



**H**ello!

We are delighted to be sending out this newsletter to all of you who have helped us so much with the SWS. The children in the SWS now are aged between 9 and 18 years so tailoring the information to suit all ages including adults has been tricky! But we hope that everyone will find something interesting in this. We are so grateful to you all for the enormous amount of time you've given us. Not everyone has been able to take part at every stage (we couldn't include everyone in some parts of the study) but there were 10 separate core visits (at home or hospital) up to when the children were age three to which everyone was invited, and another four core visits at older ages, so far, for some children. Added to that there have been special extra visits such as MRI scans at age 8-9 years, visits for DXA scans, and assessments of lung development and thinking skills. Very many thanks to you all.

In this newsletter, we explain how we've done the SWS, and the types of information we've collected from you, together with details of some of our results and new studies that we've started subsequently, based at least in part on our SWS findings. We also have some comments from people involved in the SWS about their varying experiences.

Professor Hazel Inskip, Deputy Director  
MRC Lifecourse Epidemiology Unit

#### Director's Welcome

It is a pleasure to introduce you to the 2017 SWS Newsletter. As you will see in the pages that follow, you have helped us to shed light on the causes and prevention of childhood and adult obesity; to improve bone and muscle health; and to optimise the growth and nutrition of children in years to come. The study is internationally renowned and continues to be funded through the Medical Research Council and various other grant giving bodies. This is testimony to the hard work of Hazel Inskip and all her team here at the MRC Lifecourse Epidemiology Unit, as well as to the efforts made by all of you as participants. My personal gratitude to you all.



Professor Cyrus Cooper, Director  
MRC Lifecourse Epidemiology Unit

#### Contact Information

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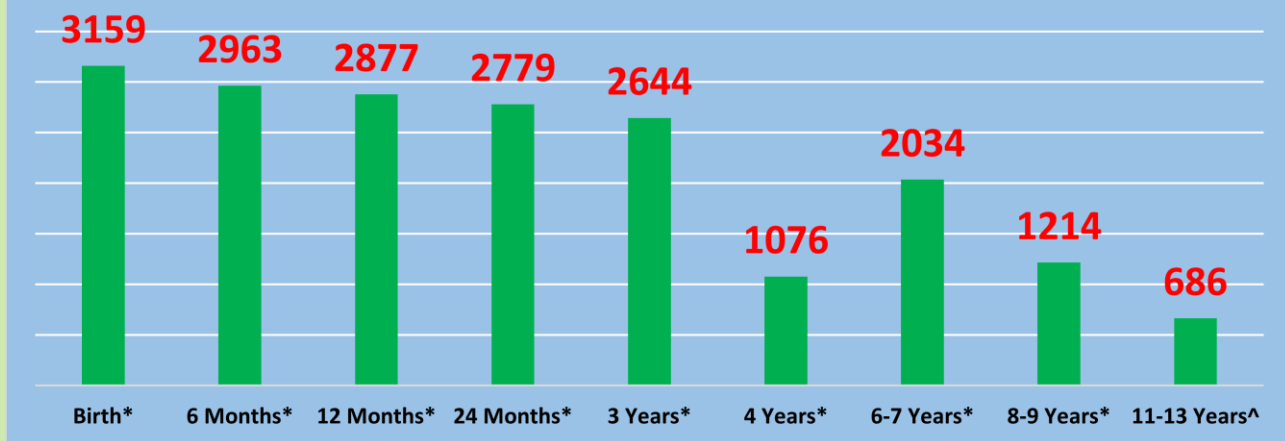
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**Please keep us up to date with any change of contact information for yourself**

## Progress so far...



*These numbers show how many children have taken part at each stage of the study to date*

*\*These age groups have been completed. ^This age group is ongoing*

### What next?

When the children are aged 15 years we are planning to try to collect some data using a secure internet questionnaire. We will be testing out this system by asking some children who have attended the 11-13 year assessment if they will use it for us – so do look out for a letter in the next few months! If it is successful we will roll it out for all children at around 15 years of age. Then at 17 years we would like to do another assessment at clinic for all those who are willing to take part. This would be a near adult assessment that would give us an understanding of growth and development from before conception to adulthood and would be tremendously valuable for helping us work out how to improve growth in children to maximise the chances of excellent health in adulthood.

