

The Current Wave

TIDES Newsletter

WINTER 2016



What's new in TIDES?

A lot has happened in TIDES in the two last years. The first five years of our study in which we enrolled almost 800 moms and their babies has led to a number of important results. Our work suggests that prenatal exposure to common chemicals in our diet and homes –phthalates, which make plastics soft and flexible—may affect the reproductive tract development of boys but not that of girls. These results were affected by the amount of stress that the mom reported during pregnancy. We also found that a women's attitudes about phthalates and other environmental chemicals vary widely and can influence their consumer choices and the amount of these chemicals to which they are exposed. Because of the success of our study and the importance of these and other findings the National Institutes of Health has funded the continue to follow your TIDES children and see how early exposures shape development in the preschool years. We hope that you will continue to be part of this important and innovative study and that you and your TIDES child will come to a study visit when your center contacts you.

Update from the Data Coordinating Center at Mount Sinai



Icahn School of Medicine at Mount Sinai
Statistician Fan Liu, Principal Investigator Shanna Swan, PhD, and Program Manager Sarah Evans, PhD MPH

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Thank you for your participation in The Infant Development and the Environment Study (TIDES). This newsletter will tell you about some of our results and publications, as well as news about our plans for future follow-up of TIDES children. Over two years and in four US cities (San Francisco, CA; Minneapolis, MN; Rochester, NY; and Seattle, WA) 894 women enrolled and completed a questionnaire in the first trimester. 962 women gave a urine sample in the first trimester and 755 gave a urine sample in each trimester of pregnancy. At birth or shortly after, 758 children born to TIDES participants had a TIDES birth exam.

The first chemicals that we have measured in the prenatal urine samples are called phthalates. In the first published TIDES paper, we examined women's concerns about chemicals in their environment and how these concerns affected the product choices women made. Our second paper looked at whether women's eating patterns affected the levels of phthalates measured in their urine. If you're interested in reading more about TIDES, our publication list is below.

You will soon be contacted by your study site to schedule a visit for your TIDES child. **If your contact information has changed, please let your study coordinator know.** We hope that you will continue to participate in our study!



URMC Study Coordinator Heather Fiore, MS Ed, RD, CDE (L) and Center Director Emily Barrett, PhD (R).

assisted the TIDES Coordinating Center in developing protocols for the first TIDES II visits. These protocols were developed in an iterative process and tested during the first TIDES II annual meeting in late August 2015. URMC hosted the 2-day annual meeting, during which Study Coordinators and Center Directors from all TIDES study centers were trained in study protocols. The URMC team has obtained IRB approval to conduct TIDES II and had our first 4-5 year old visits in December of 2015.

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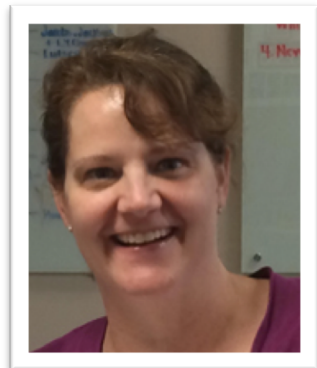
Update from University of Minnesota

We are very excited to continue this important work with our TIDES families. Over the years we have had a few planned leadership and staff changes but our team is still very committed to studying the environment and children's health. Ruby Nguyen is now leading the TIDES team and is joined by the clinical expertise of J. Bruce Redmon and Margaret Semrud-Clikeman. The daily TIDES operations, and the experienced team that families will hear from and see, are the new study coordinator, Stacey Moe, and new research assistant, Pam Carr-Manthe. With your help, we look forward to better understanding the potential effects of the environment on our community's children. You will be receiving more specific information from us in the near future.

Contact UMN:
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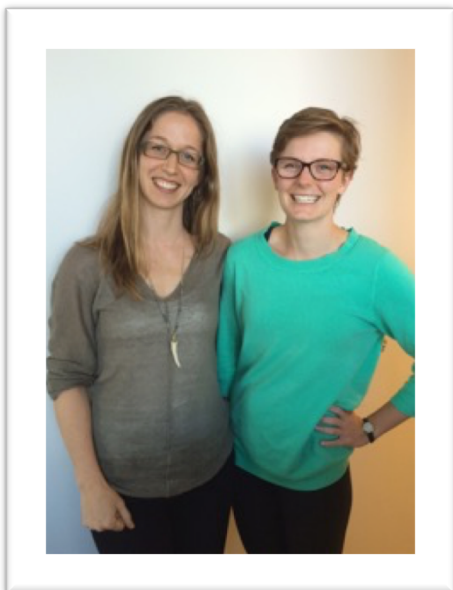


UMN Center Director Ruby Nguyen, PhD (top left), Study Coordinator Stacey Moe, MPH (top right), and research assistant Pamela Carr-Manthe (bottom).



