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Learn more at a community forum



COMMUNITY
ADVOCATES

UNIVERSITY OF
Cincinnati

Greetings! We are pleased to share with you our first Growing Up Female newsletter.

This newsletter was developed because of your input!

We plan to publish it twice a year (winter/spring and summer/fall). We welcome your comments and suggestions. Please send them to growingupfemale@uc.edu or call

us at (513) 558-0854. If you want to receive the newsletter electronically, please send us your e-mail address and your child's name. ■

The Survey Says...

Last August, we mailed to you a survey. We wanted to know what information you would like to receive about the study and how you preferred to receive the information. More than half of you responded to this survey. You told us that it was hard to find time to attend family meetings. You wanted to receive study results and related information in a newsletter. Here's Issue 1.

We mailed you a copy of the survey results in December 2008. Now we want to respond to some of your questions.

What's planned for the last two years of the study?

Study visits will continue as usual through Summer 2010. Discussions are underway with the National Institutes of Health for continued funding beyond next summer. We are encouraged by the interest expressed by the funding agencies.

How can I learn my daughter's individual results? I want to be sure she is within normal ranges.

There are procedures in-place to notify families of results that are outside normal ranges. In the past, families have been notified when their child's results on a blood pressure measurement or psychosocial questionnaire required follow-up.

At the family meetings in 2007, the

findings of two pilot studies were presented. Individual results for the girls involved in the studies were provided to their families. In 2008, we provided you with your child's growth chart and her BMI scores.

Since the study is about the onset of puberty, we have to wait for the girls to reach puberty before we can start looking backwards for the important changes. To date, urine samples from the first year of the study have been analyzed. We are carefully prioritizing samples before samples are analyzed.

This newsletter is another way we plan to communicate with you about the Growing Up Female study findings.

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*Please see **The Survey Says** on page 3*

LET'S LOOK AT SOME STUDY FINDINGS

Hormone Differences Among Girls Entering Puberty

Frank Biro, MD



I would like to share some early results about hormone levels in the blood of 175 girls in our *Growing Up Female* Study who had entered puberty as of Spring 2008. We measured the levels of estrogen and related hormones at 6, 12 and 18 months before puberty and at puberty. We are trying to determine how hormone levels change in the months prior to the onset of puberty.

We have analyzed these hormone levels in association with other clinical measures. At each visit, we measure the girls' weight and height and examine them for initial signs of puberty (breast or pubic hair development). Body mass index (BMI) is calculated using the weight and height measures. We found that girls who had breast development first had a larger BMI.

Surprisingly, we did not find that girls with breast development first had higher estrogen levels. But we took another look and analyzed the relative levels of other hormones related to estrogen (estrone and estradiol). Now we found that girls with breast development first had higher estradiol:estrogen and estradiol:testosterone ratios in the time leading up to puberty than those who had pubic hair development first.

In other words, there are differences in the proportions of estrogen-related hormones in the months leading up to puberty among girls with breast development as the initial sign of puberty compared with girls exhibiting pubic hair first. These findings are consistent with our hypothesis that there are at least two pathways through puberty. To our knowledge, this is the first time anybody has demonstrated these types of research results with girls going into puberty.

We could not have verified our hypothesis without you and your daughters' help. Please know you and your daughters are making a difference. Thank you! ■

Dr. Biro will be speaking more about this research at a community forum on March 28.
For more information see page 4.

Estrogens are the family of hormones that promote the development of female secondary sex characteristics such as breast and uterine growth, hip structure, etc. The estrogen family of hormones includes estrone, estradiol and estrinol.

Testosterone is a hormone. In females, it's important in metabolism and the development of muscles and the skeleton.

Body Mass Index (BMI) is a measure of body fat based on the weight and height of the individual.

The **onset of puberty** is defined as the first signs of breast growth, including widening of the areola and palpable breast buds, and/or the appearance of pubic hair.

In each issue we will present information from Cincinnati and the other study sites.