### What happened to all the dietary information from the SWS...?

Thank you to all the SWS families who have helped us to collect information about the diets of mums, dads, babies, children – and most recently teenagers in the SWS. Because the study started before pregnancy, the SWS is a unique dataset that we can use to start to understand how diet and nutrition at the earliest time in life can affect children's growth and development – and what this means for health later on.

Over the past few years we have been busy carrying out the analysis of the dietary data, contributing to over 40 scientific papers, and we have been asked regularly to feed back the findings to government and other health agencies and at scientific meetings.



# Assessing growth from conception to childhood

We have been assessing children's growth from conception, through birth and infancy and then childhood. We've taken many measurements of height, weight, head, waist and hip circumferences and lots of skinfold thicknesses at many time points. From these measurements we can see how children grow and how they vary. This has helped us understand how children's growth influences their health and development at later ages. Few studies around the world have as detailed measurements as we do in the SWS. Our measurements of the baby in the womb are particularly informative as we can learn about the influence of growth on later health from conception rather than just from birth.



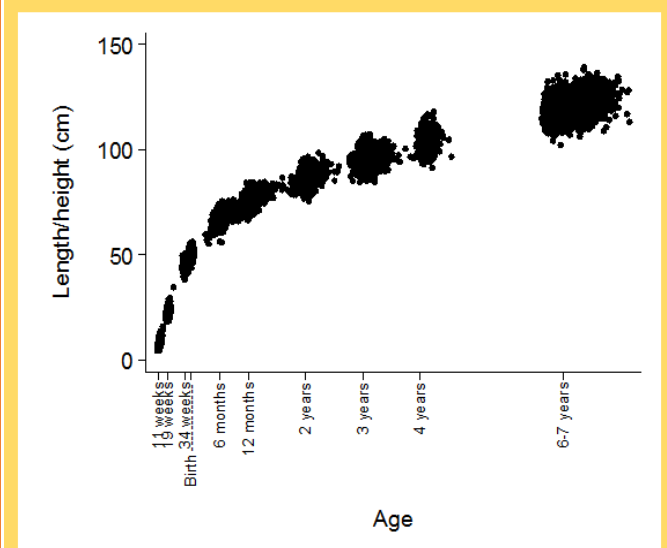
## *Tell me more*

Using these measurements, we have found that children whose waists grew faster in the womb between the 11 and 19 weeks scan visits but then slower after that were more likely to suffer from allergic reactions (assessed by the skin prick tests that we did) when 3 years old, but that those who grew slowly from 11 to 19 weeks were more likely to suffer from non-allergic wheezing. Children who grew faster in the first few months of life were also more likely to suffer from wheezing.

We have also found that the weight mothers put on during pregnancy tended to be linked to the fatness of the baby at birth and the child by age 6-7 years.

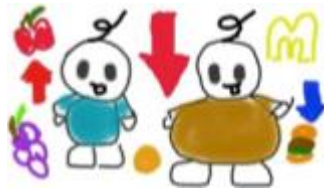
## *How do we know this?*

One of our statisticians, Sarah Crozier, has done a lot of work on the measurements trying to summarise the ways in which children grow. Below is a graph showing all the measurements we have taken of all the children's lengths and heights from the first scan at 11 weeks through to the 6-7 year visit. We have used the various summaries Sarah has made to relate growth to the children's health.



# SWS Nutrition

Age 6-7 years



There's something fishy going on!



**What are the newest dietary findings?**  
**Long chain polyunsaturated fatty acids (also known as omega 3 and omega 6) in the mother linked to children's health and development**

*Tell me more*

We have found links between mothers' omega 3 status (measured in blood samples) in pregnancy and children's bone strength, body composition and risk of some types of wheezing that are not linked to allergies in childhood – suggesting that higher status has beneficial effects on long-term health

*How do we know this?*

During pregnancy we took blood samples from the SWS mothers and in those we have measured the levels of omega 3.



