Dear CHDS Cohort Members,

Thank you for your support during our #GivingTuesday fundraising campaign! Thanks to generous donations from members of the cohort and the community we were able to raise funds to help continue our important research. In this newsletter we want to tell you how grateful we are. Thank you for your continued interest in our newsletters, and for donating or considering a donation. Your support and ongoing participation in the CHDS is the greatest gift we can ask for!

Thank you to BCEG Study Volunteers!

We still need women ages 18-35

In our Fall 2017 Newsletter we asked for volunteers to join an advisor group for one of our new studies, Breast Cancer and Environmental Exposures across Generations (BCEG). We received an overwhelming response; 68 completed surveys. Thank you for your interest and support!

From those who responded, we have successfully formed our BCEG advisor group of CHDS moms (1st generation) and daughters (2nd generation) that will help develop an education campaign about the consequences of exposure to environmental Endocrine Disrupting Chemicals (EDCs) in multiple generations. We are now seeking CHDS granddaughters (3rd generation) to help form an additional advisor group to assist with the education campaign. Please see the article below “We need the 3rd generation’s help!” If you have daughters or granddaughters between the ages of 18 through 35, please share this newsletter with them!

We need the 3rd generation’s help!

Thank you to all the women who replied to our volunteer request in our September newsletter! Now we are asking specifically for 3rd generation volunteers to help with the education campaign for our study, “Breast Cancer and Environmental Exposures Across Generations (BCEG). We are developing an education campaign about the
consequences of exposure in multiple generations to environmental endocrine disrupting chemicals (EDCs), such as pesticides, non-stick additives to pots and pans, and water repellents added to clothing and furniture. The 3-year education campaign will be designed to reach women of all ages through digital media (electronic newsletters, videos, interactive apps, etc.).

We are recruiting 3rd generation cohort members who are female, between 18 and 35 years old, and live within commute distance (~50 miles) to the greater San Francisco Bay Area.

Participation and recognition for your time over the three years involves:

- Attending one in-person, 2-hour meeting in 2018. $25 stipend.
- Being available for one, 1-hour electronic communication (via phone or video) in 2019. $10 stipend.
- Attending one in-person, 2 ½ hour meeting in 2020. $30 stipend.
- Responding to regular email correspondence throughout the three years of the study.

The in-person meetings will be held at a location within the San Francisco Bay Area. You will be reimbursed for local travel to and from the meetings, and food will be provided.

To participate please complete the following questionnaire by March 22, 2018.

Click here for questionnaire

For more information about this study please visit the CHDS website. The CHDS is partnering with Zero Breast Cancer (ZBC) to create the education campaign. ZBC envisions a world without breast cancer and seeks to reduce breast cancer risk by translating the results of scientific research into recommendations that support health and wellness at key stages of life. To learn more about ZBC, please visit their webpage: www.zerobreastcancer.org.

If you have questions about the study or participation please contact Nickilou Krigbaum at (510) 649-6390 or nkrigbaum@chdstudies.org.

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**We Need Your Help**

Hi. My name is Laurie Havas, and like you, I am one of 50,000 cohort members who are part of a unique 58-year-old study. This project began in 1959 as a collaboration between the University of California at Berkeley School of Public Health, the Kaiser Foundation Research Institute, and the Kaiser Permanente Medical Group.

In addition to being a cohort member I am honored to be a PAC member, a
research subject, a collaborative study investigator, as well as serving on several subcommittees along with other PAC members who are also cohort members.

Now that you know a bit about me I’d like to explain why you are so vital to the cohort and to future cohort members, as well as to the continuation of CHDS studies. The cohort is unique because of people like you who generously shared their health history and biological samples. This collective data now spans multiple generations. With this kind of information CHDS researchers work to link past environmental exposures to diseases like breast cancer in a manner that can lead to preventing diseases instead of treating them after they’re diagnosed. Advances in biological sample analysis allow even smaller amounts of limited stored samples to be extended to other valuable studies thereby greatly increasing the value of the cohort’s impact.

One of the primary roles of these newsletters, beyond sharing CHDS research and current interesting health topics, is to get you to understand how important you are and how important it is to continue to maintain and grow the cohort by engaging your children, grandchildren, and in some cases great grandchildren. Traditional landline phones and stamped mail are antiquated or obsolete methods to reach younger generations. Today it's all about social media, email, and smartphones. You can help your cohort stay vital by asking your family to participate. Ask them to share their contact methods and addresses with the CHDS so that we can reach out to them. These generations need to stay involved and responsive to ensure our continued legacy.

Click here to add your family members to the newsletter mailing list

You are the CHDS legacy and its future.

As part of the Child Health and Development Studies (CHDS), you have given vital help and support to the advancement of medical research. Since the study began nearly 60 years ago, you and your fellow 50,000 cohort members have been the source of landmark findings that have helped shape clinical guidelines and enlightened the direction of health
research. Here are only some of the highlights of critical research that resulted from your participation in the CHDS.