STUDY STATS

Charting the Beginnings of Puberty

Tanner Staging is one way researchers can measure girls' progress through puberty. It is a standardized way to evaluate what are called female secondary sex characteristics: breast development and pubic hair. The onset of puberty is defined as the appearance of one or both of these characteristics. In Tanner Staging, this is called B2+. The absence of these characteristics is denoted as B1. All of the girls recruited for the study were evaluated using Tanner Staging. From this information, we learned that 14% of the girls were already entering puberty when they enrolled in the study.

Percent of Girls In Puberty at the Start of the Study

Tanner Staging	Cincinnati (378 girls)	California (441 girls)	New York (416 girls)	All Sites Combined
B1	86%	93%	79%	86%
B2+	14%	7%	21%	14%

For more information about Tanner Staging go to:
<http://www.fpnotebook.com/Endo/Exam/FnrStg.htm> or
<http://www.breastcancerwatch.org/research/tannerstaging.pdf>

The Survey Says...

continued from the front page

Why are pop tarts served to the girls after their blood is drawn? Why aren't healthier foods served?

The pop tarts are a quick source of sugar for the girls. Having fasted overnight and once the blood sample has been drawn, it is important that their blood glucose levels be replenished quickly. A sugary snack and fruit juice are what the doctor ordered! It's for this same reason that when adults donate blood (like at Hoxworth), you are encouraged to eat cookies, fruit juices and sodas.

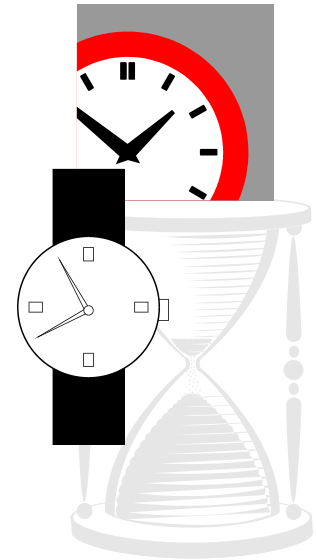
We are looking into other foods that might be used to supplement the pop tarts; string cheese is an option. Transport and refrigeration of snacks remain a challenge. If you prefer to pack alternative foods, please remember to include foods that provide a quick burst of sugar like fresh fruits.

Can the study visits be more efficient? I feel like a lot of time is wasted.

Thank you for this important feedback! We are modifying how we conduct the study visits in the schools. At our school visits, fewer girls are being excused from their classrooms at the same time. This cuts down on the amount of time the girls are away from their classes.

Last fall we started making changes to the procedures for our Saturday visits at Children's Hospital. This has resulted in markedly shorter study sessions. We are making some changes in our staffing as well which should help to limit the time you wait between study stations.

We welcome your suggestions for improving the efficiency of our study sessions. ■



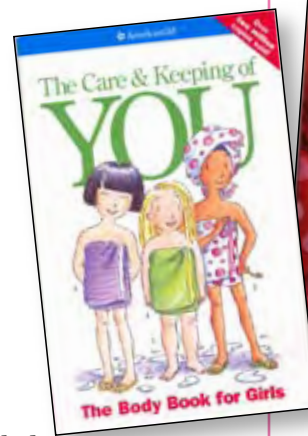
How can I discuss puberty with my daughter?

This is a conversation that takes place over time. Dr. Louise Greenspan, MD, is a pediatric endocrinologist at the Kaiser Permanente San Francisco Medical Center and a researcher with the Cygnet Study in California. Her recommendations are:

- Use your daughter's interest level in the subject matter as a guide.
- Put the discussion of puberty into the context of general health, growth and development.
- For most girls, using correct anatomical terms can make it easier to talk about.
- Most girls just want to know they are normal and what will happen next.

Here are some more suggestions that may help you with your discussion.