We have asked lots of questions about asthma and wheezing at different ages and measured how the children reacted to various allergies using a skin prick test. Amounts of bone, fat and muscle have been measured using the DXA scans at ages 4 and 6-7 years.

**Five early life 'risks' linked to overweight and obesity in children at age 6-7 years**

*Tell me more*

We looked at the effects of five early life 'risk' factors and their links to children's body composition.

- ❖ **mum is obese,**
- ❖ **puts on too much weight in pregnancy**
- ❖ **smokes in pregnancy,**
- ❖ **has low vitamin D status,**
- ❖ **baby either not breastfed or for less than one month**

Half of the SWS children had at least two of these risk factors. We found that having more risk factors was linked to a greater risk of being overweight by age 6-7 years. For example, children who had four or five of the risk factors were four times more likely to be overweight at this age than those with none.

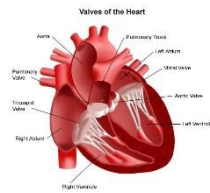
*How do we know this?*

Before and during pregnancy, we measured the SWS mothers' weights and asked them questions about their smoking. We measured vitamin D levels in the blood samples given by the mums at the late pregnancy visit. When the child was 6, 12 and 24 months old we asked questions about breastfeeding of the SWS mothers. Through childhood we measured the heights and weights of the children and also performed DXA scans of many of them. At age 6-7 we could assess which children were overweight for their age and height.



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# SWS Healthy Hearts



Age 8-9 years

At 8-9 years, children were invited to attend a clinic at the Princess Anne Hospital for a detailed assessment of their cardiovascular structure and function as well as a bone scan (DXA) and grip strength measurements. In total 1,214 children were seen at these clinics.

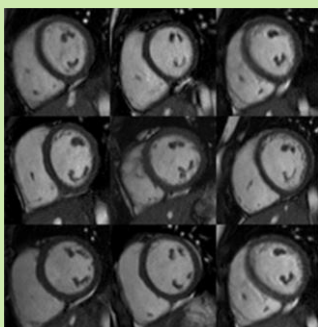
## *Tell me more*

### **Heart Function - MRI scans:**

We have now completed the MRI component of the 8-9 year follow up. 355 children came along for an MRI scan, they all did brilliantly and we got great pictures of the heart and major blood vessels. We have a mass of data on the function of the heart, measures of volumes of the ventricles in the heart, and have been able to calculate the weight of the myocardium (the muscular wall of the heart). We have found that higher oily fish consumption in pregnancy is linked to more elastic arteries by age 8-9, which is good for long term heart health.

## *How do we know this?*

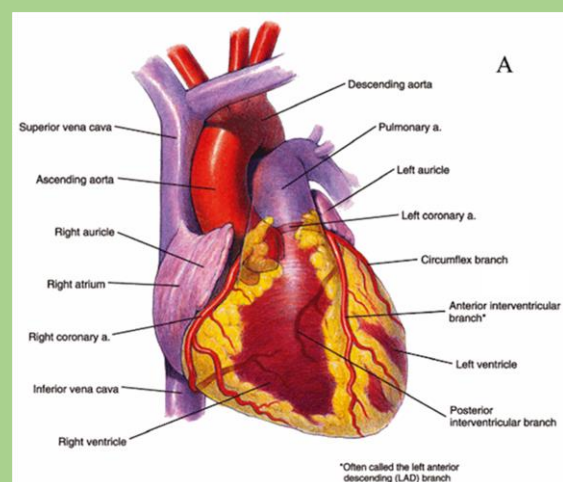
The aorta is the major artery that takes blood away from the heart and is responsible for smoothing the flow of blood from each heartbeat. From the scans we took of the blood flow through the aorta we have been able to calculate how stretchy or elastic the walls of the aorta are. The aorta gets gradually stiffer as we get older and it is healthy to have elastic arteries.



You may remember Jen Bryant who performed the MRI scans



As a result of Jen's work, we have found some interesting influences on the level of arterial stiffness in children at the age of 8-9 years.



