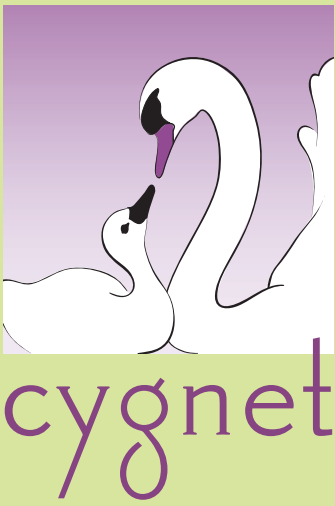


# CYGNET Taking Flight

Cohort Study of Young Girls' Nutrition, Environment, and Transitions

WINTER/SPRING 2010



## Greetings from the CYGNET Study

By Lawrence H. Kushi, Sc.D.

**G**reetings to our CYGNET Study families! As you know, we continue to see our study participant girls every year. Of the 444 girls enrolled, 391 had a visit last year, and several more families provided updated questionnaire information. We hope to meet or exceed these numbers this year, and we are doing well with 261 girls seen so far.

We are grateful for your continued participation, and I want to thank you personally for your high level of commitment to this study. Such dedication, with at least 90% of families participating, has impressed our funders at the National Institute of Environmental Health Sciences and the National Cancer Institute. They were so impressed that they released a "Limited Competition" request for applications to continue our study.

The only studies eligible to apply were the CYGNET Study, and our two companion studies in Cincinnati and New York. We submitted our application in December and expect a response in March. If successful, we will be able to continue seeing the girls not just to track the onset of puberty, but through all the physical and social hallmarks of maturation for several years. This study has been a true partnership between you and our study staff and researchers who are working with you to make this as informative for you and the general public as possible.

One way we gain input from you is by holding biannual "Tea Talks," where we present a topic of relevance to the study and provide you with study updates. The Tea Talks are also an opportunity for you to interact with study investigators and ask questions about the research. For our next Tea Talk, we are excited to host Julie Metzger, a pediatric nurse from the Children's Hospital in Seattle. She developed a program and curriculum on puberty and growing up called "For Girls

*Only: A Heart-to-Heart Talk about Growing Up.*" Ms. Metzger has worked with the Lucille Packard Children's Hospital at Stanford, and will present this program just for CYGNET Study families.

From our Tea Talks, we heard that you are interested in obtaining your daughter's individual results from the analysis of chemicals that we tested at the Centers for Disease Control and Prevention. A subset of data we are now analyzing was recently published in the scientific journal, *Environmental Research*. These findings are described in more detail on page 2 in this newsletter.

We are now developing materials to provide your daughters' individual results to you, which will include not just her exposure levels, Body Mass Index (BMI) and Tanner staging results, but numbers from the CYGNET Study and national or other data. All these data will be included so you have a basis for comparison, possible sources of exposure, and ways you can reduce your exposure. We want you to know that research on these exposures has not found clear health effects and we cannot interpret the results. You should expect to receive a letter in a couple of months asking whether you would like to receive these results. If so, we will provide these to you, and also hold a meeting to discuss an overview of the findings and answer your questions.

Along with your daughters, our study has matured to the point where we are now describing and reporting on our initial findings. The promise of this study to deepen our knowledge of the role of the environment on maturation is being realized. We look forward to continuing this partnership with you in the years to come.

**Lawrence H. Kushi, Sc.D.**, Associate Director, Division of Research, Kaiser Permanente, is the Principal Investigator of the CYGNET Study.

**INSIDE:** page

<i>Healthy Weight Gain Is Normal and Expected During Puberty</i>	2
<i>CYGNET Study Research Findings</i>	2
<i>Spring and Summer Are Great Times for Farmer's Markets</i>	3
<i>Meet Morola!</i>	3
<i>CYGNET in 2010 and beyond...</i>	4
<i>Girls Only: A Heart to Heart Talk on Growing Up</i>	4
<i>Recapping the 2009 Fall Tea Talk</i>	5
<i>For Girls Only: A Heart to Heart Talk on Growing Up</i>	5
<i>Spring 2010 Spring Tea Talk</i>	6

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## Healthy Weight Gain Is Normal and Expected During Puberty

by Louise Greenspan, MD & Julianna Deardorff, PhD

This is a time of many physical changes. During puberty, all girls grow and gain weight; however, this happens at different ages and rates for different girls. As a result, many girls notice that they look different from their peers. Girls tend to gain weight and body shape the year before they get their period, but some gain more or less than others. In fact, not gaining weight can prevent puberty from progressing normally. It is important to understand that weight gain is all part of the healthy and normal changes that occur at this age.

