PROJECT Viva

A Study of Health for the Next Generation

# Viva Views

Spring 2011

Dear Project Viva Participants,

In 2007, we began seeing participants for our Age 7 Visit. Now, 3½ years later, we are happy to report that we have completed all visits including more than 1100 in person and almost 200 more by mail! We reached these goals only through your flexibility, generosity, and dedication. While most of our visits were at the Kenmore site here in Boston, we also visited participants in their homes and offices, and in camp sites, libraries, and even vacation spots (see story to the right).

Without you—and our devoted staff—we would not be able to continue our groundbreaking research into the origins of obesity, diabetes, heart disease, asthma, allergies, and healthy development. We sincerely appreciate your strong commitment.

Stay tuned—if we are fortunate enough to get additional grant funding, we will want to see you and your child when he or she is about 11 years old. In the meantime, please continue to complete annual surveys by mail or online through our secure web server. And, now that we ask the kids to fill out their own surveys, please encourage your child to do it!

In this issue, we show the 'distance' we went to see some participants, we highlight some findings that made headlines this year, and we spotlight two families.

Thank you again for your continued participation and for making Project Viva a success!

Matthew W. Gillman, MD, SM
Principal Investigator

## Viva Across America

Project Viva is proud to announce the completion of the Age 7 Visit! In a span of 3½ years we completed 1,116 visits in-person. The majority of our participants came to our Kenmore office to complete the visit (including a few who have moved away but returned to the Boston area on family vacations), and we traveled to some participants' homes in eastern Massachusetts, but others of you live outside this area and could not visit us. Because collecting information from all of you is important for data accuracy, we also traveled far and wide to do visits. Project Viva has 218 participants living outside the Commonwealth, in 30 states and 8 countries. Viva staff traveled to 17 of these states to see 61 mother-child pairs. Some states were as close as New Hampshire, while others were as far as California. Here's where we went to do Viva 7-year visits:

- California
- Connecticut
- Florida
- Georgia
- Illinois
- Maine
- Maryland
- New Hampshire
- New Jersey
- New York
- North Carolina
- Oregon
- Pennsylvania
- Rhode Island
- Vermont
- Virginia
- Washington

During these travels, our staff logged over 30,000 miles—more than the circumference of the earth (24,901.55 miles)! The furthest visits were 3,200 miles away from our home base! We encountered friendly families, many different pets, all types of weather conditions, and wonderful participants. We learned a lot—things like how to get through airport security with all of our equipment, which GPS systems are best, and how to efficiently complete all visit components around kitchen tables and in living rooms. These experiences were fun for staff, improved our follow-up rates that are so important for validity of results, and have prepared us well for future visits.

*In flight with equipment*

Viva thanks all of you who took the time to see us for the Age 7 Visit, as well as those of you who participated only by mail this time. We look forward to future in-person visits and hope that you're as excited as we are! In the meantime, please fill out and return the yearly surveys by mail or via the web. These are really helpful for getting all the needed information between the times we see you in-person.

We would like to see even more of you for our next in-person visit! To do that, it's important for us to have your most up-to-date contact information. To update your email address or any other contact information, please contact us at Project_Viva@ hphc.org. If it's easier for you, call us at 1-800-598-4247 x86067. We hope to see you soon!

***In This Issue:***

# Frequently Asked Questions

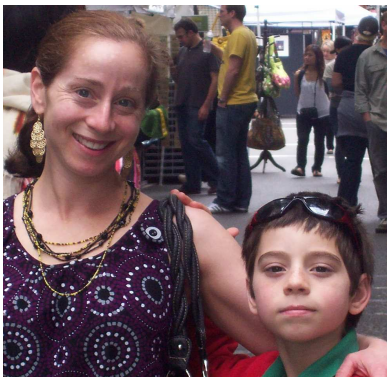
1. **How does Project Viva take into account the season in which we fill out the yearly questionnaire?**
   Project Viva sends out its questionnaires around the time of Viva kids' birthdays. As a result, there could be seasonal differences in reported physical activity time, electronics use or even eating habits. To account for when you complete the survey, we adjust for date of completion in statistical models. This approach allows us to produce results that are independent of these seasonal differences. Please report your answers based on the time frame of the question, and we'll do the rest!

2. **My child is usually very physically active, but broke his or her arm recently. What should I write on the survey?**
   We understand that events like this can limit your child's physical activity for a time. Nevertheless, when completing the survey, please report activity for the time period we specify in the questionnaire.

3. **Why do I still need to answer old questionnaires if my child has already reached his or her next birthday?**
   Every year we introduce new questions and remove old ones. It's important to have complete information on all of our participants which is why we ask you to complete an "old" survey even if your child has reached his/her next birthday.

4. **How much longer is Project Viva going on for?**
   We hope to follow Project Viva participants for as long as we can! In our research, some of the most interesting—and policy-relevant—findings have arisen from following Viva kids until school age. We have applied for further grant funding to follow Viva kids to early adolescence, and expect a new round of informative results.

# Researcher Spotlight—Sheryl Rifas-Shiman & Alec



***Sheryl:***

**How long have you been with Viva?**
I started working on the Viva pilot study called "Pregval" in 1997. I've been working on Viva since it started in 1998. I actually named the study "Project Viva"!

**How did you get involved with Viva?**
While working on Pregval, I finished my degree in epidemiology and biostatistics. Matt asked me to join Viva as the senior research analyst.

**What is your favorite thing about being involved with Viva or about Viva?**
As an analyst, I get to examine the great data collected from Project Viva participants. I feel like I'm putting the pieces of a puzzle together.

