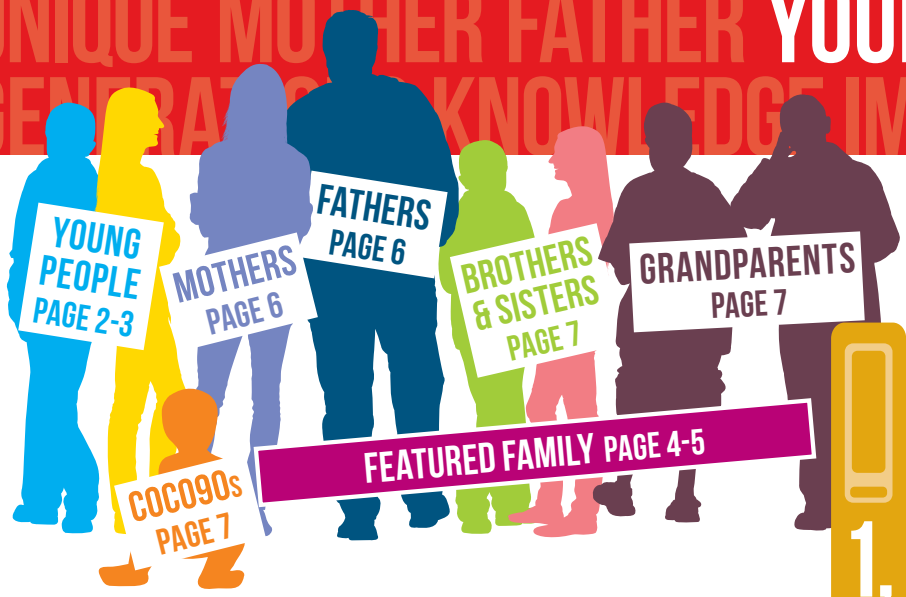
ME FAMILY FRIENDSHIP FOCUS FUTURE
UNIQUE MOTHER FATHER **YOUR NEWS...**
GENERATIONS KNOWLEDGE IMPORTANT

CHILDREN OF THE 90s

2014-2015



HELLO!

Paul and George (pictured above)

Welcome to our latest newsletter in which we are delighted to make two big announcements.

First, we'd like to introduce Professor Paul Burton (pictured left) who has moved from the University of Leicester to join Professor George Davey Smith at the helm of Children of the 90s.

Second, we are delighted to announce that we were recently awarded almost £8m from the Medical Research Council and the Wellcome Trust. This has secured our funding for the next five years and will allow us to carry on charting the health of all our study participants.

With continued funding our aim is to make Children of the 90s a lifelong study of four generations. This makes us unique and it's all thanks to the remarkable commitment of you and all our study families. Turn to page four to read about just one of the thousands of amazing families who make what we do possible and go to the back page to find out who funds our work.

From June 2015 we will be inviting all study young people to a focus visit, but to do so we need to know where you are! If you or anyone in your family has moved home or changed phone number or email address recently, please complete and return the enclosed 'Get in Touch' form (no stamp required). Or get in touch using our contact details on the back page.

For now, read on to find out what we're working on now and how playing your part in Children of the 90s is helping the lives of countless people all over the world.

Thank you for your incredible commitment and dedication.

George Davey Smith

Professor George Davey Smith

Paul Burton

Professor Paul Burton

RESEARCH PAPERS AND COUNTING

Thanks to you and all the information you've given us, we've made hundreds of discoveries and shared them with a huge worldwide audience through our publications. This year (2014) we published our 1,000th research paper.

It shows that men who smoked before the age of 11 had sons who had 5-10 kilos (11-22 lbs) more fat mass than the sons of men who never smoked or who started smoking after the age of 11. Our researchers think this may be because boys are particularly sensitive to exposure to toxins (like nicotine) before puberty starts.

HOW DO WE KNOW THIS?

We know this because we asked the study fathers if and when they started smoking and we've charted the weight and fat mass (using DXA scans) of the study young people since childhood.

WANT TO FIND OUT MORE?

Go to www.childrenofthe90s.ac.uk/media/news/2014/204.html to read the full story.

Thank you to study participant Sunjay and his dad, Lakhbar, for helping us promote the story to ITV News www.itv.com/news/west. The research was also reported on by the *Bristol Post*, the *Daily Mail*, the *Independent*, *Metro*, the *Sun* and the *Times*.

DID YOU KNOW?

When Children of the 90s started, more than half of all fathers smoked. Nowadays about one in five adult men smoke and one in three men aged 25-34 smoke.