**We are currently following up the children at ages 11-13 years. This is an important time of development as the children become adolescents. Their body composition changes considerably and they are developing lifestyles that they may maintain into adulthood.**

### *What do we do at this follow-up?*

The assessment at this age includes a DXA scan, which many of the children have had before in earlier waves of the SWS. The usual body composition measures of height, weight, skinfold measurements etc. are collected along with detailed questionnaires to the mum and the child. We also do an exercise test to assess how well the heart responds to the stress of exercise and some computer assessments of thinking skills. Because the body changes so rapidly at these ages we need to know how far each child is through their pubertal development. Our nurses conduct an examination if the child is willing or the child can complete a self-assessment questionnaire. Some children don't like the pubertal assessment but it is done very quickly and gives us really useful information for the study. But no child is pressurised to have it done. We also are taking blood samples from the children for the first time. We have taken bloods from the mums and dads in the past but never from the children before. After numbing the skin before the sample is taken most children are unaware that the needle has gone in. Many children have now given us samples and we are most grateful to them.

### *Why do we need this information?*

We are trying to understand what affects development throughout childhood and into adulthood.

We have lots of information on SWS participants that help us understand the role of diet, physical activity, hormones, genetic and epigenetics on the way in which children grow and how their hearts develop. This information helps us work out ways to improve the health of children in the future.

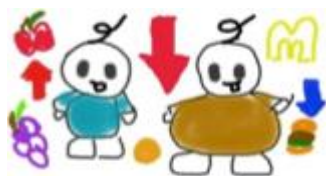
### *We take dental photographs looking at the composition of the enamel on specific teeth.*

#### **Smile Please!**

The pictures of the children's teeth are for scientists looking for the cause of something called Hypomineralisation. To do this from photographs they need to be able to see specific teeth from all angles. That's why we take so many pictures, five at least! It's also the reason we use some funny retractor things to move the child's lips out of the way, and why we have to get up so close with the camera. The good news is that the scientists are really pleased with the pictures. All thanks to many winning smiles!!



# Vitamin D



# Epigenetics

Higher vitamin D levels in mothers' blood in pregnancy are good for children's body composition (*bones, fat and muscle*)



## Tell me more

We have found that levels of vitamin D in the blood samples taken from the mother in pregnancy are linked to stronger bones in the children at various ages, less fat by the time they are 6-7 years old, and stronger grip strength (a measure of muscle strength) at age 4 years.



These findings, together with those from other studies, have led us to run a trial to assess the benefits of giving

women vitamin D supplements in pregnancy (the MAVIDOS trial) to try to improve the bones and general health and development of children.



## How do we know this?

We measured vitamin D levels in the blood samples we took from the SWS mothers and have linked them to the measures of bone and fat from the DXA scans taken in some children at birth and at ages 4 and 6-7 years.



We also measured the grip strength of the children at age 4 years, using an instrument that the children squeezed as hard as they possibly could.

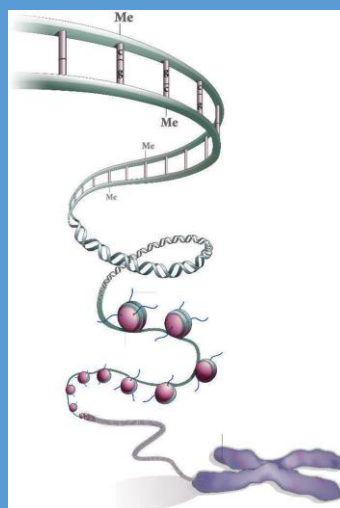
Epigenetic marks in the umbilical cord are associated with body fat in the children at age 6-7 years



## Tell me more

Professor Keith Godfrey says "Epigenetics is an exciting new part of science that helps us understand how our genes operate in affecting our health. Our genes are fixed, but how they act can depend on other things happening in our lives. Epigenetics is helping to find out how the "memory" of the nutrition babies receive from their mothers before birth affects their later health and wellbeing. We've found links between epigenetic marks in the umbilical cord and amount of body fat in children at age 6 years, showing that amount of fat could be partly explained by things that happened before children are born".

