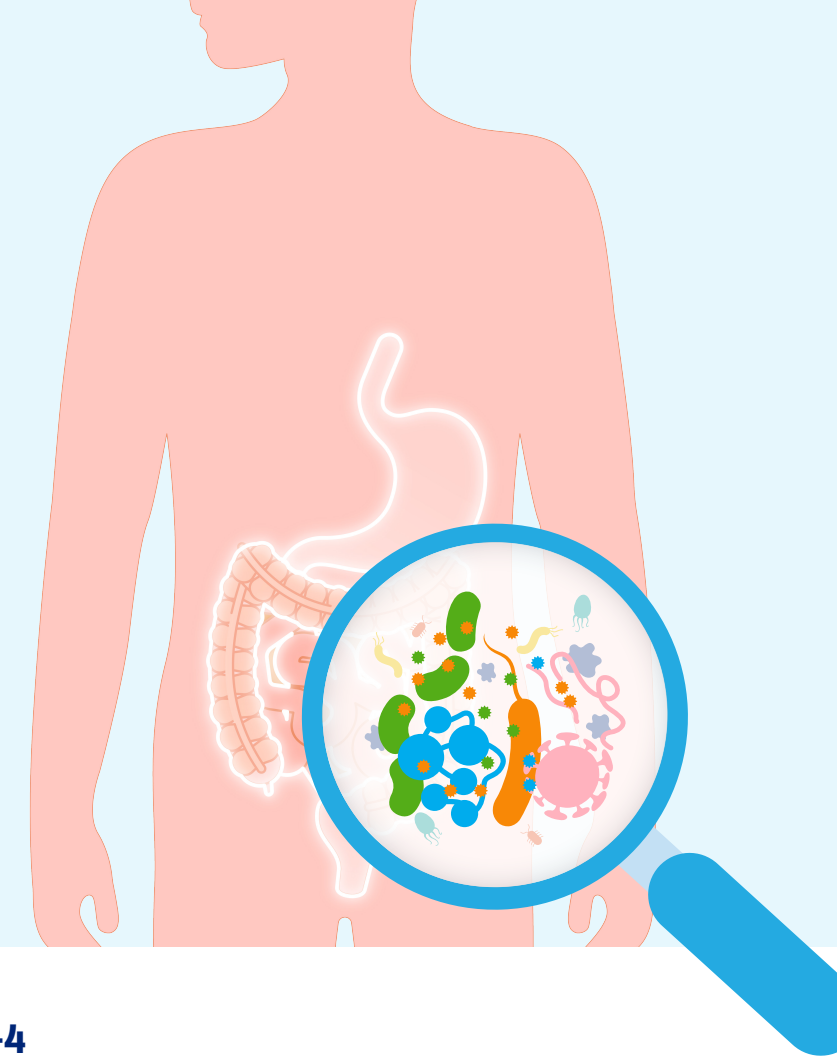
RESEARCH & INNOVATION

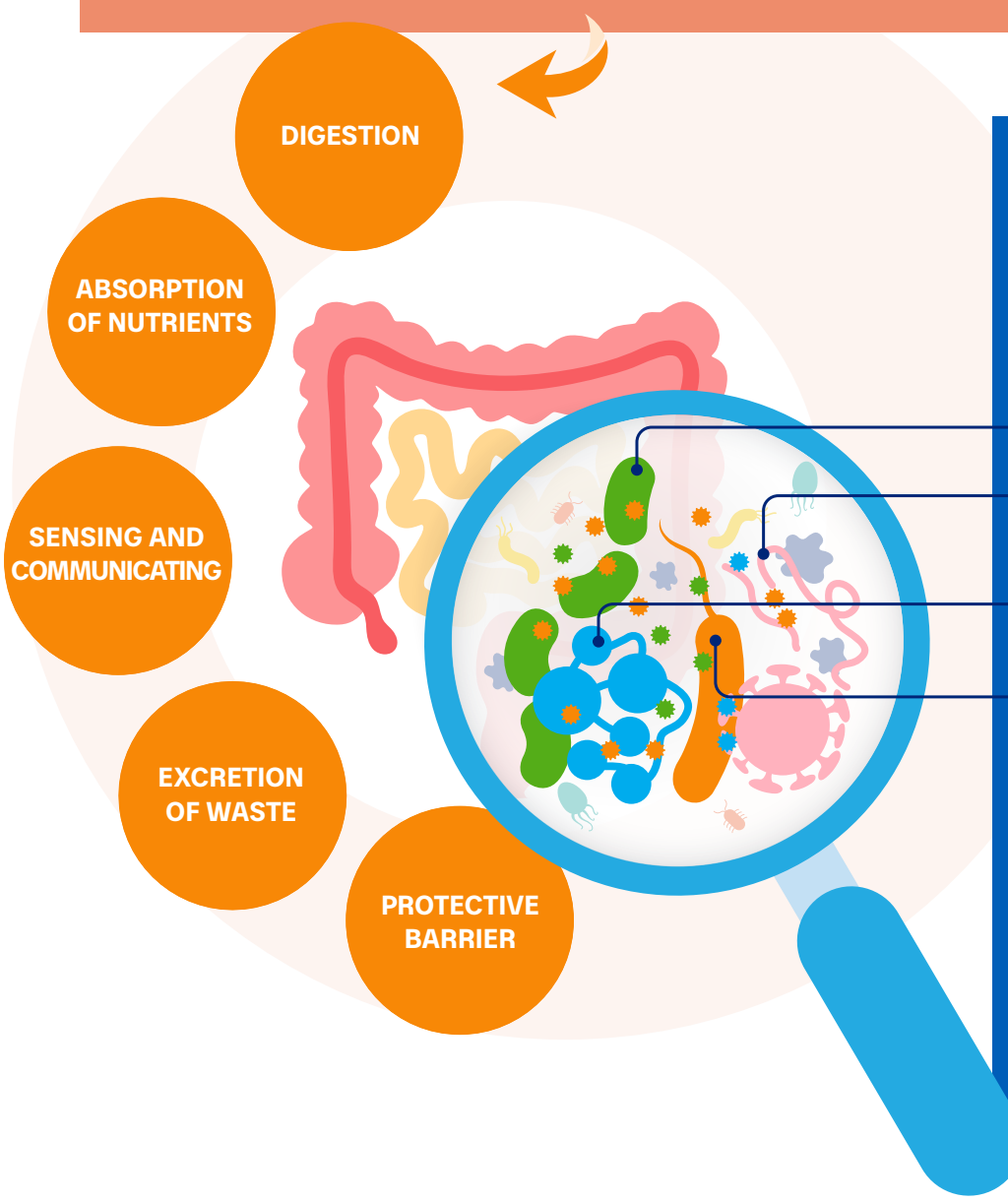
THE ROLE OF THE GUT FOR LIFELONG HEALTH

Section 1: Introducing the Gut
Section 2: Developing Gut Health in Infancy
Section 3: Maintaining a Healthy Gut in Adulthood
Section 4: Optimizing Gut Health During Illness



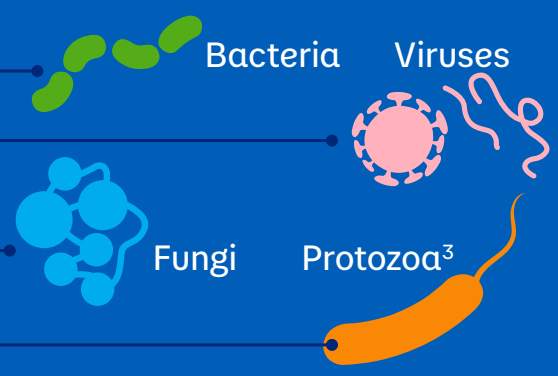
SECTION 1: INTRODUCING THE GUT[1-4]

The gut plays a central role in maintaining good health and wellbeing, and is responsible for vital functions like:



THE MICROBIOTA

Around 100 trillion microorganisms can be found in the human digestive tract, including:



This vast and complex microbial community, referred to as the gut microbiota, profoundly influences human health and disease.

