



Newsletter

March 2016

WIND STUDY PROGRESS

Thank you for your continued participation in the WIND Study! Whether your child is almost 2 years old (the youngest in our study) or just over 5 (the oldest), we truly appreciate everything you have done to stay involved. Currently, we are following about 900 kids from 39 states across the country, plus several who now live abroad!

We have some exciting projects in the works! We plan to publish several research papers soon that explain some of the study's early results. For example, one paper focuses on tests that we did with nasal samples provided when your child was hospitalized with bronchiolitis. We found that the two most common viruses that cause bronchiolitis – respiratory syncytial virus (RSV) and rhinovirus – were associated with very different kinds of nose and throat bacteria, when one might expect these viruses to show the same kinds of bacteria because they both cause bronchiolitis. While this does not reveal the whole picture of how bronchiolitis might be caused, it helps us understand more of the biology behind this very common disease in order to one day potentially prevent it.

These findings will be published in the *Journal of Allergy and Clinical Immunology*. If you ever want a copy of one of our WIND Study papers, please write to us and we'll send a PDF version to you!

"I like that you guys are very thoughtful and are always sending nice reminder gifts to my son. It's really sweet that you keep tabs on him, and it makes him feel special even though he doesn't really know what's going on. I know that RSV is common, and I just hope we can find a cure so fewer babies have to deal with it." - WIND Study Parent

CONTACT US!

Do you have questions about the WIND Study? Did you recently move, or change your phone number or e-mail? Please let us know so we can stay in touch. Call or e-mail us anytime.

855-815-WIND (9463)
windstudy@partners.org
www.windstudy.org
<https://www.facebook.com/windstudy>

MISSING THE SNOW?

Here are a few inexpensive activities for you to try this March as the winter months come to a close.



Q-TIP PAINTED SNOWFLAKES: Have your child cut a piece of blue construction paper into several vertical strips. Then, tell them to arrange the blue strips of paper at varying angles in a circular fashion before gluing them together at the center so that they make a snowflake. While your child is

gluing the snowflake together, pop some white and silver paint onto a plate and add a Q-Tip to each color. Now, your child can use the Q-Tips to paint and design their own snowflake.



MARSHMALLOW SNOWMAN: Draw the outline of a snowman on a piece of construction paper and then add glue along the outline. Have your child decorate the snowman's face with black marker for the buttons and orange construction paper for a carrot nose, and then instruct them to place marshmallows on the glue outline in order to complete their very own marshmallow snowman.



MASON JAR SNOW GLOBE: This simple craft is a sure way to entertain your child. First, super glue a small toy of your child's choice (e.g., a snowman figurine) to the bottom of a Mason jar. Once the glue has dried, have your child add snowflake confetti, glitter, and water to the Mason jar. Tell your child to close the lid and shake the Mason jar to stir the contents, and

watch their fascination as their very own winter wonderland unfolds inside their Mason Jar snow globe.



IN-DEPTH: THE "HYGIENE HYPOTHESIS"

During phone interviews, we ask several questions that allow us to have a better idea of your child's living environment. These questions touch on factors such as in-home cleaning product usage, time spent on farms, and whether your child attends day care or preschool. These questions help us understand just how "clean" your child's living environment is.

These questions relate to a popular idea in medicine known as the "hygiene hypothesis," which suggests that children can indeed be too clean! According to the hygiene hypothesis, insufficient exposure to bacteria and viruses during childhood can actually increase the chances that a child gets an allergic disease by changing the natural development of his or her immune system. Moreover, we now know that there are lots of good and bad bacteria on (and in) every human body, and that lifestyle changes to a more "hygienic" way of living (such as less exposure to farm animals) have resulted in decreased exposure to the good bacteria that can be important for good health.

Recent research shows that 3-month-old infants who were at high risk of asthma had lower levels of four specific types of



bacteria in their digestive tracts [1]. These scientists also found that mice that had these four bacteria injected into their gut developed less severe asthma, a finding that supported what they had observed in the 3-month-old infants. This complicated but fascinating study provides support for the idea that bacteria in an infant's gut can play a role in asthma early in life when the child's immune system is still developing. However, this discovery could also lead to new ways to prevent asthma, such as a bacteria-based treatment for infants to help prevent the unhealthy sequence of events. In the WIND Study, we have collected lots of nasal swabs and are looking at bacteria in these swabs. We think these bacteria will be more relevant to respiratory disease than those in the gut, but we shall see... Stay tuned!

With your help, we are optimistic that the WIND Study will help us learn more about the relationship between the cleanliness of a child's living environment and asthma, including the role of the abundant bacteria found in every person's nose.

[1] Arrieta, M-C, et al. Early infancy microbial and metabolic alteration affect risk of childhood asthma. *Science Translational Medicine*, 2015; 7, 307.

GET TO KNOW: LINDA TILME



Linda Tilme is a lead study coordinator in the Department of Pediatrics at Arnold Palmer Hospital for Children in Orlando, one of the 17 hospitals where children were enrolled in the WIND Study. She helps manage four different departments – pulmonology, endocrinology, gastroenterology, and infectious disease – and has been working in the field of medical research for nearly seven years.

Linda's main research interest involves clinical trials. "It's interesting to see the difference that clinical trials can have in patients from start to finish," Linda said. "It's rewarding to see positive patient responses from the observational / clinical side of things, as well as from the investigational drug side." This research background may have contributed to her decision to enroll her daughter in the WIND Study!

"I love doing work for the WIND Study because it's just a positive way to see that someone on the other side of things cares for the patients," Linda said. "As a research coordinator, I am able to oversee the whole research process, and I feel the WIND Study research is important because it allows parents to be a part of the child's care from the beginning."

In her free time, Linda enjoys spending time with her kids. "I'm always watching movies with them, and taking them to places like Chuck E. Cheese and Disney," Linda said. "They're too young to go on rides, but they love the Magic Kingdom Theme Park!"