- **Look again at the two books given to study families:**
The Care & Keeping of YOU: The Body Book for Girls by Valorie Lee Schaefer, published by American Girl (1998).
Real Beauty: 101 Ways to Feel Great About YOU! by Therese Kauchak, published by American Girl (2004).
- **Check out a new book:** *Taking Care of Your Girls: A Breast Health Guide for Girls, Teens and In-Betweens* by Marissa Weiss and Isabel Friedman, published by Three Rivers Press (2008). The book has a related web site at <http://www.takingcareofyourgirls.com>
- **Consider attending a community forum on March 28th.** The program includes a panel discussion with local experts entitled *Talking with Our Daughters About Breast Health—An Open Discussion with Health Professionals*. You can learn more about this event on the back page of this newsletter. ■



[Reprinted from Cygnet Taking Flight Newsletter, Winter/Spring 2008.]



**Thank YOU!
Thank YOU!
Thank YOU!**

You are the most important part of the Growing Up Female study!

By learning about what you eat, how you grow and what is happening in your body, we can help girls become healthy women! Some girls are seen in their schools for their study visit and some go to Children's Hospital on a Saturday morning for their visit.

Where ever we see you, we thank you for being you. We could not have our study without you! ■

[From Butterflies and Blood? by Louise Greenspan, MD and Gayle Windham, PhD. Cygnets Taking Flight Newsletter, Summer 2006.]

■ LET'S TALK ABOUT...

Giving Blood

Why do I have to give blood?

We want to get samples of your blood (and your urine, too) because we want to know if there are chemicals in your body that might affect your health.

The chemicals might be from the air or water, from your food, or from other things we use all the time.

Everyone has some of these chemicals because they are used to make many things, but some people may have more or less than others.

These chemicals may be telling your body to grow up too soon.

Without your blood, we won't know how much of these chemicals are in your body. ■



It Takes Just **3** Easy Steps

- 1. Keep warm.** In the wintertime, wear a sweatshirt or a long sleeved shirt the day of your visit.
- 2. Drink water.** It will help to dilate (expand) your veins.
- 3. Relax!** Listen to music or take deep breaths. This will help calm you down if you are nervous.

Got Butterflies? Your brain and your body are like best friends. They tell each other almost everything. When something happens around you or to you, **your brain receives the message and tells your body how to react**—sometimes before you even realize it. That's where those butterflies in your stomach come from.

[From The Feelings Book: The Care & Keeping of Your Emotions by Dr. Lynda Madison. American Girl, 2002.]



Here's one way to calm those butterflies.

It's called **SQUARE BREATHING.**

- Breathe in slowly to the count of five.
- Hold your breath to the count of five.
- Exhale slowly to the count of five,
- Breathe normally to the count of five.
- Repeat this sequence five times, or as many times as needed until you feel calmer. ■

I want to know...

Why can't I eat breakfast before my visit?

Our goal is to understand what is happening in your body. If you eat breakfast before your visit, the food makes it harder to see the real you. There are chemicals in your body, like insulin, that can change because of what you eat for breakfast. So the best way to see what is happening in your body is to be breakfast free.

After all, we aren't studying Cheerios, we're studying YOU!

Why is it okay to have Pop-Tarts after a visit but not every day?

When we draw your blood, your body loses energy. So it is important that your body get refueled, like a car. A sugary snack is the fastest way to do this. On a normal day, you don't need this sugary boost. So remember... a healthy, balanced diet will provide the energy you need. ■



On the other 363 days of the year our motto is:

Eat your breakfast!

It's the most important meal of the day! Breakfast is the fuel that gets you going.