A nutritious and diverse diet can help balance the microbiota and support gut function.

DID YOU KNOW?

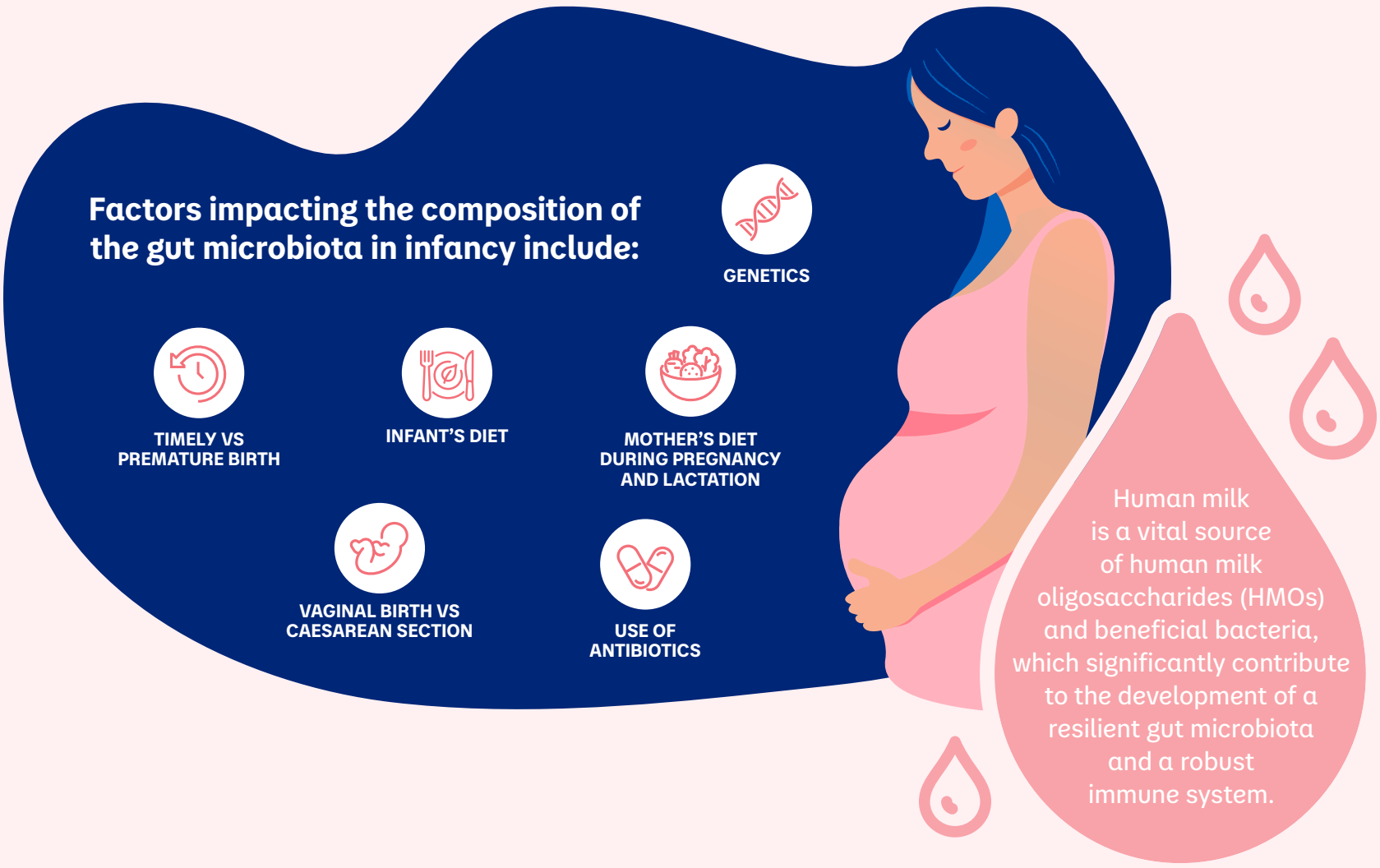
The gut and its microbiota are key regulators of the gut-brain axis, an intricate communication system that involves neural, hormonal and immunological pathways.