In the CYGNET Study, we keep track of weight gain and growth by monitoring the Body Mass Index (BMI), which is calculated from a child's weight and height and is one indicator of body fatness. It is important to note that BMI may over-estimate body fat in athletic girls. BMI is often plotted on a growth chart to show change over time and to compare to other girls the same age. Girls who go through puberty early may have an earlier rise in BMI, and conversely, late bloomers may have a lower BMI compared to their peers. These differences are normal.

Because of the changes associated with puberty, many girls struggle with body image. The media plays a large role in fostering this body dissatisfaction. Parents can help counter the effects of the media by teaching their daughters to think critically about media portrayals of body size and composition and how unrealistic they are. Also, it's important for parents to help their daughters recognize that bodies come in all shapes and sizes and that this diversity should be celebrated. Your daughter needs your help to identify her strengths and to focus on what she likes about herself.

Parents and caregivers also set examples for their daughters. You can help your daughter establish a positive body image by improving and/or maintaining your own positive body image. It's important for your daughter to know that you respect your body from a perspective of health and wellness. You can do this by emphasizing healthy eating (as opposed to dieting) and modeling healthy levels of activity and exercise.

- Let your daughter know that weight gain is a normal part of growth, especially during puberty.
- Avoid negative statements about food, weight, and body size and shape.
- Let your daughter make choices about food. Offer her healthy and nutritious meals and snacks.
- Praise your child for her many activities, talents, and accomplishments.
- Watch TV with your daughter and discuss the images you see.
- Encourage your daughter to get regular exercise—try going on a family walk together.

The above tips are from SAMHSA:

[http://family.samhsa.gov/be/gnb\\_image.aspx](http://family.samhsa.gov/be/gnb_image.aspx)

**Louis Greenspan, M.D.** is a Pediatric Endocrinologist and clinician who practices at Kaiser Permanente San Francisco Medical Center.

**Julianna Deardorff, Ph.D.** is an Assistant Adjunct Professor for the Division of Cancer Epidemiology at the University of California, San Francisco.

Both are co-investigators with the CYGNET Study.

## CYGNET Study Research Findings

by Gayle Windham, PhD and Casandra Aldsworth, M.P.H.

Thank you for continuing to participate in the CYGNET Study. When your daughters visit the clinics, urine, blood and saliva samples have been collected. We collected these specimens to learn more about environmental exposures and how these exposures might influence breast development and onset of menarche.

Many of you have asked us to keep you informed about the research findings. So we would like to tell you about a study<sup>1</sup> recently published, which reports on CYGNET data, led by Dr. Gayle Windham. This initial CYGNET study compared levels of chlorinated chemicals used as flame retardants (PBDEs), pesticides like DDT and polychlorinated biphenyls (PCBs) in CYGNET girls and girls in Ohio who participate in the national Breast Cancer and the Environment Research Centers (BCERC). Blood samples of girls who provided one were analyzed at the national Centers for Disease Control and Prevention (CDC). Our girls in California had higher than average levels of PBDEs than girls in Ohio, even when accounting for other factors. Racially, Blacks had higher average PBDE levels than Whites and Hispanics had intermediate values. PBDE levels were lower among more obese girls, but did not vary much by other factors. Compared to the National Health and Nutrition Examination Survey (NHANES), the average levels of PBDEs in the girls in our study were higher, while levels of PCBs and pesticides were similar. Unlike PBDEs, Blacks had lower levels of PCBs and DDE than Whites in our study.