## How do we know this?



We've measured epigenetic marks in the umbilical cords that linked the babies to their mothers in the womb during pregnancy, and, using DXA scans, we measured the amount of fat in each child at the 6-7 year visit in the General Hospital.

# Sleep



## Mothers' stress before pregnancy linked to disturbed sleep for babies

### *Tell me more*

We've found out that mothers who are stressed before they become pregnant are more likely to have babies who are still waking up in the night when they are 6 and 12 months of age.



### *How do we know this?*

When we first saw the SWS mums we asked them whether they were stressed or anxious. When the children were 6 and 12 months old, we asked the mums how many times their children woke up at night between midnight and 6am.



## Children who sleep less at age 3 years are have more fat and lean mass (mainly muscles) by age 4 years.

### *Tell me more*

Many studies have found that shorter amounts of sleep are associated with children being fatter, as measured by body mass index (BMI). We have found that children don't just have more fat, they have more muscle too. If this finding is correct then encouraging children to sleep more may reduce obesity but also have an impact on muscle development.

### *How do we know this?*

When the children were 3 years old we asked their mums how much time the children spent asleep at night and taking naps. Some of those children came into the hospital and had a DXA scan at age 4 years. DXA scans tell us how much fat and lean there are in the body as well as telling us about bones.

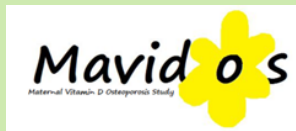




# Studies resulting from the SWS study

As a result of findings from the SWS we have started to try to improve the health of mothers and children in Southampton and elsewhere. At the MRC Unit we are doing the following:

## Maternal Vitamin D in Osteoporosis Study (MAVIDOS)



Following the findings in the SWS that higher levels of vitamin D in the mothers' blood samples were linked to better health in their children, we are testing whether giving women vitamin D supplements during pregnancy can improve the strength of their children's bones. The trial has shown that babies born in the winter have stronger bones if their mothers took vitamin D. A new phase of the study has just started for 6-7 year olds.

## Southampton Initiative for Health (SIH)

### Southampton Initiative for Health

In the SWS, we found that the quality of children's diets is strongly linked to their mothers' own quality of diet even before they became pregnant. So we are trying to improve the diets and general health behaviours of women in the general population who may become pregnant. We have worked with staff in the SureStart Centres training them in 'Healthy Conversation Skills' to help them enable women to try to improve their diet, physical activity, reduce smoking and alcohol etc. The methods have proved popular and are being used across much of southern England as well as parts of New Zealand, South Africa and Canada.

## SPRING (Southampton Pregnancies Intervention for the Next Generation)



SPRING is a trial in pregnant women that combines the vitamin D supplementation from MAVIDOS with the 'Healthy Conversation Skills' in SIH to see if we can improve health of mothers and their babies. **This trial is still recruiting pregnant women. If you are pregnant and would like to take part, phone the SPRING team on 023 81 204186**

## LifeLab

The SWS and related studies have shown the importance of good diets and other health behaviours in both men and women before they start to have their families. Patterns of eating and taking part in physical activity are formed in the teenage years. The SWS has led in part to development of LifeLab which is a purpose-built laboratory space for school children to visit. All of the secondary schools in Southampton and many from further afield have sent children to LifeLab. It aims to increase the children's enthusiasm for science as well as their understanding of the importance of good health behaviours both for their own health and for their future children. Some SWS children have already visited LifeLab and we hope that many more will visit in the years to come. We are conducting a trial to see how successful LifeLab is.



LifeLab was shortlisted for the Times Higher Education Awards and the team are pictured above at the award ceremony in London. More recently LifeLab has won the Vice Chancellor's Award at the University of Southampton for Collegiality.