THANK YOU

to all the study young people who got in touch after our last newsletter to help us with our research. We're now looking for participants to take part in research on breast cancer, heart disease and schizophrenia. Read on to find out more and get in touch if you'd like to get involved. Our contact details are at the bottom of the page.

HEALTHY HEARTS

WHAT WE ALREADY KNOW

Most people don't find out they have heart disease until they are middle aged or older, but the process of atherosclerosis (clogged arteries) begins in childhood and is a major risk factor for conditions like stroke and heart attack. In the largest study of its kind ever undertaken, we looked at our young people's arteries when they were aged 9-11 and again when they were aged 17-20. Even when they were nine, some of the risk factors for heart disease were already present in some participants.

WHAT WE'D LIKE YOU TO DO

Go to Great Ormond Street Hospital in London for a series of tests which will look at your heart and arteries and see how fast your blood travels.

WHAT WE HOPE TO FIND OUT

More about how heart disease starts so scientists can develop new cures and discover how best to have a healthy heart.

SAVE THE DATE!

From June 2015 we will be inviting all our study young people to come and see us at Focus @ 24+. This will be the first Focus clinic in eight years and we are really excited about seeing everyone again.

In order to keep you informed about it, we need to know where you are. Please let us know if you've moved recently or changed your phone number or email address by completing and returning the enclosed 'Get in Touch' form or contact us using the details on the back page.

BRAINS AND GENES

WHAT WE ALREADY KNOW

Schizophrenia affects one in every 100 people and a person's risk of developing it is influenced by their genes. New evidence suggests that some of this risk is due to a large number of differences in the genetic information which are so common that everyone in the population can be expected to carry some of them (although some people will have more than others).

WHAT WE'D LIKE YOU TO DO

Travel to Cardiff to have brain scans, perform some activities and complete some questionnaires.

WHAT WE HOPE TO FIND OUT

Learning more about the effect of genetic differences in people who do not have schizophrenia or other mental illness will help us understand more about the effect they have on people who do have schizophrenia.

PLEASE NOTE

The sort of genetic information we collect is not suitable for medical diagnosis. We are only interested in how genetic differences affect healthy people. If selected to take part please be assured that this is not an indication that you are more or less likely to have schizophrenia now or to develop the condition in the future.

BEATING BREAST CANCER

WHAT WE ALREADY KNOW

Breast cancer affects about 48,000 women in the UK each year and is the most common cancer among women in the UK and worldwide.

WHAT WE'D LIKE YOU TO DO

Have a breast MRI scan and provide blood and urine samples. We'll compare these results with data we hold about your growth in childhood and, with her permission, the results of your mother's breast-screening mammograms.

WHAT WE HOPE TO FIND OUT

More about the hormones and genes that affect the structure of breast tissue so we can improve our understanding of what causes breast cancer later in life – we hope this will help prevent the disease in the future.

PLEASE NOTE THAT BEING SELECTED TO TAKE PART IS NOT IN ANY WAY RELATED TO YOUR RISK OF BREAST CANCER.

To find out if you are eligible to take part in any of these projects, please get in touch with your name, date of birth or reference number and the research you are interested in.

☎ 0117 331 0010

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info@childrenofthe90s.ac.uk

ABOUT YOUR RECORDS

Large amounts of information are stored about all of us in our official records. When combined with the information you have given us, these records are a powerful tool for researchers.

Over the past few years we have written to you (study young people) asking you if you are happy for us to use your records. We have now started to collect them, unless you have told us you do not want this to happen.

Here's how we use them, and the steps we take to protect you while doing so:

- We remove your personal details (name, date of birth, address) before we share them with researchers. This makes it incredibly hard for anyone to identify you
- We only provide data to bona fide researchers who are legally bound to keep your information confidential
- We do not do research with the aim of commercial gain – all our research aims to benefit society and is not for profit
- Our website tells you exactly which research project is using your records: www.childrenofthe90s.ac.uk/participants/usingyourrecords/
- If you don't want us to use your records, either for a specific project or in general, please let us know. We will respect your decision.

HOW YOUR RECORDS HELP OUR RESEARCH

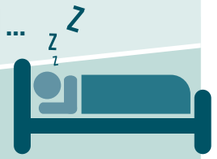
CASE STUDY: SELF-HARM

Self-harm is a common sign of distress that affects those who do it, as well as their friends and family. By analysing hospital records for self-harm we will improve understanding of the condition and the long-term risks of hospital admissions for treatment. We want our research to improve public health policy and provide help for people who self-harm.