My research is focused on nutrition and other exposures that occur during pregnancy and childhood, and the influence of these experiences on the health of both mother and child.

**What did you do before Project Viva?**
Before getting involved in research I was a professional ballet dancer. I danced with Milwaukee Ballet and Pacific Ballet Theatre. Another fun job from my past was playing Elmo on Sesame Street Live!

**What do you like to spend your time doing outside of Viva**
I have a 10 year old son named Alec. We like to travel, go to the theater, and play sports. Alec is into theater and I love watching him perform on stage. In my spare time, I also enjoy choreographing dances for musicals around town.

**How did Alec get involved with Project Viva?**
Alec has been a "pilot" participant for Viva since he was born. As a pilot participant, the research assistants get to practice all of the visit components on Alec before they work with real Viva participants.

***Alec:***

**Do you like being able to test out Viva visit components?**
I like helping the research assistants to learn how to measure. It's fun working with all of the Viva research assistants. When can I come back to work on Viva?

**What is your favorite Viva visit component?**
The DEXA machine was cool. I loved getting a printout of my skeleton.

# Recent Findings

Since Viva began we have published close to 100 original articles in the peer-reviewed medical literature. Project Viva has moved to the forefront of maternal and child health research and is influencing national policies and clinical care. Below are two of our research papers that received attention in the press in the past year.

## Racial/Ethnic Differences in Early-Life Risk Factors for Childhood Obesity

**Voted one of Robert Wood Johnson Foundation's "Most Influential Research Articles of 2010"**

Researchers have found that by the time a child is 2 years old, racial and ethnic disparities in obesity prevalence are already present. The prevalence of obesity at age 2 is higher among minority than white children—10.7% among white children, 14.9% among black children, and 16.7% among Hispanic children. By the way, we define obesity in children by body mass index or BMI—weight in kilograms divided by the square of height in meters. If the BMI is higher than 95% of children of the same age and gender, we call that "obesity."

While higher rates of obesity in young minority children is something that other researchers have found, no one had looked at disparities in the risk factors that can lead to these higher rates. Factors in the prenatal period and infancy set the stage for the development of chronic diseases like obesity. In this study, we found racial/ethnic differences in many early life risk factors for childhood obesity. For example, black and Hispanic women were more likely to begin their pregnancies already overweight or obese. Black and Hispanic children were more likely to have gained weight rapidly in early infancy, and had shorter sleep durations, more televisions in bedrooms, and higher intakes of sugary drinks and fast food during the first 3 years of life. These differences were not explained by any social or economic disadvantage experienced by minority families. It is possible that "weathering" placed on minority women well before conception could explain some of the observed disparities in these risk factors.

Early childhood appears to be a key time period for interventions to prevent the consequences of obesity in children and to reduce disparities. Viva investigators and their colleagues are now doing some intervention trials to test this theory.

*Taveras EM, et al. Racial/ethnic differences in early-life risk factors for childhood obesity. Pediatrics. 2010 Apr;125(4):686-95.*

## Timing of Solid Food Introduction and Risk of Obesity in Preschool Aged Children

**As featured in the Wall Street Journal, New York Times and on National Public Radio and CNN**

Among 847 Project Viva kids, Viva investigators Sheryl Rifas-Shiman (see Spotlight on Sheryl and Alec) and Dr. Sue Huh, a pediatric gastroenterologist, led a team to study how the timing of introduction of solid foods during infancy could influence the development of obesity by 3 years of age. They analyzed infants who were breastfed at 4 months of age (67%) separately from formula-fed infants (33%). At age 3 years, 75 children (about 9%) were obese. Among breastfed infants, the timing of solid food introduction was not associated with the development of obesity. But formula-fed infants with solid food introduction before 4 months had a 6-fold increase in odds of obesity at age 3 compared with waiting until between 4 and 6 months to introduce solids. These findings suggest that for formula fed infants, waiting to introduce solid foods until after 4 months of age could help reduce the risk of developing obesity later in childhood.

*Huh SY, Rifas-Shiman SL, et al. Timing of solid food introduction and risk of obesity in preschool-aged children. Pediatrics. 2011Mar;127(3):e544-51.*

**Be on the look-out for a new Viva website this summer! Visit us at: www.dacp.org/viva/**

# About Project Viva

Established in 1998, Project Viva—"A Study of Health for the Next Generation"—is a groundbreaking longitudinal research study of women and children based in eastern Massachusetts. The aims of the research are to examine how factors during pregnancy and after birth may affect the long-term health of a mother and her child. Project Viva enrolled over 2,100 mothers during pregnancy and has continued to follow them and their children for more than a decade. Matthew W. Gillman, MD, SM, is Project Viva's Principal Investigator. He and his colleagues conduct the study out of the Department of Population Medicine, jointly sponsored by Harvard Medical School and Harvard Pilgrim Health Care Institute. Project Viva is funded primarily by the National Institutes of Health (NIH), with additional funding from the March of Dimes Foundation, the U.S. Centers for Disease Control and Prevention (CDC), and other agencies. The ultimate goal of Project Viva is to improve the long-term health of children by ensuring the well-being of their mothers.

## *Thank You!*

**Thanks to Boston Red Sox, Build-A-Bear Workshop, Whole Foods, Trader Joe's, Zoo New England, Museum of Science & Harvard Vanguard Medical Associates for their generous contributions.**

**Moving?** Please call us with your new address and phone number at 1-800-598-4247 ext. 86067 or email us at Project_Viva@hphc.org

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