## Nutritional Intervention Preconception and in Pregnancy to improvE offspRing outcomes (NiPPeR)



This is a relatively new study that has recently had a lot of media coverage. You may have heard adverts on the local radio and even seen adverts on the back of Southampton buses! The NiPPeR team are currently recruiting women who are planning to try for a baby within the next six months and who are happy to have their babies delivered at either Princess Anne Hospital or the New Forest Birthing Centre in Ashurst. NiPPeR is testing a nutritional drink to see if it can improve the mothers' health before and during pregnancy and thus improve the health of the baby in the womb and beyond. This is an international study with women in Singapore and New Zealand also taking part.

Here are just a few of the local team members ranging from Superintendent Sonographer to Senior Research Nurses and administrators:



### Back Row:

Dr Pam Mahon, Karen McGill, Julia Hammond, Kelly Montague, Wendy Johnson.

### Front Row:

Sarah Standfield, Tina Horsfall and Lorna Doswell who you may come into contact with if you join the NiPPeR study.

## The first NiPPeR baby, was born at the end of June 2016



The family, Lizzie, Stuart and baby Sophie Richardson have featured in the local press, Lizzie said *"I was keen to take part in a unique study that may give my daughter the best start in Life"*.

([http://www.dailyecho.co.uk/news/14680309.This\\_Hampshire\\_baby\\_could\\_save\\_thousands\\_of\\_lives\\_but\\_how/?ref=erec](http://www.dailyecho.co.uk/news/14680309.This_Hampshire_baby_could_save_thousands_of_lives_but_how/?ref=erec)) and they have been interviewed on local radio stations as well as being filmed by BBC TV South, for the South Today programme, and also the regional TV channel, "That Solent TV". You can view the interview on YouTube.

**Recruitment ends in spring 2017, so if you are interested in taking part, or know of anyone who would be interested in taking part, please ask them to contact the NiPPeR team on 0800 032 31 30. More information can be found at [www.nipperstudy.com](http://www.nipperstudy.com)**

**The SWS has linked up with many cohorts around the world so we can answer questions that need data on lots of people**

### *Tell me more*

Examples of this type of work are:  
The SWS has contributed to a combined analysis of 24 studies (data on 147,000 children) showing that children who were born early, or small at birth or had greater weight gain in infancy tended to have poorer lung function in childhood.

Another analysis of data from 19 studies (152,000 children) showed that mothers who ate more fish in pregnancy had a lower risk of preterm birth and their babies were slightly heavier at birth. Interestingly the findings were stronger in smokers and in the overweight and obese.

Using data from the SWS and one other UK study, the Avon Longitudinal Study of Parents and Children, new methods for monitoring blood pressure during pregnancy to predict the risk of pre-eclampsia have been developed.

### *How do we know this?*

Our data were combined with data from other cohorts using very limited information so that no names, or identifying information were revealed to any researchers from any of the studies. Then all the studies were analysed together giving much more data for answering the research questions more accurately.



**Links with work in India - Babies and children in India are smaller than our SWS children**

### *Tell me more*

We have compared the size of children in a cohort from rural India, the Pune Maternal Nutrition Study with our SWS children. The Pune study is the only other study in the world that recruited the mothers before conception of the child, though in very different circumstances. At birth, 1, 2, 3 and 6 years, the Pune children were on average much smaller than the SWS children though their skinfold thicknesses were closer to the SWS than other measurements, indicating that Indian children have proportionally more fat than SWS children despite being generally smaller.

### *How do we know this?*

We compared the heights, weights, head and mid-arm circumferences and skinfold thicknesses of the Pune children at the five ages with the measurements taken at the same ages in the SWS.

### **Teeth**

The environment in pregnancy and early life influences tooth development in children.

### *Tell me more*

Early arrival of teeth is not thought to be good as the teeth are at greater risk of decay. We found that children born to mothers who smoked, or who were less physically active, or came from more disadvantaged backgrounds tended to have their baby teeth emerging at an earlier age.

### *How do we know this?*

We collected a lot of information about the SWS mums during pregnancy and were able to link this to the ages of the children at which the mums reported their first teeth appearing.

# People involved in the Southampton Women's Survey

## DJ Dad Andy Maxwell says –

As a Father whose family is his world, the Southampton Women's Survey (SWS) provides me with extra peace of mind. I know that I am taking advantage of everything available to me to ensure my children and others have the best possible chance of a healthy life. It also provides the opportunity to spot any health related problems at the earliest time.