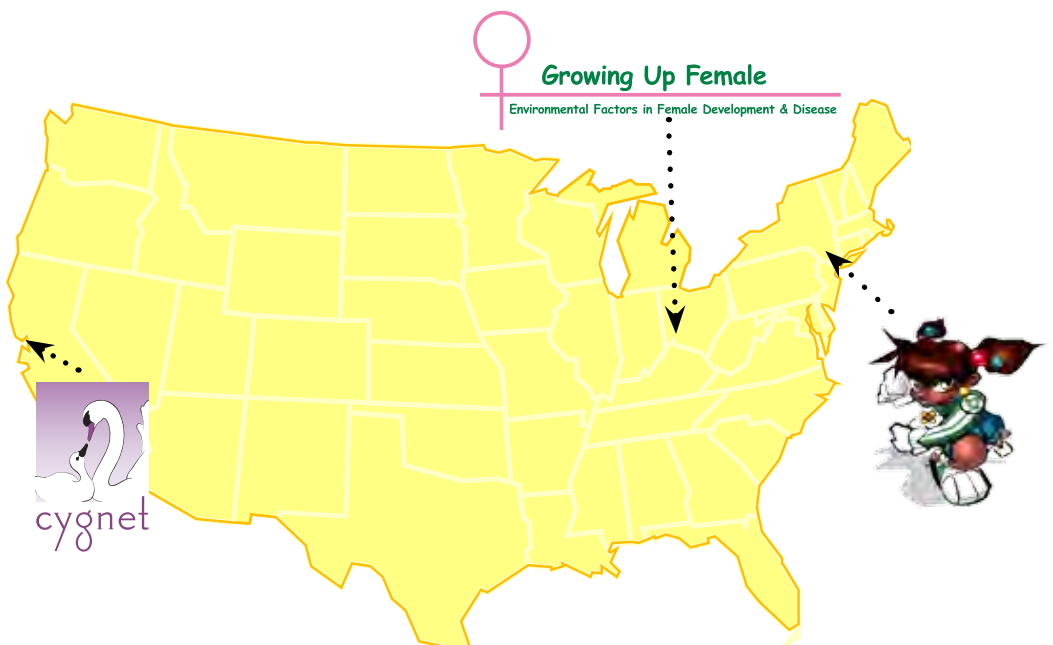
Just like with other meals, try to eat a variety of foods:

- grains (breads and cereals)
- protein (meats, beans, and nuts)
- fruits and vegetables
- milk, cheese, and yogurt ■



Be Proud! **You** are part of a national study that includes 1239 girls.

Girls in New York and California participate in studies very similar to Growing Up Female. The study in New York City is called Growing Up Healthy and the study in the San Francisco area is called Cygnet. As you can see, each site has its own logo. ■



Studying Early Environmental Exposures

Cincinnati is one of four **Breast Cancer and the Environment Research Centers (BCERC)** throughout the United States funded by the National Institute of Environmental Health Sciences and the National Cancer Institute.

The Cincinnati Breast Cancer & the Environment Research Center (BCERC) is a joint effort of researchers from the University of Cincinnati (UC) and Cincinnati Children's Hospital Medical Center (CCHMC) with local breast cancer survivors and their advocacy, support and service organizations. Together, we are studying:

- the development of the mammary gland and how/when it is affected by environmental agents using biology studies;
- how environmental and genetic factors affect the start of puberty in young girls using epidemiology studies; and
- how best to educate breast cancer advocates, study participants, the public and policy makers about the research findings and their implications for personal health and public health policies.

Cincinnati is one of four BCERCs throughout the United States funded by the National Institute of Environmental Health Sciences and the National Cancer

Institute. The other Centers include University of California at San Francisco, Fox Chase Cancer Center in Philadelphia, Pa. and Michigan State University. There is not a study of young girls at the Michigan Center.

The goal of this research is to understand how early environmental exposures impact pubertal maturation, development of the mammary gland and breast cancer. BCERC researchers are studying these subjects because early puberty is a risk factor for breast cancer in women. ■



News for Parents

Growing Up Female

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You Are Invited

Saturday, March 28, 2009

8:00 a.m.–12:30 p.m.

UC Genome Research Institute, 2180 E. Galbraith Road, Cincinnati

Looking Upstream for Environmental Links to Breast Cancer

A Cincinnati BCERC Community Forum

A partial listing of presentations includes:

- **Bisphenol A (BPA) and Your Health:** An Update
- **Growing Up Female Update:** Preliminary Data on Study Girls Entering Puberty
- **Talking with Our Daughters About Breast Health—** An Open Discussion with Health Professionals

A poster session will present BCERC research.

Cost is \$15.00 which includes breakfast.

Nursing CEUs are pending.

For more information call (513) 558-0854.