100 million nerve cells are located along the gut

95% of the body's total serotonin (a chemical messenger in the brain responsible for regulating our mood, emotions and sleep) is produced in the gut

SECTION 2: DEVELOPING GUT HEALTH IN INFANCY[1,5–9]

The first 1,000 days of life are key in shaping the diversity and composition of the gut microbiota, laying the foundation for a lifetime of good health and wellbeing.



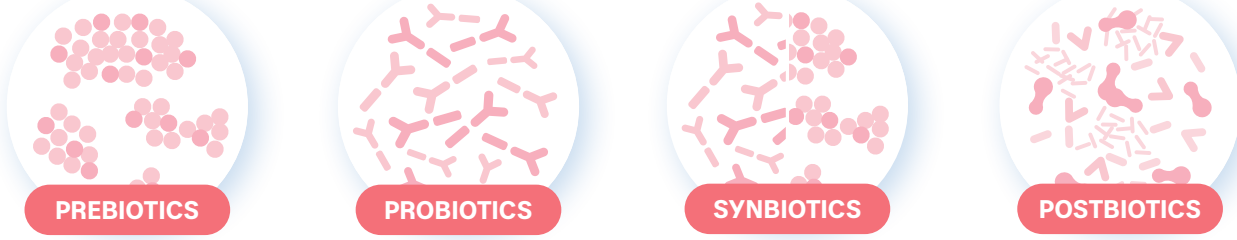
DYSBIOSIS

Dysbiosis refers to an imbalance in the gut microbiota, and can significantly affect health during infancy and later stages of life. This condition has been associated with elevated risks of allergies, colic and gastrointestinal disorders.

DID YOU KNOW?

70-80% of the body's immune cells are located in the gut

Nutritional innovations that may help improve health and wellbeing by modulating the gut microbiota include:



SECTION 3: MAINTAINING A HEALTHY GUT IN ADULTHOOD[10–19]

A healthy gut in adulthood is nurtured through daily lifestyle choices, including a balanced diet and an active routine.

The composition of the gut microbiota throughout life is influenced by factors like:

- Gestation
- Aging
- Disease
- Lifestyle changes

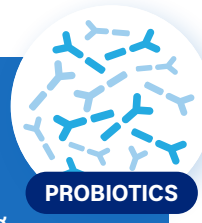
As we age, the gut microbiome often experiences a significant decrease in number and overall species diversity.

An imbalanced gut microbiota has been linked to gastrointestinal conditions,[19] including:

- Abdominal pain
- Excessive wind
- Bloating

Dietary fibers are carbohydrates derived from plant foods resistant to digestion and absorption in the small intestine. They reach the large intestine intact, and serve as nourishment for our gut microbiota. Some fibers are classified as prebiotics, and can be selectively utilized by the microorganisms in our digestive tract, conferring health benefits.