Although research on these environmental exposures has not found clear effects on health, concern is growing because they persist in the environment and may act like, or interfere with, hormones in the body. Hormones influence many physiological functions, including the reproduction system and growth and development in children. We will look at these possible effects in this study, as our next step. The current report only used grouped data; as explained elsewhere in this newsletter, we will provide you with individual results for your daughter soon.

Some of these chemicals measured in the study were banned in many Western countries (such as the pesticide DDT and PCBs) but they stay in the environment for many years. Unlike other states, California has a history of more stringent regulations regarding flammability of upholstered furniture that require the addition of flame retardants, such as PBDEs.

To minimize exposure to PBDEs, you can identify items in your home that may contain PBDEs such as foam items and furniture purchased before 2005. Using a HEPA-filter on your vacuum can decrease dust in your home. To reduce exposure to pesticides, you can wash and peel produce, buy organic produce, and use integrated pest management principles. By decreasing high-fat fish and meat intake and avoiding contaminated soil and sediments you can reduce exposure to PCBs.

<sup>1</sup>**Gayle C. Windham, Susan M. Pinney, Andreas Sjodin, Raymond Lum, Richard Jones, Larry Needham, Frank M. Biro, Robert Hiatt, Lawrence H. Kushi, Body Burdens of Brominated Flame Retardants and Other Persistent Organohalogenated Compounds and Descriptors in U. S. Girls. Environmental Research 2010. doi:10.1016/j.envres.2010.01.004. On-line pre-publication, expected in print in April or May.**

**Gayle Windham, Ph.D.** works in the Environmental Health Investigations Branch of the California Department of Health Services and is a CYGNET Study co-investigator. **Casandra Aldsworth, M.P.H.**, is the Community Outreach and Education Coordinator for BABCERC.

## Spring and Summer Are Great Times for Farmer's Markets

Farmer's Markets provide local produce to communities around the Bay Area. Buying local produce is healthful because it is fresher and often pesticide and chemical-free. It supports the business of local farmers. Sometimes Farmer's Markets can be pricey but they are also just fun to walk around and see all the different fruits and veggies and sometimes even the chickens where the eggs come from. You could even try some exciting samples of foods you may never have had before!

Here are some popular farmer's markets around the Bay:



### EAST BAY

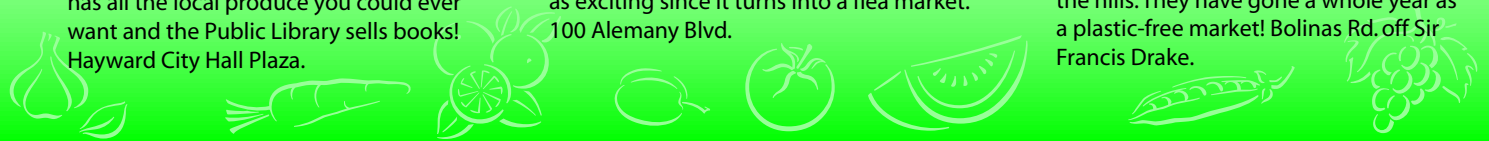
- The Grand Lake Farmer's Market on Saturdays from 9am to 2 pm in Oakland is known to some as the best Farmer's Market. You can even splash around in the Splash Pad Park fountain. Splash Pad Park on the corner of Grand and Lake.
- The Richmond Farmer's Market on Fridays from 11pm to 5pm has lots of exciting produce and you might even spot some chickens who are laying the eggs fresh to be bought! Civic Center Plaza Drive and McDonald Ave.
- The Hayward Farmer's Market at City Hall Plaza on Saturdays from 9am to 1pm has all the local produce you could ever want and the Public Library sells books! Hayward City Hall Plaza.

### SAN FRANCISCO

- The Stonestown Market opened this year and runs Sundays from 9am to 1pm. It has convenient parking for your parents and delicious grass feed beef. Stonestown Galleria at 3251 20th Ave.
- The San Francisco Civic Center Farmer's Market on Wednesdays and Sundays from 8am to 5pm provides a diverse market with everything from different types of mushrooms to live fish. Civic Center, Market at Grove.
- The Alemany Farmer's Market on Saturdays from 8am to 3pm is known for good deals and fresh produce. On Sundays it is almost as exciting since it turns into a flea market. 100 Alemany Blvd.

