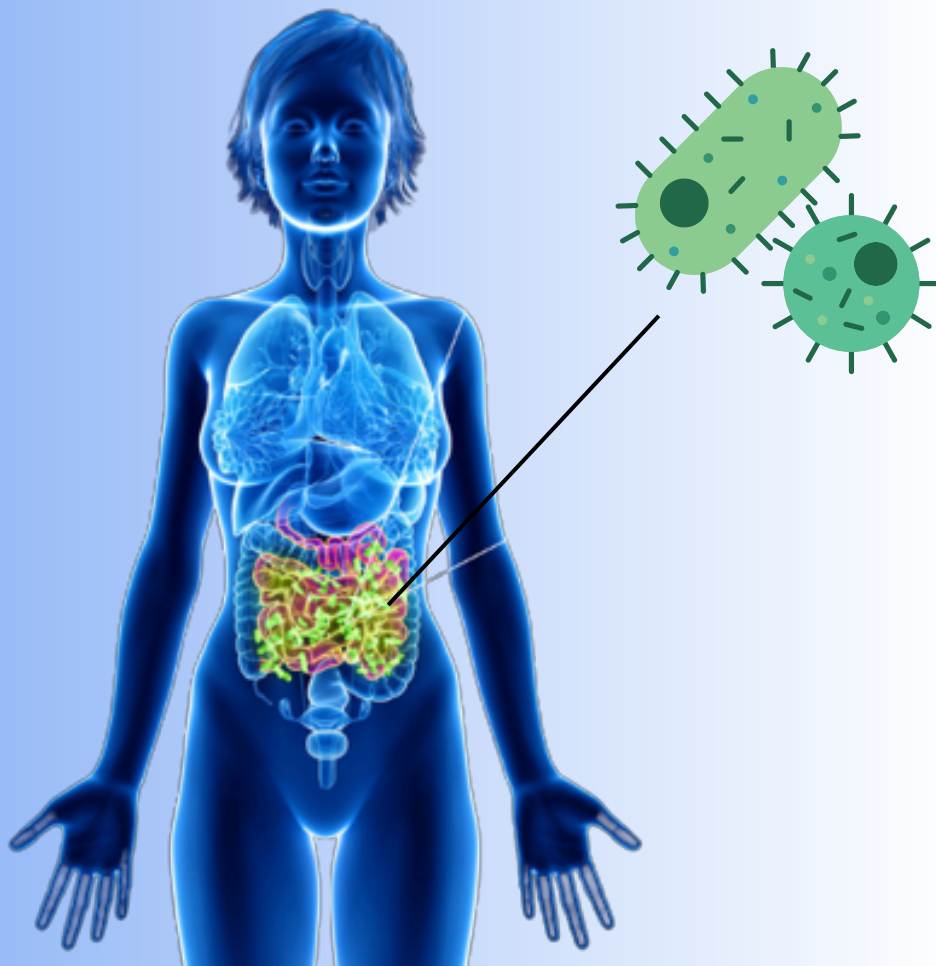
HOW MICROBIOME BENEFIT THE BODY?

- Microbiota stimulate the immune system.
- Break down potentially toxic food compounds, and synthesize certain vitamins and amino acids, including the B vitamins and vitamin K.
- The key enzymes needed to form vitamin B12 are only found in bacteria, not in plants and animals.
- The microbiota help to break down these sugar, starches and fibers with their digestive enzymes



WHAT IS ROLE OF PROBIOTICS?

- Probiotics are either foods that naturally contain microbiota that contain live active bacteria.
- Probiotics examples - lactic acid bacteria (LAB), yogurt, cheese, pickles ETC.



EFFECT OF DIET ON MICROBIOME?

- The diet plays a large role in determining what kinds of microbiota live in the colon.
- A **high-fiber diet** in particular affects the type and amount of microbiota in the intestines.
- **Short chain fatty acids (SCFA) are released as a result of fermentation.**
- This lowers the pH of the colon, which in turn determines the type of microbiota present that would survive in this acidic environment.
- The lower pH limits the growth of some harmful bacteria like **Clostridium difficile.**

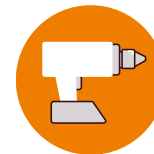


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