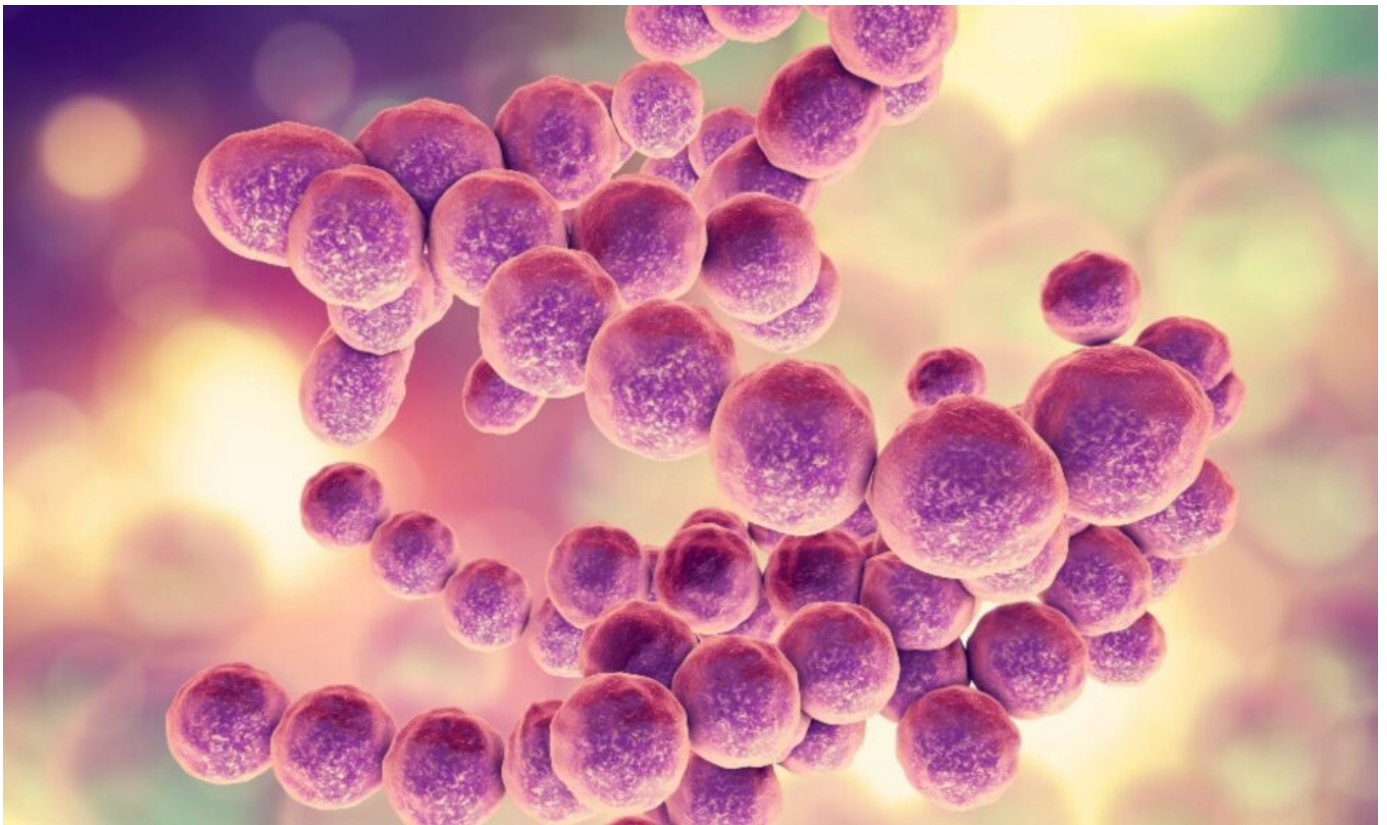


Gut bacteria may affect babies' fear levels, study finds



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A pilot study by Michigan State University has unveiled a connection between gut bacteria and fear levels in babies.

In the experiment, scientists studied a group of 30 one-year-old babies. Stool samples from the dataset were taken at age one month and one year. After analysing the samples, researchers wore a selection of Halloween masks in front of the infants and observed their reaction.

Those displaying higher levels of fear, expressed through facial expression, vocal distress, escape behaviour and startle response, were found to have a gut microme imbalance. They

brain development," said Michigan State University Associate Professor's Rebecca Knickmeyer, who led the research study published in the journal **Nature Communications**. *"The microbiome is an exciting new target that can be potentially used for that."*

A similar research on the connection between gut health and fear in animals led Knickmeyer and her team at MSU's College of Human Medicine and Department of Pediatrics and Human Health to study the effects in humans. The findings could be beneficial in understanding and prevent mental health issues.

"Fear reactions are a normal part of child development. Children should be aware of threats in their environment and be ready to respond to them", stated Professor Knickmeyer. *"But if they can't dampen that response when they're safe, they may be at heightened risk to develop anxiety and depression later on in life."*

Using MRI technology the researchers also found a connection between the children's microbial levels and the size of the amygdala – the part of brain associated with the 'fight or flight' response – leading them to believe that bacteria could be affecting the development and function of the amygdala.

"We have a great opportunity to support neurological health early on. Our long-term goal is that we'll learn what we can do to foster healthy growth and development.", concluded Rebecca Knickmeyer.

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