### NORTH BAY

- The Marin Civic center on Thursdays and Sundays from 8am to 1pm offers tours of the market and has up to 100 local farmers. It also has great food vendors if you just want to go to eat! Marin County Civic Center in San Rafael.
- The Novato Farmer's Market is on Thursdays from 4pm to 8pm and has around 50 farmers and food purveyors. There is also live music and art. On Grant between Reichert and Machin.
- The Fairfax Farmer's Market in Bolinas Park on Wednesdays from 4pm to 8pm benefits from the many farms just over the hills. They have gone a whole year as a plastic-free market! Bolinas Rd. off Sir Francis Drake.



## Meet Morola!



Morola enjoying a hot cup of coffee in Denali National Park, Alaska

Hello CYGNETs! My name is Morola, and I have been a Research Assistant for the CYGNET Study for about one year. I really enjoy working with my colleagues and spending time with CYGNET families. I grew up in Brooklyn, New York and moved to Oakland two years ago. It is sometimes difficult to live far from home, so I am trying to convince all my friends and family to move to California.

When I am not working, I like to camp, hang out with friends, and see live music. The coolest thing about living in the Bay Area is that there are a lot fun things to do really close by. I especially enjoy spending sunny afternoons lounging around Lake Merritt in Oakland.

The next time you see me at clinic, feel free to suggest a place to hang out or take a hike. I love discovering new and unexpected places to enjoy my new hometown.

**Morola Adjibodou** is one of the Research Assistants in the CYGNET Study who works at the clinic.

## CYGNET in 2010 and beyond...

This summer, the CYGNET Study will complete seven years of funding that were granted from the National Institutes of Health back in 2003. But do not worry cygnets! We have asked the National Institutes of Health for more years of funding to follow you into your teenage years. If you remember from the beginning of the study or even when we talk to you about it at clinic, we started the CYGNET research project in order to understand puberty in girls. We decided to ask for more funding because we want to make sure we see all of you through the end of puberty. As some of you know, some cygnets have not yet had their first periods and none have reached their adult height. These transitions are important to follow, so we hope we will get to see all of you in the years to come!

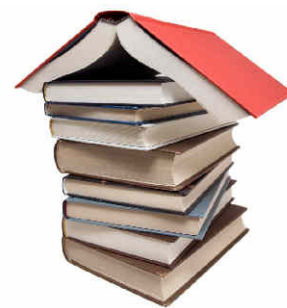
If you are interested in learning more about puberty or the other transitions you will be going through in the coming years you should check out these books for girls:

### BOOKS FOR YOU:

- My Body, My Self for Girls*  
Madaras and Madaras, 2007, Newmarket Press
- My Feelings, My Self*  
Madaras et al, 2002, Newmarket Press
- What's Happening to My Body? Book for Girls*  
Madaras, 2007 Newmarket Press
- The Period Book: Everything You Don't Want to Ask (But Need to Know)*  
Gravelle and Gravelle, 2006, Walker Publishing
- The Care and Keeping of You: The Body Book for Girls*  
Schaefer, 1998, American Girl Library
- The Feelings Book: The Care and Keeping of Your Emotions*  
Madison, 2002, American Girl Library

### BOOKS FOR YOUR PARENTS:

- 101 Ways to Help Your Daughter Love her Body*  
Richardson and Rehr, 2001, Harper
- Everything You Never Wanted Your Kids to Know about Sex (But Were Afraid They'd Ask)*  
Richardson and Schuster, 2004, Three River Press
- Keep Talking: A Mother-Daughter Guide to the Pre-Teen Years*  
Madison, 1997,  
Andrew McMeel Publishing
- Girls will be Girls: Raising Confident and Courageous Daughters*  
Deak and Baker, 2003,  
Hyperion



## Girls Only: A Heart to Heart Talk on Growing Up

Even after reading some books, you and your parents might still have some questions on puberty. To help you and your parents to answer those questions, we will have a Tea Talk with an expert on puberty who may answer questions such as:

1. Is my body growing and working the way it is supposed to?
  - How do I know if my body is working ok?
  - Is this normal?
  - Am I the right shape and size?
2. How do I fit in?
  - Will others think I am important and include me?
  - What do I do when someone teases?
  - I am different.
3. What am I feeling?
  - Why do I feel a zillion things at once?
  - You don't understand me.
  - How can I be safe? I am afraid.
4. Am I ready?
  - What and who are my resources?
  - How will I talk to my parents about this?
  - Have we talked about everything I need to know?