**Some key findings based on CHDS Mothers, Fathers, Daughters and Sons.**

- The CHDS helped generate clinical recommendations for the use of a certain type of diuretic drug (increases urination and water loss), called “thiazides”, during pregnancy and for certain tranquilizers taken in early pregnancy.
  - Diuretics were used to treat edema (swelling) in pregnant women. The CHDS data showed these certain drugs had negative effects on the placenta and on labor and delivery, and increased the risk of infant death. CHDS evidence was used to warn doctors away from using this type of diuretic to treat edema in favor of other drugs.
  - CHDS was the first to show that certain tranquilizers, (e.g. meprobamate or chlordiazepoxid), taken early in pregnancy (within the first 42 days), were related to higher rates of severe congenital anomalies (birth defects). This evidence was used to caution doctors against prescribing these drugs to women in early pregnancy and to warn women against becoming pregnant while taking them.

- Evidence from the CHDS suggests that pregnancy has a lot to teach us about the disease process. Pregnancy characteristics are strong and clear markers of disease later in life, and sometimes they predict risk of disease in surprising directions. These findings can help lead to better and earlier care for women:
  - CHDS mothers who had pregnancy complications, like pre-eclampsia, or combinations of pregnancy complications, like high blood pressure along with preterm delivery, had high risk of cardiovascular disease.
  - On the other hand, CHDS mothers who experienced high blood pressure during pregnancy were protected against breast cancer.

- The CHDS was the first to show that DDT exposure predicted cancer.
  - High DDT levels during pregnancy increased risk of early breast cancer in mothers.
  - High DDT exposure in the womb increased the risk of early breast cancer in daughters and was associated with higher risk of aggressive breast cancer.
  - High DDT exposure in the womb increased the risk of testicular cancer in sons.
  - These findings are important because they show that chemicals in the environment have direct and lasting impacts on human health.

- The CHDS was the first to show that PSA screening in CHDS fathers is a predictive marker for prostate cancer even at younger ages.

**Where do we go from here?**
Why is it important to continue this long-lived, multi-generational study?

- Having information about health and exposures of mothers and fathers during pregnancy, of daughters and sons in the womb, through childhood and in mid-life, and of granddaughters in childhood and early adulthood gives us irreplaceable clues about disease pathways.
• Studying three to four generations is the only way to separate the genetic effects from the environmental effects.
• In combination, these assets add up to being able to find disease early when it is generally easier to treat; or even better, they allow us to find out how to prevent disease.
• Continuing our outreach to the 3rd generation is the link that connects our incredible past to our future.

Making room for gratitude

This year, our New Year’s resolution is a renewed mindfulness to be grateful to our cohort members for all they have done to contribute to building a better world. It turns out that focusing on being grateful can actually improve mental and physical health! Some of the positive physical health effects of being grateful include lowering blood pressure, improved immune function and better sleep. It also has positive psychological effects like increasing stress reduction, increasing happiness and reducing risk of depression, anxiety and substance abuse disorders. Practicing gratitude can shift our behavior – research has shown that “grateful” people exercise more often, are less likely to smoke and drink and have higher rates of medication adherence.

How does one cultivate a “grateful” mindset? Dr. Robert Emmons, a prominent researcher in the area of gratitude at the University of California, Davis has some suggestions on ways to become more grateful and why gratitude matters.

These are a few of his helpful suggestions:

• Keeping a gratitude journal to record moments from each day that you are grateful for – especially the ordinary, everyday events.
• Paying attention to your senses – taking time every day to go outside and feel the sunshine, listen to the birds and smell your steaming cup of coffee, reminds you how much you have to be grateful for.
• Make the decision to be grateful and then practice it.
• Going through the motions – saying thank you and smiling make you practice sharing your appreciation and triggers feelings of gratitude.

Ask Barbara

In every newsletter we plan to answer questions from readers like you! So please email the CHDS with your health concerns or questions and we will choose one to answer in future newsletters. If your question is chosen you will win a $10
Dear Dr. Cohn,
I've heard a lot about the flu being very bad this year. Why is that? Is it important to get a flu shot?

Dear CHDS Cohort Member,
The flu is caused by the influenza virus. There are many different versions of influenza virus and the virus mutates (changes) to create new strains as well. How well the flu vaccine works can depend in part on the match between the viruses in the vaccine and the viruses that are circulating in a given flu season. It's not possible to truly predict in advance what flu viruses will be most common. Scientists make their "best guess" to anticipate which flu versions will be circulating during flu season. And even when the vaccine includes the most common virus it may not prevent you from getting the flu. The primary reason why this season's vaccine may have been less effective is because the most common virus this season, H3N2, is a particularly nasty version. Although this year's vaccine does provide some protection against this version it may not prevent illness completely. It is still important to get a flu shot even when the vaccine is a poor match to the most commonly circulating flu virus. It will help to reduce the severity and duration of the symptoms if you do get sick. The most vulnerable to flu are young children and older adults, and they benefit greatly from getting the vaccine in any case. To protect you and your family from the flu, avoid people who are sick, wash your hands frequently and avoid touching your mouth, nose and eyes. Be aware of the symptoms of the flu which are fever and body aches along with cough and congestion. If you do get sick, here's what the Centers for Disease Control (CDC) says, "Most people with the flu have mild illness and do not need medical care or antiviral drugs. If you get sick with flu symptoms, in most cases, you should stay home and avoid contact with other people except to get medical care."

Sincerely,
Barbara