To Sign Up Your Daughters or Mother

If you would like us to send an information pack to your mother and/or your daughter(s), please complete the details below and return the slip in an envelope (no stamp needed).

Breakthrough Generations Study Team
FREEPOST NAP 2103
Institute of Cancer Research
S26 3BR

Your details
(Rock capitals please)

Full name

Your mother’s details

Your mother’s full name

Relationship to you

Date of birth

Address

Post code

Your daughter’s details

Full name

Relationship to you

Date of birth

Address

Post code

Jacquie Leonard

Professor Garcia-Closas joined the Generations Study team in September 2010. She was born in Spain and trained as a doctor before studying and working at Harvard University in the US for six years. She then worked at the US National Cancer Institute, but she and her family have now decided to return to Europe.

The Generations Study was a key factor in my decision to move to the Institute of Cancer Research and Breakthrough Research Centre. I am particularly interested in investigating the causes of different subtypes of breast cancer and the causes of cancers occurring in younger women.

The study already has enormous research potential, and will increase in value as more data are gathered across many years of follow-up. This requires highly motivated and committed participants, which has been demonstrated by the high participation rates in the study to date.

My ultimate aim is to discover new causes of cancer and develop strategies to prevent it. Because breast cancer is an extremely varied disease, one of my first goals in the study is to obtain detailed information on the type of cancer that first occurs in study participants. I will be using information from the questionnaires and blood samples, as well as obtaining samples of cancer from hospitals.

Understanding what causes cancer will improve our ability to predict who is at high risk of developing it. This knowledge will help with the development of strategies to prevent the occurrence of this devastating disease, or to detect it in its early stages so that more successful treatment options can be considered.

For Jacquie Leonard, Community Programme Manager for Marks & Spencer, what started as part of her job turned into something much more personal.

Jacquie was asked to tour the research facility where the Generations Study is underway, on behalf of her employer, Marks & Spencer. She was a report leader of the Generations Study and long-time supporter of Breakthrough Breast Cancer.

"I was struck by how amazing it was. The study is so unique and well-run that it was also inspired by the fact that even though it is a long-term study, some results will come out while it’s going on.”

These reasons, as well as the fact that the study has the potential to help prevent all types of cancers, inspired Jacquie to sign up to be a participant. “I lost my very best friend to cancer at 31 and had a breast biopsy at 35, just in case. With a busy life it’s often easier to give money, but I felt it was time to do more from that. Before finding out about the Generations Study, I never knew what that was. This gave me an opportunity to give something back.”

Jacquie also asked her 11-year-old daughter, Alexandra, if she wanted to participate in the study, when she realised the importance of genetic factors to breast cancer risk. “We went to get our blood taken together and spent the rest of the morning filling out our questionnaires.

We made the time to do it.”

If I have a daughter aged 16 or older who may be interested in signing up for the study, please admit the tear off card on the back left side of this page, or have joined with other members of your family, whose mother hasn’t joined the study but might like to, please do the same.

With best wishes,

Professor Montserrat Garcia-Closas

Generations Study Team

Professor Anthony Swedlow

Thank you

As always, thank you for your continued support of the Generations Study. We are grateful to all of you who have contributed to the study.

With best wishes,

The Breakthrough Generations Study Team

Professor Alan Ashworth

Study participants attend special events

Mothers and daughters joining the study

One of the special features of the Generations Study is that many of you have joined with other member of your family, often mothers or daughters. The information and blood samples from mother-daughter pairs are already proving very valuable for research.

Mothers and daughters do not share genes, they also often have similar lifestyles and environments. Mothers may also know more about their daughters’ birth and early childhood than the daughter herself may know.

We are keen to increase the number of mother-daughter pairs in the study so that we can investigate further the extent to which family risks are due to shared genes and to what extent they are due to similar lifestyles and environments.

As example, we have found that mothers and daughters tend to reach menopause at similar ages, but that is more due to genetic similarities than to similar environments and backgrounds.

So, if you have a daughter aged 16 or older who might like to join the study, or if your mother might like to join, we would be very pleased to hear from you. Please complete the tear-off form on this newsletter and return it to a freepost address.

Mothers and daughters are asked if they would like to receive an information pack and invitation (we are sent you when you sign up to the study). It will, of course, be entirely your choice whether they join the study.

Thank you.
Study progress and the next steps

The number of women taking part in the Generations Study has now reached 111,000. Over 90,000 have been study members for more than 2½ years, and have been sent and returned the first follow-up questionnaire. Thank you to all who have sent it back. The remainder of you will be mailed as you reach 2½ years from joining.

