

# Your Baby's Gut and HMOs

## The immune system of the infant is functionally immature and naive



Your baby's microbiome is the collection of bacteria (good and bad) and everything else residing naturally in their gut. This develops in the early days of life, and, in fact, the microbiome can be influenced right from birth. Research shows babies born via C-section can have a slightly altered gut microbiota than those born by vaginal birth.

Your baby's gut bacteria have an important role in educating and supporting your baby's immune system. A healthy gut microbiome can reduce the risk of health issues such as asthma, obesity, food allergies, diabetes, and immune-related conditions later in life.



## How nature supports your baby's gut microbiome

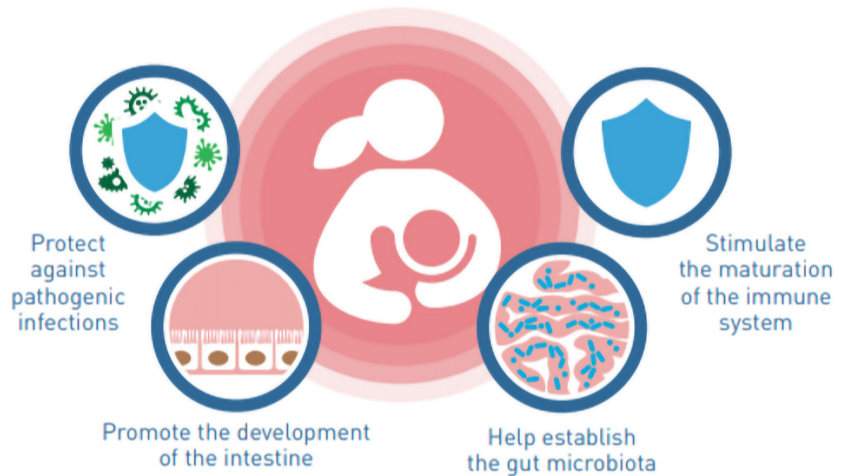
Human breastmilk contains its own unique source of food – Human Milk Oligosaccharides (HMOs), which are important in feeding/supporting your baby's good gut bacteria.



## What are HMOs?

Breast milk contains a lot of HMOs. HMOs are a type of carbohydrate that the good bacteria in your baby's gut love to feast on, particularly in the early days of life when the milk is called colostrum. There are hundreds of these carbohydrates in breastmilk, but five specific types make up about 50% of the entire category. These carbohydrates are called 2'FL, DFL, LNT, 3'SL and 6'SL. HMOs work to reduce the amount of 'bad bacteria' in the gut meaning that good bacteria can thrive and a healthy gut microbiome can be achieved.

### HMOs give newborns multiple layers of protection



Imagine your baby's gut as a garden. The good bacteria are the flowers, and the bad bacteria are the weeds. HMOs fertilise the flowers, but don't feed the weeds – giving the flowers a chance to outgrow the weeds and thus creating a garden that is blooming.

## Quick facts about HMOs



HMOs act as food for the beneficial bacteria. They selectively feed only the good bacteria and not the bad



HMOs help balance baby's immune systems by teaching it when to attack infection and when not to.



HMOs block bad bacteria from attaching to the gut wall. This lowers the risk of viral and bacterial infections.



HMOs help strengthen the gut barrier by tightening the gaps between cells within the intestine, thus making it harder for the bad bacteria to get through.

There is so much to know about HMOs, and the team at SMA Nutrition are continually investing into research to better understand HMOs and the endless benefits of breast milk.



Sources: [ from website]

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