



We bet you're all looking forward to spring as much as we are! In celebration of spring and COAST III, we're throwing our **4th Annual Gymfinity Party!** We will also provide a light snack and beverages. Mark your calendars for:

Sunday, June 8 2008

2-4pm

(invitation to follow)

Please RSVP to us by Thursday, May 29 (call us at 263-8539 or toll free at 1-877-947-2229; e-mail: coast@medicine.wisc.edu). We hope to see you there!

New Procedures for COAST/New COAST sub-studies:

Because we have entered COAST III, that means there are some new procedures and study opportunities to mention. The additional procedures start with the 9 year COAST visit:

- 1) Skin Prick Testing. This was performed at the 5 year visit, but we're repeating it again at age 9. This will be very helpful to us, because many allergies can grow and change with age!
- 2) Plethysmography. This is another type of breathing game, which should only take about 15 minutes. Our 9 year olds will sit in a box that's like a phone booth (see picture at right), and complete similar breathing tests, as they have since they were four. This glass "box" will help us measure lung volumes.

At the 10 year visit, there will also be a new procedure:

- 1) Sputum Induction. This will help us obtain lung cell samples. The 10 year olds will breathe in a salt water mist for 12 minutes, and then are asked to cough and spit into a Petri dish.



COAST III also has several new optional studies that may be offered to some of you, based on history of wheezing and viral exposure. These studies include:

- 1) Serial Nasal Sample Study (RhinoGen/SeaSONs). This includes obtaining a series of nasal samples at home, which will help us evaluate how participants with and without asthma respond to the Rhinovirus. So far, we have 115 participants in the current series. Thank you to those of you for helping us learn more about Rhinovirus!!
- 2) MRI. This will involve breathing in a special gas while in the MRI scan that will show how air fills different parts of your lungs. Research shows that air fills the lungs differently for people with and without asthma. We are starting to do these around the 9 year visit.
- 3) Methacholine bronchoprovocation test. The kids will breathe Methacholine in increasing amounts, to test airway hyperresponsiveness. We hope to do this testing at age 13 years. This test will help us classify asthma severity.

AAAAI 2008 Annual Meeting

As you may have heard, COAST staff recently presented the COAST and T-Reg (vacuum study) data at the AAAAI (American Academy of Asthma, Allergy and Immunology) annual meeting in Philadelphia, PA. We'd like to thank you so much for all the information you've provided us with! We had 11 members of our COAST/T-Reg team present their research findings based off of your help. Here is what we found:



Beth A. looked at the sick nasal samples collected in the first 2 years of life. We found that spirometry results at age 6 years were related to wheezing with Rhinovirus in the first 2 years of life. Children with asthma who wheezed with Rhinovirus were more likely to have impaired lung function at age 6 years.

Nick H. looked at signaling chemicals in the blood called cytokines and how their levels differ between children who have allergies and those children that do not have allergies. We looked at three different cytokines: interleukin-5, interleukin-10, and interferon- γ we found that both groups of children cytokine levels looked the same through age 3 years, however at age 5 years children who had allergies had higher levels of cytokines in their blood.

Dr. Dan J. looked at children who wheezed with Rhinovirus in the first 3 years of life. He also looked at allergic sensitization during that same time period. We found that nearly 90% of children who wheezed at age 3 with Rhinovirus developed asthma by age 6 years. We found that both allergic sensitization and Rhinovirus wheezing are risk factors for the development of asthma at age 6 years.

Dr. Woo-Kyung K. A group of children with asthma from the community participated in the T-Reg study. The study involved a collection of dust vacuum samples from the home, one clinic study visit at the UW Hospital and two nasal sample series at home during the fall and spring seasons. Children and their parent's completed the spring 2006 nasal sample series for this analysis. We found that nearly all children got sick with a virus during the 6 week home nasal sample collection period, and most of the

illnesses were symptomatic. We also found that these illnesses affected the children's asthma symptoms.

Tressa P. COAST Children with asthma had many more moderate to severe illnesses in the first 3 years of life compared to children without asthma, although all children got the same types of viruses. Children with asthma also had many more wheezing illnesses in the first 6 years of life caused by a variety of viruses; however, Rhinovirus (the common cold virus) was the main cause of wheezing in all years.