Because this research is considered to have important potential benefits to the public, we have been allowed to collect self-harm records for all the people in the study – unless you have specifically told us you don't want us to. We have approval to do this because in situations where people's health makes it difficult for them to take part in studies like Children of the 90s, it is considered important that we don't leave people out. For our research to be relevant and accurate, it is important that we include information from as many records as we can.

MAKING A DIFFERENCE

OUR RESEARCH ON ...



AUTISM

We've found that more girls may have the condition than previously thought. They are just better than boys are at covering up some of the signs. We've also discovered that children with autism are more likely to have disrupted sleep patterns. These discoveries can help parents, teachers and doctors look out for early signs of autism in both girls and boys.

We know this because of information the study parents gave us in questionnaires and from a computer task the study young people did to identify different emotions in people and in inanimate objects.

SMOKING

We've shown that children as young as seven can have high levels of cotinine (a by-product of nicotine) if their mother smoked. This can have a long-term and damaging effect on a child's lungs. On average, children whose mothers smoked had cotinine levels four times higher than those found in the children of non-smokers. This is equivalent to a teenager smoking occasionally.

We know this because the study young people and their mothers have told us in questionnaires whether or not they smoke. We checked cotinine levels by testing the study young people's plasma (a part of blood).

PSYCHOSIS

We've discovered that people whose brains process information more slowly than others may be at greater risk of having psychotic experiences like hearing voices or hallucinating. However, most psychotic experiences do not persist nor develop into psychosis.

We know this because we measured the young people's speed on cognitive tests at ages 8, 10 and 11 and we asked them about unusual experiences in interviews when they were 12. One in nine said they had had these experiences.

MERCURY

We've found that fish accounts for only seven per cent of mercury levels in the human body. This is much lower than previously thought. Other research has warned against eating too much oily fish during pregnancy because of fears over mercury levels, but we've found that oily fish is good for eyesight and IQ.

We know this because we tested the mercury levels in the study young people's blood and compared this with the information from four questionnaires and a food diary their mothers completed during pregnancy.

FEATURED FAMILY...

FOCUS ON JOSH AND HIS FAMILY

Meet Josh, a study participant, and the rest of his family. They are just one of the thousands of amazing families that make Children of the 90s the success it is.

JOSH'S MUM, LOUISE

Josh's mum

Louise with her son (Josh) and grandson (Leo)

"My name is Louise. My youngest son, Josh, has been part of Children of the 90s for the past 22 years. Josh has a six-year-old son, Leo, who is part of COCO90s.

I am the eldest of four children whilst Josh is the youngest of four.

I was kept very busy with four children and a part-time job whilst they grew up, taking them to Beavers, Cubs, football and swimming.

I now work full time as a radio despatcher for the emergency services doing shift work which gives me four rest days, so I can help with my three grandchildren and the two that are on the way, which we are very excited about.

I also teach children to swim at Bishopsworth Swimming Club two nights a week when I am not at work. It's very rewarding watching the swimmers enter galas and competitions, winning medals or achieving personal best times.

I enjoy going to Zumba, having a swim and catching up with my friends as often as possible."

JOSH

Josh and his son (Leo)

"My name is Josh and I am 22 years old. I have been coming to Children of the 90s since I was a baby. I have enjoyed helping out and doing the tasks over the years. I now have a six-year-old son called Leo who is part of COCO90s.

Growing up I went to Beavers, football and was part of Bishopsworth Swimming Club.

I started swimming for Bishopsworth at the age of seven, then progressed to City of Bristol and Team Bath. I swam three mornings for two hours and six nights for two hours whilst competing. I got best newcomer the first year, captain the second year, then 'swimmer of the year' for eight years.

I have a full-time job at City Plumbing Supplies which I enjoy. I like meeting and helping the general public. I play football on Saturday afternoons for Conham Rangers Football Club.

My great-grandma Ivy Gibson, who sadly passed away in February this year, used to help out at Children of the 90s when it first started."

Josh's son

Leo with his puppy (Freddie)

JOSH'S SON, LEO

"I enjoyed myself when I visited COCO90s with my daddy. I am looking forward to coming again. My teacher gave me time off to visit as well."

Josh's grandma

Josh's nan (Wendy)

JOSH'S NAN, WENDY

"My name is Wendy and I am Josh's nan. I was born in Knowle in 1946. I wasn't very well when born, so I was kept in a dresser drawer by the fire.

I moved from Knowle to Lockleaze when I was four and went to school there. I went to work in a factory at St George when I was 15, making foundation garments.