Update from University of Rochester Medical Center

We have enjoyed getting to know over 200 Rochester moms and babies through TIDES over the past few years. We have had the opportunity to share our work on TIDES with many members of the Rochester community who are concerned about children's health and development. As we prepare to start the next phase of this important study, we are fortunate to have Emily Barrett, Center Director, and Heather Fiore, Study Coordinator, continue to lead the TIDES team. We also welcome Dan Mruzek, Associate Professor of Pediatrics at the University of Rochester, to our team. Keep your eyes open for letters and e-mails from us in the next few months - we are excited to continue our work on TIDES and to see how your children have grown over the past few years! In Year 1 of TIDES II, Dr. Barrett and Ms. Fiore



Update from UC San Francisco

The San Francisco TIDES study welcomes new leadership and staff. Nicki Bush, a child clinical psychologist and maternal and child health researcher on the faculty at UCSF, is now leading the SF team. She is joined by Stephanie Grover, a bio-psychology major from UCLA who is coordinating the follow-up study. Both have extensive experience working with families and young children in research and community settings and have a passion for learning about children's development during the preschool period. Nicki and Stephanie are excited to connect with TIDES participants and get to know you and your TIDES child. We realize many of you may have moved since we last contacted you, so please let us know the best way to get back in touch or keep your eyes and ears out for our efforts to reconnect!

Contact UCSF

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UCSF Center Director Nicole Bush,
PhD (L) and Study Coordinator
Stephanie Grover (R).

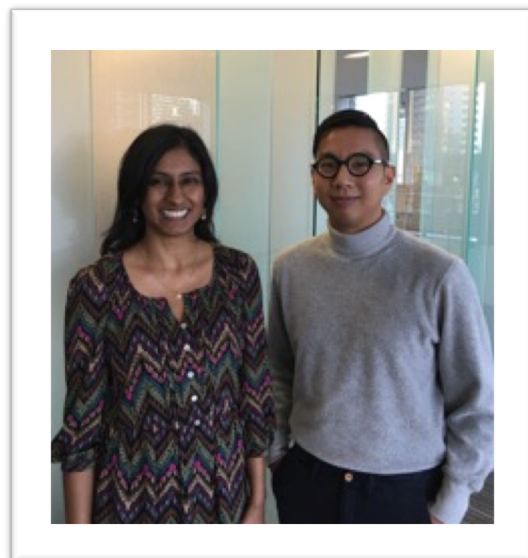
<http://bushlab.ucsf.edu/tides-infant-development-and-environment-study>

Update from Seattle Children's/ University of Washington

The Seattle Children's/University of Washington site has been busy working on a paper on phthalate exposures in pregnancy in relation to frank genital anomalies in boys at birth. In addition, they have started two smaller studies. One is examining reproductive hormones during pregnancy in relation to phthalate exposures and male genital outcomes. The other examines genetics associated with male reproductive development. Results from these studies should be available in 2016.

Contact Seattle Children's:

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Seattle Center Director Sheela
Sathyanarayana. MD (L) and Study
Coordinator Garry Alcedo (R)

TIDES Published Papers

1. Barrett ES, Parlett LE, Sathyanarayana S, Redmon JB, Nguyen RH, Swan SH. Prenatal Stress as a Modifier of Associations between Phthalate Exposure and Reproductive Development: results from a Multicentre Pregnancy Cohort Study. *Paediatr Perinat Epidemiol*. 2015 Nov 17. doi: 10.1111/ppe.12264. PMID: 26576028
2. Adibi JJ, Lee MK, Naimi AI, Barrett E, Nguyen RH, Sathyanarayana S, Zhao Y, Thiet MP, Redmon JB, Swan SH. Human Chorionic Gonadotropin Partially Mediates Phthalate Association With Male and Female Anogenital Distance. *J Clin Endocrinol Metab*. 2015 Sep;100(9):E1216-24. doi: 10.1210/jc.2015-2370. PMID: 26200238

3. Swan SH, Sathyanarayana S, Barrett ES, Janssen S, Liu F, Nguyen RH, Redmon JB; TIDES Study Team. First trimester phthalate exposure and anogenital distance in newborns. *Hum Reprod*. 2015 Apr;30(4):963-72. doi: 10.1093/humrep/deu363. PMID: 25697839
4. Alur S, Wang H, Hoeger K, Swan SH, Sathyanarayana S, Redmon BJ, Nguyen R, Barrett ES. Urinary phthalate metabolite concentrations in relation to history of infertility and use of assisted reproductive technology. *Fertil Steril*. 2015 Nov;104(5):1227-35. doi: 10.1016/j.fertnstert.2015.07.1150. PMID: 26275821
5. Sathyanarayana S, Grady R, Redmon JB, Ivicsek K, Barrett E, Janssen S, Nguyen RHN, and Swan SH and the TIDES Study Team. Anogenital Distance and Penile Width Measurements in the Infant Development and the Environment Study (TIDES): Methods and Predictors. *JPurol Online publication*: 29-MAR-2015 DOI information: 10.1016/j.jpurol.2014.11.018
6. Serrano SE, Seixas NS, Karr CJ, Swan SH, Sathyanarayana S. Dietary Phthalate Exposure in Pregnant Women and the Impact of Consumer Practices. *Int J Environ Res Public Health*, 2014. 11(6): p. 6193-6215.
7. Barrett ES, Sathyanarayana S, Janssen S, Redmon JB, Nguyen RH, Kobrosly R, Swan SH, and the TIDES Study Team. Environmental health attitudes and behaviors: findings from a large pregnancy cohort study. *Eur J Obstet Gynecol Reprod Biol*. 2014, 176:119-25.

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If your contact information has changed, please tell your study coordinator. Thank you!