We have also started sending out the second follow-up questionnaire, to those who have been in the study longest, and will be sending these out to more of you over the next year, depending on when you joined. For those study members who were mailed for this follow-up so far, we asked for a blood sample at this stage of the study. Recently, however, we have had to discontinue sending the blood packs for the present, because of the downturn in the economy and resulting financial constraints. We would still be grateful to receive blood samples back from those of you who did receive the blood packs, and we plan to ask the rest of you for blood samples in the future, if and when funds are available.

Menopause and breast cancer risk

The age at which a woman enters the menopause has long been established as a risk factor for breast cancer, with risk gradually increasing with an increased age of menopause.

On average, breast cancer risk increases with older age at menopause. This is true both for natural menopause and for artificial menopause – for instance menopause resulting from surgical operations or radiotherapy. For this reason we included several questions in the questionnaire about whether your periods have stopped, and the reasons for this. We are now using the Generations Study samples and research to investigate the reasons why a woman’s menopause occurs when it does.

Risk factors vary by type of breast cancer

Different types of breast cancer require different types of treatment. New researchers are discovering that these different types of breast cancer may also have different causes.

Although breast cancer is often spoken of as a single disease, there are actually many different types of which only different in the way that they respond to treatment. For instance, breast cancers vary in whether they respond to oestrogen (called “oestrogen receptor positive”) or respond to different treatments from those that are non-oestrogen responsive (”oestrogen receptor negative”). Breast cancers can also be subdivided by their appearance under the microscope, and in other ways. Knowing about the different types that exist is important in recent advances in treating breast cancer, and there has been growing research into the extent to which these different types of breast cancer may also have different causes, and hence how women can reduce their risk. This question will be the main focus of research of Professor Marion García-Closas, who recently joined the Generations Study team (see page 4).

Research using data from the study has shown a wide range of factors – some beginning before a birth is made – are related to the age at which a girl starts her periods.

A step towards predicting early menopause

A recent paper described a genetic predisposition for early menopause, and called this the “menopause GWAS”. (See page 54.) The researchers who carried out the study were interested in what characteristics of women might lead to an early menopause. They have particular relevance for women considering when to start a family.

The first findings from the Generations Study were published recently, and will have particular relevance for women, as the research team has studied the ages at which women start their periods. The study team compared blood samples from women who had experienced early menopause, with blood samples from other girls. The research team published their results in a recent paper in the journal Br J Cancer 2010; 103: 1760–4. It is known that cigarette smoking causes menopause to occur earlier, and that there is a resemblance between mothers and daughters in their age at menopause. Apart from this, however, there is a great deal yet to be understood, and we are free to investigate both the causes of age at menopause, and its effect on longer breast cancer risk.

Risk factors that may influence age at puberty

Age at menarche is the age at which a girl starts her periods. Age at menarche is linked to breast cancer risk. The risk of disease gradually increases with a younger age at menarche. The average age at menarche has been getting younger in the UK for more than a century, which may be partly due to the reason why breast cancer has become more common.

Using data from the first 81,000 participants in the study, results published by the study team show that girls who were heavier and exercised less were more likely to reach their menarche at a younger age. Daniele Franks, who worked on the analysis, said, “A girl who takes more exercise is likely to start her periods later in life. We know that girls are already getting regularly as an adult can help reduce the risk of developing breast cancer.” This study shows that a young woman who is not active is at risk of breast cancer risk later in life.

Other factors that were found to relate to early menarche were having a low birth weight, not breast feeding as a baby, and being tall. Daniele continued. “This study shows that these factors that relate to age at first period – an important breast cancer risk factor – not begin very young, probably even before a child is born. Some factors, such as beginning in the womb, may affect risk of developing breast cancer decades later.”

Risk factors may influence age at puberty

Age at menarche is the age at which a girl starts her periods. Age at menarche is linked to breast cancer risk. The risk of disease gradually increases with a younger age at menarche. The average age at menarche has been getting younger in the UK for more than a century, which may be partly due to the reason why breast cancer has become more common.

Using data from the first 81,000 participants in the study, results published by the study team show that girls who were heavier and exercised less were more likely to reach their menarche at a younger age. Daniele Franks, who worked on the analysis, said, “A girl who takes more exercise is likely to start her periods later in life. We know that girls are already getting regularly as an adult can help reduce the risk of developing breast cancer.” This study shows that a young woman who is not active is at risk of breast cancer risk later in life.

Other factors that were found to relate to early menarche were having a low birth weight, not breast feeding as a baby, and being tall. Daniele continued. “This study shows that these factors that relate to age at first period – an important breast cancer risk factor – not begin very young, probably even before a child is born. Some factors, such as beginning in the womb, may affect risk of developing breast cancer decades later.”

For more about Breakthrough Breast Cancer, visit www.breakthroughgenerations.org.uk.