

Keeping TABS on the LAB

UPDATES ON BRIGHAM YOUNG UNIVERSITY'S COGNITIVE DEVELOPMENT RESEARCH



Feb
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WHAT ARE GUT MICROBIOTA?

Microbiota are bacteria and other organisms that naturally live inside our bodies. They can be found inside our mouths, genitals, and skin, but the majority live inside our stomachs. In our lab, we study this "gut" type, specifically those which are found in lower parts of the digestive tract.

Even though they sound gross and germ, our microbiota actually help our bodies stay healthy by creating chemicals needed for digesting food, feeling emotions, and fighting disease. Click [here](#) to learn more.

WHERE ARE WE? PHASE 1

We are almost finished screening and matching participants and will be sending out the remaining fecal sample kits.

Please watch your mailbox for the test tube. It will arrive in a grey padded envelope. Inside, there is an instruction sheet with a photo of how the finished swab should look.

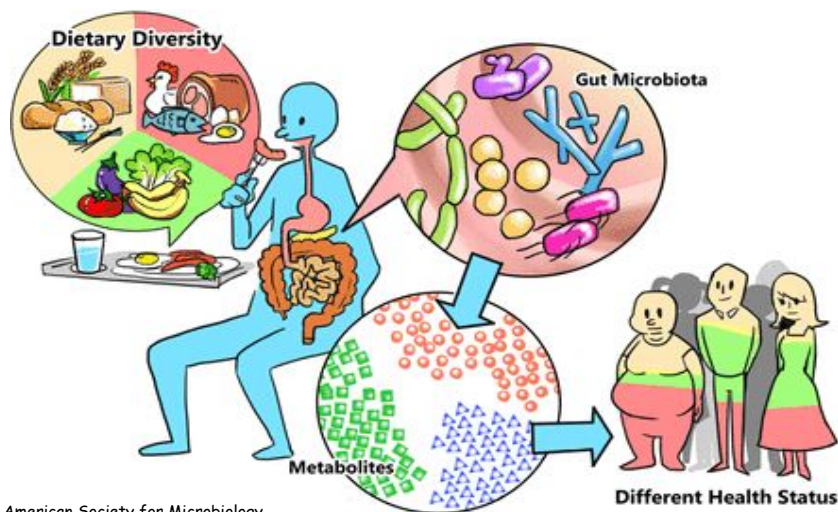
Be sure to contact us once the sample is collected and in your freezer and we will schedule a pickup time within 48 hours.

From there, we will begin collecting round 2 so that we can monitor changes in infant microbiomes over time.

MICROBIOTA FUN FACTS

- The gut microbiome can weigh up to 5 lbs in the average adult
- Our stomachs can have as many as 5,000 different strains of microbes
- The microbiome starts to develop in utero. That is, while the microbiome is influenced by breast milk, formula, and the vaginal canal during/after delivery, infants are born with some microbiota already introduced.
- Some microbiota help the body produce vitamin K which is important for healthy blood
- People who eat more fiber and plants tend to have healthier microbiomes

To learn more from the Journal of Cardiovascular Nursing, click [here](#)



American Society for Microbiology
<https://msystems.asm.org/>

MEET OUR ADVISOR

As a developmentalist I conduct studies with infants, children, and adults. I have interest in typically developing and atypical populations, such as those with an attentional or cognitive deficits (including those with autism, traumatic brain injury, or attention deficit disorder). The goal of my research is to clarify influences on cognitive development from infancy to adulthood. I have worked on projects at Brigham Young University, the University of Wisconsin-Madison, Rice University, the University of Houston-Clear Lake, the Houston VA Medical Center (HCQCUS), and the University of Houston.



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8 MONTH MILESTONES



The following are some characteristics and behaviors you may notice in your infant beginning around eight months. If you have concerns about any late or missing benchmarks, please reach out to your pediatrician. You can also learn more [here](#) or [here](#).

Learning and exploring through taste and touch
(Be sure to cover electrical outlets!)



Growing fast!
Probably weighs about 20 lbs.
(19 for males, 17 for females)



Separation anxiety may begin to manifest, but should ease if baby is distracted

Beginning to try more solid foods.
Half of calories still come from breastmilk or formula.



Likely sleeps around 13 hours per day (including 2-3 naps)



Baby may begin to form short words like *Mama* and *Dada* as well as use a pointing gesture.

NEWS FROM OTHER MICROBIOTA LABS

Considering the link between Autism Spectrum Disorder (ASD) and microbiota might seem to be a niche topic. However, researchers across the world are looking into this connection and the potential impacts this research could have on the medical field. In Iran, Kamyar Moradi and his colleagues wanted to see if the current research on ASD and microbiota has the potential to lead to ideas for possible treatments. Their findings have identified that psychobiotics (probiotics that interact with gut bacteria to improve mental health) alleviate both gastrointestinal issues as well as common mental health problems in individuals with ASD. There were several other possible treatments that were found in this study, but the use of psychobiotics appears to be the most beneficial one they identified. **Hailey Coleman**; Click [here](#) to read the full article

In a recent study, autism children were found to have higher amounts of certain gut bacteria than children without autism. The children with autism studying had a higher amount of harmful bacteria and a lower amount of good bacteria. This doesn't necessarily mean that autism is caused by gut bacteria but shows how gut bacteria may be a way to see if a child has autism.

Adia Hansen; Click [here](#) to read the full article

Microbiota refers to all the different things that are living in our guts such as the various bacteria. Previous studies have shown that the gut bacteria in those with Autism Spectrum Disorder (ASD) differs from those without, so researchers are looking at how these gut bacteria might play a role in their symptoms. Recent studies have shown that administering specific probiotics or fecal transplants changed the microbiota in patient's guts, in some studies leading to an improvement in various behaviors associated with ASD. **Stephen Gilliat**; Click [here](#) to read the full article

OTHER WAYS TO GET INVOLVED

If you know other families with children who have autism or who may be interested in one of our studies, please feel free to pass along one of the flyers attached to this email. We are also always grateful when people share our flyers or links to the lab website on social media outlets like Facebook, Twitter, or Instagram! If you know of a business that may be willing to post a flyer, please also let us know. Thanks for helping us spread the word!



MINDFULNESS WITH YOUR KIDS

Is the stress of COVID-19 getting to you or your kids? Here are some fun ways to practice mindfulness as a family! Click [here](#) for more!



BALLOON BREATH

Imagine a balloon over your head as you fill your lungs with air and slowly let it out

PLEASURE GAZING

Take a moment to gaze into your infant's face. Try to memorize all the beautiful details