## Spring 2010 Tea Talk

A Special Tea Talk May 22nd for CYGNET  
Girls and one Trusted Adult

Saturday, May 22, 2010

10:00 am – 12 pm *in English*

12 pm – 1 pm *Light Lunch*

1 pm – 3 pm *in Spanish*

**Location:**

**Krutch Theater**

**Clark Kerr Campus**

**2601 Warring St., Berkeley, CA 94720**

**Speakers:**

**Julie Metzger (English)**

**Elena Pacheco (Spanish)**

## Recapping the Fall 2009 Tea Talk\*



Our last Tea Talk was on October 24, 2009 at the Aquarium of the Bay in San Francisco where we held separate programs for parents and children. The parents program included a presentation by Dr. Gayle Windham about safe seafood consumption followed by an overview of the CYGNET study to date by Dr. Lawrence Kushi. The children went on Aquarium tours, participated in the Touch the Bay Exhibit and worked on craft projects.

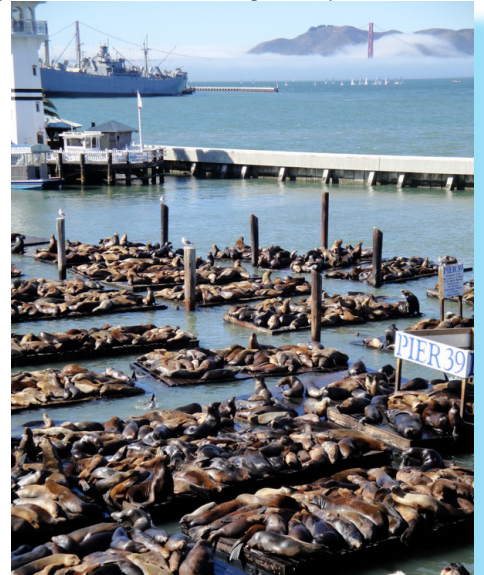
Dr. Windham focused on safe seafood consumption to emphasize the importance of maintaining good nutrition while educating parents about ways to reduce exposure to contaminants found in seafood (See the article on research findings to learn more about the chemicals being studied in the CYGNET girls). Nutritionally, it is essential to eat fish, particularly for proteins, minerals, and omega-3 fatty acids; however, there are concerns about contaminants in fish.

Dr. Windham recommended following the FDA/EPA guidelines for pregnant women and children who consume fish including:

1. Do not eat: shark, swordfish, king mackerel and tilefish
2. For purchased fish, eat 1 to 2 meals per week and eat low mercury fish like shrimp, canned Light tuna, wild salmon, pollock, farmed catfish, and aialapia.
3. For purchased tuna, choose canned light tuna because it has less mercury than albacore ("white") tuna and tuna steaks.
4. For fish you catch, follow local advisories. If there isn't one, eat one meal per week (6 ounces cooked) and do not eat any other fish during that week. For men and women not of childbearing age, you can eat up to 3 meals per week.

We also learned about how over-fishing and farmed fish affect the environment and fish stocks. Farming creates new problems and some farmed fish, such as salmon, have even higher levels of contaminants.

TEA TALKS are held twice a year in several Bay Area locations to bring investigators, participants and their families together to discuss a wide range of science and health topics with focus on the CYGNET Study.



