

STUDY BRIEFING:

The Tooth Fairies of Science!

On behalf of the ARCH research team, thank you for your re-consent and participation in the ARCH research study. As you may have heard, one of our new projects asks that you collect and send in your child's baby teeth as they lose them. For each tooth we receive, we will send you a \$10 gift card in the mail!

Baby teeth can provide us with valuable information about the environments our children live in, such as the quality of our community's water. During the Flint water crisis, traces of lead were detected in children's baby teeth by doctors, and that information signalled Flint's community to take action towards bettering their water. Baby teeth analysis can also indicate the vitamins and minerals our children are receiving in their diets, and whether they are acquiring the optimum amounts of these vitamins and minerals.

In the coming months, we will begin sending tooth collection kits in the mail. These kits will include a collection tube, an instruction sheet, an information sheet, and a pre-stamped envelope so you can send us baby teeth at no charge. We will send you one collection kit at a time. Once we receive a tooth from you, we will send your gift card along with another tooth collection kit until we receive five teeth from you.

In the meantime, those of you who have been contacted by us, agreed to letting us collect baby teeth, and have a child at least 3 years old will receive our temporary kits. In these envelopes, we will have a small card for you to fill out along with a plastic bag. If your child does lose a tooth between now and the time we send out the collection kits, we are asking that you simply fill out this card to the best of your ability and keep this card and their baby tooth in a plastic bag in a dry, dark, room-temperature area such as a drawer or a cabinet. If you haven't received a kit and you would like one, please call (1-866-925-8758) or email

charmstudy@epi.msu.edu.



INVESTIGATOR SPOTLIGHT:

Dr. Salafia: Increasing our Understanding, one Placenta at a Time!

Dr. Carolyn Salafia is finding answers to important medical questions with the help of your placentas!

The placenta is one of the most underrated and misunderstood organs in the human body. Just think--an entire organ grows only to support the life of your child while in utero. It is the only organ that is commonly thrown away in a hospital! There are stories and myths associated with placentas that suggest it is nutritional for new moms to eat it or that it makes a great face mask. But the placenta is a hidden treasure that may hold the answers to some of the biggest research questions in reproductive medicine!

The placenta is an organ that develops in your uterus during pregnancy. This structure provides oxygen and nutrients to your growing baby and removes waste products from your baby's blood until they are born. The placenta attaches to the wall of your uterus, and your baby's umbilical cord arises from it. At birth, the placenta is delivered along with the baby, and CHARM asks to collect our participants' placentas for our research efforts. Given this, you may be wondering: what kind of questions can the placenta help us answer?



In order to learn more about placenta research, we spoke with Dr. Carolyn Salafia, M.D., a valued and esteemed member of the CHARM research team and a pioneer in placenta research. Dr. Salafia is board certified in anatomic and clinical pathology with a subspecialty in pediatric pathology. Dr. Salafia received her BA from Dartmouth College and her Medical degree from Duke University's School of Medicine. Following medical school, she completed a Residency in Anatomic and Clinical Pathology at the Yale-affiliated community hospitals of St Raphael and Danbury Hospital. She is one of a small handful of pathologists who specialize in reproductive pathology nationwide.

Placenta research itself is a relatively new frontier in medicine, and because of this, there had been a lack of both technology and importance associated with the organ until recently. In fact, researchers had used the same methods of analysis from 1960s to the early 2000s. She and her research team are pioneering changes in how placentas analysis.

Dr. Salafia's role in the M-ARCH study is directed specifically towards research on mother's placentas that are collected after the birth of their child. Her research hones in on analyzing placentas make-up, shape, size, symmetry and uniformity. Placental abnormalities in shape, size, growth rate, etc. could reveal different medical problems and neurodevelopmental issues a baby may encounter during their lifetime. Using new techniques, Dr. Salafia and her team are able to see how the blood supply for your baby developed. Differences in blood supply may explain differences in children's development. Over time, the collection of many individual's data will eventually help us apply answers to the medical questions of entire populations. Dr. Salafia's placenta research will pave the way for reproductive science in the years to come. We thank her for her inspiring work and for being a part of CHARM!

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TIPS FOR MOMS AND DADS:

Healthy Dental Habits for your Child!



Maintaining and encouraging our children's dental hygiene is important not only for their current health and well being, but also to ensure that they develop good hygiene habits for the future. The risks correlated with poor dental hygiene are very commonly overlooked, because many people don't realize that mild dental decay could lead to other more serious medical issues. Therefore, it is crucial that parents adhere to age appropriate dental hygiene routines with their children and teach them proper techniques from the start.

In infancy, a baby's gums can be gently massaged with a moistened washcloth after feeding, in order to promote good gum health. Teething for infants commonly begins around four to six months of age, and during this time period it is essential to make sure they have clean, cold teething rings to encourage healthy teeth growth. Remember that dental decay is an infectious and transmissible disease, so avoiding testing bottle temperature with your mouth, sharing utensils, etc. can help stop the transmission of dental decay causing bacteria to your baby.

As soon as an infant grows their first tooth, the parents should begin brushing! Also, if your drinking water doesn't have fluoride in it, ask your pediatrician about fluoride supplements, because fluoride plays a vital role in oral health!

Once your child reaches the age of 1, they should have their first oral examination by a dentist. As their teeth come in, check their teeth regularly for unusual brown spots, as these can be clear indications of dental decay and/or cavities. If you do see any unusual brown spots on their teeth, make a dentist appointment as soon as possible, to make sure the cavity gets treated and doesn't get worse.

By the age of 2, you can start using toothpaste with fluoride and having your child learn how to spit it out and learn the movements. Children should ideally be able to brush their teeth unsupervised by the age of 7, so make that a goal for your child! By 3 years of age, most toddlers will start weaning themselves off of pacifier use. If your child is over the age of 3 and still using pacifiers or sucking his/her thumb, talk to your dentist about it!

Encouraging good oral hygiene with your little ones and making sure they begin to develop a routine as they grow will ensure long-term oral health and good habits!