

STUDY BRIEFING:

M-ARCH Work Begins!



And we're off! **M-ARCH has officially started enrolling pregnant women into the study in Flint, Michigan!** In Flint, we are working with moms-to-be with help from Hurley Medical Center.

The M-ARCH team was eager to get work started in Flint, Michigan as a result of the Flint Water Crisis. After the switch from Detroit water to Flint river water, increased blood lead levels were detected by one of our researchers, Dr. Hanna-Attisha^[1]. Since M-ARCH seeks to determine the effects of pollutants on child development, the work being done in Flint is very important.

We have already gained a lot of information from ARCH. However, there is still so much to learn! If you are part of the ARCH project, our research team will be calling you over the next few months to ask if you are interested in continuing with the ARCH project. Continuing with ARCH is voluntary and we will ask you to agree to the new parts of ARCH over the phone. To help prepare you for what we will ask, we sent out copies of the new ARCH consent in the mail for you to read before we call you over the phone.

If you have had a chance to read the new consent form and are interested in continuing or if you did not receive a copy in the mail, please feel free to call ARCH at 1-866-925-8758.

Together, ARCH and M-ARCH are working to help mothers and their babies live healthier lives.



INVESTIGATOR SPOTLIGHT:

Dr. Comstock Seeks to Understand Your Gut!



Deep within our gut live more than 100 trillion microscopic organisms^[2] that work with the body to protect us. These tiny titans have a close relationship with our immune systems, working to keep us healthy. They are commonly referred to as the gut microbiota. Dr. Sarah Comstock is working to understand the gut microbiota and the role it plays during pregnancy and childhood.

Dr. Comstock earned a Ph. D from the University of California, Davis in Nutritional Biology. She came to MSU in 2012 and is an Assistant Professor in the Department of Food Science and Human Nutrition.

Dr. Comstock oversees two microbiome projects: ARCH-GUT and MARCH-Microbe. In both projects, she is working with mothers and their children to describe the gut microbiomes of mothers and babies. She hopes to find out if there are relationships between a mom and baby's microbiome and to learn if having certain organisms in your gut may lead to healthier children.

Findings from these studies will help us understand how to improve the health of mothers and their children. Believe it or not, these tiny organisms, invisible to the naked eye, could point us to necessary changes for a healthier generation. **Dr. Comstock would like to say thank you for your continued support and contribution. ARCH and M-ARCH are nothing without all of you!**

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TIPS FOR MOMS AND DADS:

Don't Let Fruit Juice Fool You!



We know that fruit juice is a tasty treat for kids, but how good is it for them?

100% fruit juice is a great way for children to enjoy some of their fruit servings. It is mostly made of water and has important nutrients like Vitamin A, Vitamin C, fiber, and sugars for energy.

Whole fruit plays a critical role in supplying your child nutrients so it is important to keep a healthy balance of juice and fruits in the diet.

Fruit juice contains many sugars, which in moderation can be good for kids! However, too much juice may lead to dental problems like cavities. When serving juice, it is important to avoid putting it in a bottle or sippy cup that can be carried around throughout the day. This helps limit the time that the sugars are in contact with your child's teeth.

It is important to understand recommendations for appropriate use of fruit juice in children's diets. According to the American Academy of Pediatrics it is best to wait until your child is 1 year old before serving juice and kids between ages 1 and 3 should be limited to 4 ounces of juice per day^[3]. Between the ages of 4 and 6, this intake increases to 4-6 ounces, and after age 7, kids should be limited to 8 ounces (1 cup) per day^[3].

Juice is a tasty treat for children, but it is important to remember that juice in moderation is key. Whole fruits offer the best source of nutrients and should not be replaced with juices. If you have questions or concerns about serving your child fruit juice, reach out to your family doctor.

For more information or to read the official recommendations from the American Academy of Pediatrics, please visit: <http://pediatrics.aappublications.org/content/early/2017/05/18/peds.2017-0967>

Footnotes:

- [1] Hanna-Attisha M, LaChance J, Sadler RC, Champney Schnepf A. Elevated Blood Lead Levels in Children Associated With the Flint Drinking Water Crisis: A Spatial Analysis of Risk and Public Health Response. *American Journal of Public Health*. 2016;106(2):283-290.
- [2] Guinane CM, Cotter PD. Role of the gut microbiota in health and chronic gastrointestinal disease: understanding a hidden metabolic organ. *Therapeutic Advances in Gastroenterology*. 2013;6(4):295-308. doi:10.1177/1756283X13482996.
- [3] Melvin B. Heyman et al., "Fruit Juice in Infants, Children, and Adolescents: Current Recommendations," *Pediatrics*, June 01, 2017, accessed June 07, 2017, <http://pediatrics.aappublications.org/content/139/6/e20170967.info>.