## For Girls Only: A Heart to Heart Talk on Growing Up A Special Tea Talk May 22nd for CYGNET Girls and One Trusted Adult

On May 22nd, we are excited to host a special Tea Talk program called *For Girls Only: A Heart-to-Heart Talk on Growing Up*. This highly entertaining program is an opportunity for CYGNET girls and one trusted adult (mother, auntie, guardian, grandparent, father) to learn more about puberty and sexuality in a fun format and relaxed atmosphere. The program will be presented in both English and Spanish.

Taught by Julie Metzger, RN MN, the program emphasizes family communication, and provides resources that help guide young people on their journey through adolescence. Using lectures, group activities and humor, the program will cover the following topics:

- What girls experience during puberty;
- Problem solving and practical ideas for managing changes;
- Common concerns of puberty including pimples, nutrition, sleep, moods, personal care and periods; and
- Tips on staying close through healthy communication in families.

Metzger, a pediatric nurse, writer, educator and mother to three adolescents, developed a curriculum on puberty, sexuality, and decision-making for pre-teens and a trusted adult in 1989 called Heart to Heart: For Girls Only, and she has since taught the Heart to Heart class to tens of thousands of pre-teen girls and adults in the Seattle area, Pittsburgh, and the Bay Area. Metzger collaborates regularly with the Lucille Packard Children's Hospital in Palo Alto and is a nurse consultant at Children's Hospital and Regional Medical Center in Seattle. For more information about Julie Metzger and For Girls Only: A Heart-to-Heart Talk on Growing Up go to [www.greatconversations.com](http://www.greatconversations.com).

**Spring 2010 Spring TEA TALK**  
**For CYGNET's and One Trusted Adult Only**

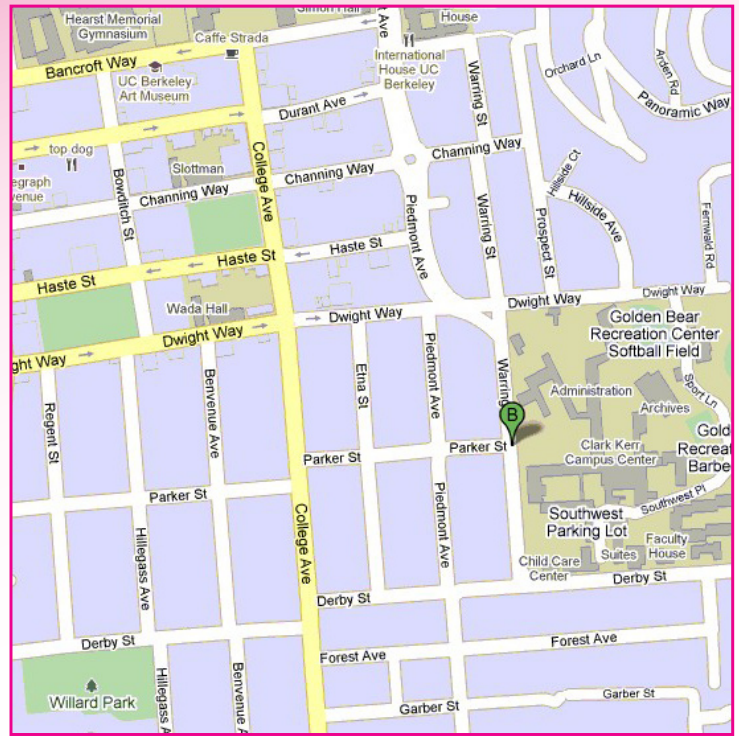
**For Girls Only:**  
**A Heart to Heart Talk on Growing Up**  
**Speakers: Julie Metzger, RN MN (English)**  
**Elena Pacheco (Spanish)**

**JOIN US!**

Saturday, May 22, 2010  
10 am – 12 pm *in English*  
12 pm – 1 pm *Lunch*  
1 pm - 3 pm *in Spanish*

Krutch Theater  
Clark Kerr Campus  
2601 Warring St., Berkeley, CA 94720

Two-hour program about puberty for CYGNET girls  
and their one trusted adult  
Program presented in English and in Spanish  
No activities for siblings will be offered  
Refreshments and a light lunch will be provided



**Please RSVP by May 14, 2010**  
**510-891-3884**

Division of Research  
2000 Broadway  
Oakland, CA 94612



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