I moved up the road to another foundation factory and worked there until I got married and left to have a baby. I married early and have now been married for 50 years. We had four children – girl, boy, girl, boy. Louise was the eldest.

We have 11 grandchildren and three great-grandchildren with two more on the way.

I went on to do part-time work in a care home. After leaving through bad health I took a year's typing course, then got a job with Bristol Housing and worked there until I retired.

I like to go to the gym as often as possible."

Josh's great grandma

Josh's family

Josh's great-grandma (Ivy), who passed away in February 2014 aged 100, helped out at Children of the 90s in the early days.

Josh's family. Josh (far right) with his mum (Louise), dad (Brian) and brothers (Ben, Jason and Russell)

Would you like your family to feature in our next newsletter? Get in touch to tell us your story. Our contact details are on the back page.

THANK YOU

A big thank you to the 3,000 study mothers and 2,000 study fathers who've filled in a questionnaire or attended a Focus session. The information the mothers have provided is helping us build up a really clear picture of women's health during the menopause. Our work with the fathers is letting us see how a man's relationship with his partner could influence his health. Read on to find out more.

Our friendly clinic team

WHAT WE KNOW ALREADY

We know that the heart, brain, body and bones change as women go through the menopause. We also know that changes in health are related to changes in sex hormones, lifestyle, family circumstances, relationships and genetics.

A century of past research has shown that married men are less likely to die of heart disease than unmarried men. Similarly, men who divorce and remarry also do better. Researchers believe this could be due to the psychological benefits of having a partner to provide emotional support.

HOW YOU HELPED

By completing questionnaires and by attending Focus on Mothers (FoM) 1, 2 and 3, the first three in our current series of four Focus visits, looking at women's health during the menopause.*

On three occasions our study fathers have told us how caring they would describe their relationship with their partner. They've also let us check their blood pressure, weight and blood lipids (fats).

WHAT WE DID

In FoM3 we used a 3D whole-body scan to look at how fat is distributed across the body. This can affect the risk of heart disease and osteoporosis. We also used an activity monitor to assess physical activity over a period of a week.

We looked at whether men who appear to be in stable and caring relationships have better blood pressure, weight, and blood lipids than men whose relationship is less good or has changed over time.

WHAT WE FOUND OUT

We have just started FoM4 and hope to see all 3,000 mothers again. Once that's complete in about a year's time, we will combine all the information from the Focus visits with what we know already. That will help us build up a really clear picture of women's health during mid-life, so watch this space for news updates.

In the case of obesity, we found some evidence that men in stable and caring relationships have lower levels of obesity. Interestingly, men who told us that their relationships were less good in the past but have since improved also had lower levels of obesity.

WHAT'S NEXT?

At FoM4 we will conduct a second ultrasound of the carotid artery in the neck which allows us to measure the thickness of the artery wall and will indicate any narrowing of the artery. We first did this at FoM1. Doing it again five years later will allow us to study how and why it has changed over time.

These are just preliminary findings and we need to do further work on this, but if these results are true then it highlights the importance of men's relationships not just for their family but also for their health and the possibility of taking steps to improve both.

*We know that some of the things we ask about, such as sexual health or money, are very personal and can be sensitive. Of course you only need to answer the questions you want to, but by providing us with this information we can build up a really detailed picture of women's health in mid-life.

Like us on Facebook at My Child is in Children of the 90s

COCO90s

Our Children of the Children of the 90s study (COCO90s) has been running for over two years. We have really enjoyed meeting and getting to know so many of you and your children. Almost 500 study young people now have children. More than 200 have enrolled their child or children in COCO90s. We are looking forward to seeing many more over the next few years.

We have extended COCO90s so that we can see children until they are at least seven years old. We start seeing people from the 16th week of pregnancy so it is never too soon or too late to become involved!

MEET THE TEAM

Meet Claire and Sheila from our COCO90s team! They are the people you will see when you and your child come to visit us. They have been involved with Children of the 90s for many years and have lots of experience. They try to make the visits as fun and interesting as possible for you and your children.

If you or your partner have a child or are expecting or have any questions or queries about COCO90s, please get in touch with Claire or Sheila.

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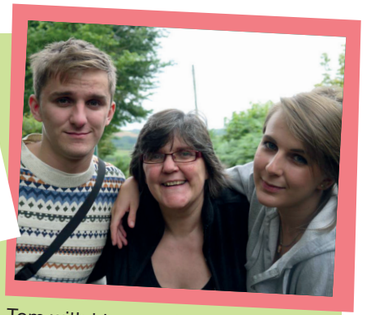
BROTHERS & SISTERS



Tom with his mum (Kate) and sister (Abi)

We can learn a huge amount about the causes of health and well-being by comparing children from the same family. We also want to gather some information so that we can study siblings in their own right. Many brothers and sisters have already said they want to be involved – now is their chance!