Michael P. looked at important viral and bacteria fighting molecules in the blood called immunoglobulins and how they relate to wheezing illnesses. We looked at three different classes of immunoglobulins: IgA, IgG and IgE, and found that wheezing illnesses before age 2 years did not influence the levels of immunoglobulins at 2 years of age. Also, among immunoglobulins at age 2 years only IgE predicted wheezing in subsequent years.

Kathy R. looked at medication use in early childhood related to the development of asthma at age 6 years. We found that antibiotic use in early childhood was not related to the onset of asthma. The use of motrin and/or combination antihistamine/decongestant in early life, however may be a marker of asthma severity or may be associated with an increase risk of asthma by age 6 years.

Lisa S. also looked at Dr. Gern's environmental study, but from the fall 2007 series. We found that those children who reported on their diary cards two or more days with moderate or severe cold symptoms had an increase in their Exhaled Nitric Oxide (eNO) levels than children who reported no cold symptoms. There were no differences in the children's Spirometry testing or breathing regarding presence or absence of cold or asthma symptoms.

Kate S. looked at food-specific IgE levels in year 1, and its association with the development of asthma at age 6 years. We found that positive levels of milk and peanut-specific IgE was a potential indicator of asthma at age 6, but the greater the amount of egg-specific IgE was an indicator of a greater risk of asthma at age 6 years.

Christopher T. Allergic disease has a strong familial inheritance pattern. In COAST we found that children with one parent having high IgE levels had higher IgE levels. We also found that if both parents were sensitized to dog, ragweed, *Alternaria* (a mold), or cat, their children were much more likely to be sensitized to them as well.

Dr. Christine V. wanted to find out whether eNO levels (from the "Dora" game) were associated with allergic diseases such as allergies, asthma, and eczema. We found that eNO levels were much higher in kids who had allergies - both those with positive skin prick tests and those with positive RAST tests (the blood tests for allergies). eNO levels were not higher in kids with eczema. eNO was also not higher in kids with asthma, unless they also had allergies.

*Three other members of our team will also be presenting data at the ATS (American Thoracic Society) meeting in Toronto, ON in May!

Where in the world are Dr. Rob and Dr. Jim?

Dr. Rob and Dr. Jim have had a busy year presenting COAST and RhinoGen data. Collectively, they have been to at least 16 states, and even worldwide presenting the data that YOU helped us learn!

- **Dr. Rob Lemanske** has presented our data in South Korea, Toronto, Amsterdam, Thailand, Chile, Spain and Sweden.
- **Dr. Jim Gern** has presented our data in Mexico, Portugal, Amsterdam and Singapore.

Both Dr. Rob and Dr. Jim are very thankful for all your help!

World Asthma Day

World Asthma Day is an important day on the 6th of May, which is Asthma Awareness Month. This year's theme is "you can control your asthma."

Camp WIKIDAS (WISconsin KIDS with ASThma)

Camp WIKIDAS is a summer camp for children between the ages 8 and 13 years with asthma, and on a daily asthma controller medicine. The camp is in Wisconsin Dells from June 22-27. The children participate in a variety of activities, such as canoeing, kayaking, arts and crafts, ropes courses and sports as well as attend instructional sessions on how to control asthma in daily life. Registration deadline is May 30, 2008.

To learn more, contact:

Theresa Sandy, American Lung Association

Phone #: 1-800-586-4872

Website: www.wisconline.com/attractions/camps/wikidas.html

Staff comings and goings

- **Michael** will be leaving us in the summer to attend UW Madison's Medical School in the fall. We wish him the best of luck!
- **Chris K.** will also be attending medical school in the fall. We thank him for a great year working with us!
- **Nick** will be joining Michael and Chris at Medical School this fall. Congrats to all of them!
- Congrats to **Lisa**, who will be attending grad school at UW Whitewater in the fall! She will still be working part-time with us.
- **Haley**, one of our students, spent the past three months working in a children's hospital in South Africa, but will be back to work with us this spring.
- **Steff** is studying abroad "down unda' "in Australia until June, but will be back to work with us this summer.
- **Douglas** will be coming back to us this summer! He spent the last year working for COAST in London, England. We missed him and are excited for him to move back to Madison!

Sick Visit Reminders

After this long winter, we are finally nearing the end of the peak respiratory illness period! If your child does catch a cold, remember to please contact COAST at 263-8539, or toll-free at 1-877-947-2229. Otherwise we hope you enjoy the spring!



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