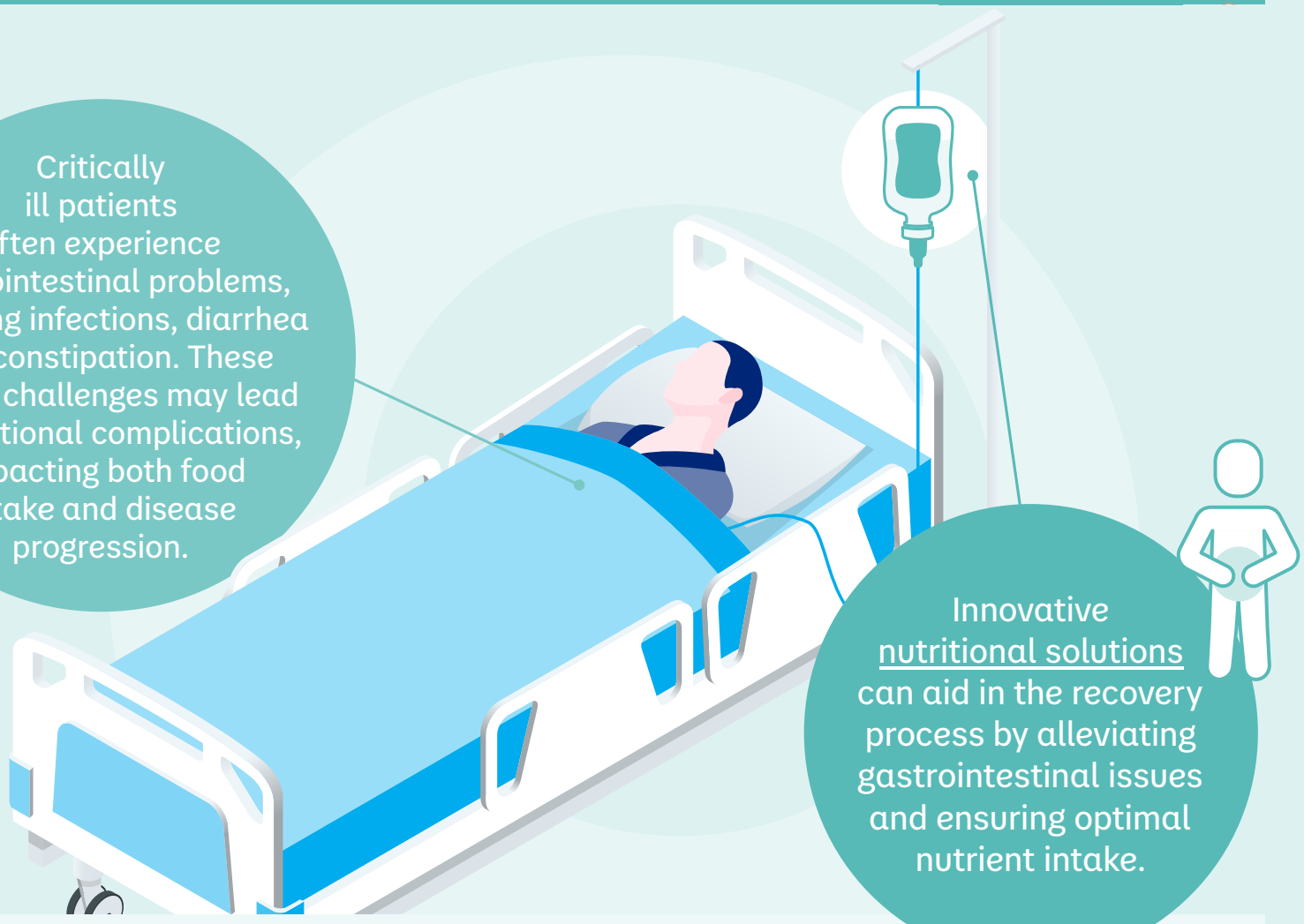
DID YOU KNOW?
In many western countries, fiber intake falls below national dietary recommendations.



Food innovations, such as probiotic fermented foods, have the potential to support the gut. Ongoing studies are exploring new probiotics for their ability to ease gut-related symptoms and enhance overall health.

SECTION 4: OPTIMIZING GUT HEALTH DURING ILLNESS[19–31]

Medical treatments, lifestyle and dietary changes can disturb the balance of the gut microbiota.



Critically ill patients often experience gastrointestinal problems, including infections, diarrhea and constipation. These health challenges may lead to additional complications, impacting both food intake and disease progression.

Innovative nutritional solutions can aid in the recovery process by alleviating gastrointestinal issues and ensuring optimal nutrient intake.

DID YOU KNOW?

A growing body of evidence suggests an association between microbiota dysbiosis and health conditions, such as cardiovascular diseases, cancer, respiratory diseases, diabetes, inflammatory bowel diseases and brain disorders.

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RESEARCH & INNOVATION

ABOUT US

Leveraging our unparalleled expertise in understanding the impact of nutrition on gut health – from early life to adulthood, both in health and illness - Danone Research & Innovation continues to lead the way with innovative nutritional solutions.

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Years of research into gut health

Find out more at www.danoneresearch.com/gut-health

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