Hundreds of siblings have already enrolled and we will be contacting lots more over the coming weeks and months, asking them to complete a questionnaire and provide a saliva sample.

If you are in Children of the 90s and have a brother or sister who is 16 or older and who would like to get involved, they can download an enrolment pack from our website.

www.childrenofthe90s.ac.uk/participants/siblings/
☎ 0117 331 0010
Like us on Facebook at Children of the 90s

GRANDPARENTS

We are contacting the original Children of the 90s mothers and fathers to ask them if they can help us to involve their parents too. You may have recently received a pack in the post from us. If enough grandparents participate we will have genetic information on three generations – sometimes four – of the same family. This puts us in a unique position among studies of our kind and will provide an incredibly powerful resource to look at the importance of health across generations.

WHERE WILL WE BE IN 20 YEARS?

When Children of the 90s started, mobile phones had not hit the high street. Now, the smartphone is everywhere. They contain many tiny devices that can collect information. Cardiologists can implant devices into patients to better regulate their heart. Geneticists can 'read' the whole genome. Biochemists can measure thousands of compounds from tiny samples. Information can be streamed directly from a sensor device on a person through the internet to any chosen computer.

Step forward 20 years and imagine a future in which tiny devices with far greater capabilities and sensitivities will be able to collect huge amounts of data about us. In this world, your daily world will be the Focus centre and our research into health will have entered another dimension.

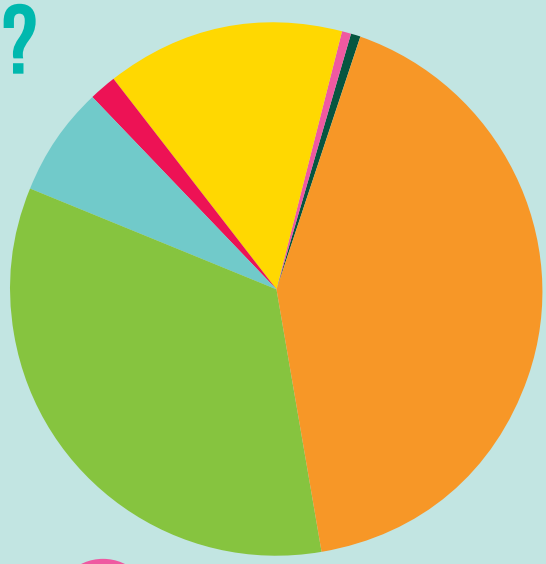
WELL DONE!

Congratulations to our founder, Professor Jean Golding OBE, who features in the 'You Make Bristol' exhibition at M Shed in Bristol. It celebrates 40 Bristol people who've made a difference to the world.

Well done to our scientific director, Professor George Davey Smith, who has been elected as a fellow of The Royal Society of Edinburgh. Speaking about the award he said:

'It is a real honour to be elected to the Royal Society of Edinburgh.'

WHO FUNDS CHILDREN OF THE 90S?



- £7.5m UK research councils
- £6.0m UK charities
- £1.2m UK government
- £0.3m European Union
- £2.6m US government
- £0.1m Other UK funding
- £0.1m Other US funding

DID YOU KNOW?

We have a virtual gallery of some of our key discoveries on imgur that you can share with friends and family. Check them out at imgur.com/a/PyqhW and start sharing!

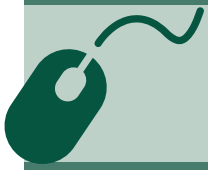
Four in 10 boys are afraid of gaining weight or getting fat. Search for 'Seeing the Unseen' by Nadia Micali on YouTube to find out more.

More than 600 researchers all over the world are using our data to research topics ranging from allergies and autism to genes and heart disease.

Up to one in six premature babies may be enrolled in school a year earlier than they would be if they had been born on their due date.

We've discovered 16 new genetic regions linked to common allergies like pollen, dust-mite and cat allergies. Together they are responsible for about 25% of allergy in the population.

Our breakthrough research on the importance of iodine in the diet during pregnancy made headlines all over the world.



You can read about all our latest discoveries at www.childrenofthe90s.ac.uk/media/press

This newsletter is also available to view or to download as a pdf from our website at www.childrenofthe90s.ac.uk/participants/newsletter

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Children of the 90s

University of Bristol

Avon Longitudinal Study of Parents and Children