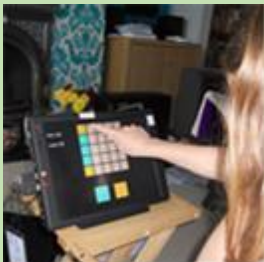


Having unfortunately lost our second child in early pregnancy, Michelle and I were most grateful for the extra support, care and expertise offered and available to us as study participants. Of the two of us, I was probably most keen to take part and had no hesitation getting involved in the research.



To be honest I did not enjoy the pregnancy period following the sad situation we had previously experienced. However, having the extra ultrasound scans and support from the research team, really made coping with the pregnancy easier for both of us as it enabled us to be more informed about Bethany's development in the womb.

Although the reason for taking part in the study was personal to us, as Bethany has become older, all three of us understand that the scans, tests and communication provided by the SWS are all part of a bigger picture. We realise the study is intended to help and support families by identifying links to health issues and how certain behaviour, upbringing and family history impact on our children's lives.



## I feel the help and benefits received by taking part in the SWS are:

- \* Peace of mind during what can be a stressful pregnancy
- \* Expert support and advice
- \* Understanding what the study is trying to achieve for the benefit of our children and future generations
- \* Understanding how our child grows and develops
- \* Providing me with the knowledge that our beautiful Bethany and her lovely Mum's contribution is going in some way to helping others



**Mum Alyssa Holloway says** - I find it interesting being part of SWS. Nothing happens for a while then a letter comes through the post informing myself and Maya about the next part of the study, relating to her age she has been invited to be involved in. We read through the information together and she enjoys the importance of being asked to be part of something. I have enjoyed the variety of things she has done. We always get asked the diet questions which I find a good reminder of the importance of healthy eating, as she gets older though she has started to interrupt and give her opinion on how many times a week she has eaten certain foods! I found the allergy skin prick testing particularly useful as I suffer with hayfever, eczema and other allergies so was interested to see whether she has inherited these allergies.

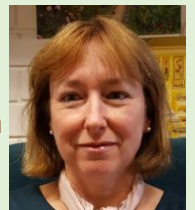


We were both amazed to see images of her heart beating away on the 8 year old scan. We also found the bone density scan very useful as the results provided us with information that we otherwise wouldn't have known. We now include more calcium rich foods in her diet. Ready Brek for breakfast is becoming the norm! Being involved in the survey has given me greater knowledge of potential health issues that Maya could develop as she moves through childhood and what we can do about them.

## Staff involved in the studies

### **SWS Senior Research Sister Julia Hammond says ...**

I have been working on SWS since it began in 1998, my first job involved sorting out and furnishing office space for the new SWS staff. At our peak we had 38 nurses carrying out the initial pre-pregnancy visits. You may recall us coming to your homes - thank you for making us feel so welcome! We now have 7 research nurses working on the SWS 11-13 year follow-up clinic at Southampton General Hospital. Some have worked on SWS for over 10 years although there are some new faces. Our experienced nursing team come from various backgrounds; from working in primary care GP practices to hospital secondary care staff - we have had general nurses, midwives and paediatric nurses working on SWS. Although much of my time is now spent in other areas of research and line managing staff I can still "sneak off" to meet some of the newer SWS study participants at the clinic as well as some that I first met a decade or so ago - it is wonderful to catch up; where has time gone!



### **Some of my memories**

- Meeting you all and being welcomed into your lives and homes - despite us asking lots of questions over the years down to the last 1/8th of a teaspoon on how much of this and that - I can honestly say it never feels repetitive; although it may do to you, particularly when the food frequency questions are fired!!
- It's the children and young people who really impress me; they have been so amazing in undertaking the various activities for the study from bone scans to cardiac MRI scans, cognitive function, dental and other assessments and measurements.
- Chasing toddlers around furniture; trying to measure them sometimes with and sometimes without success; teddy and the staff can be measured more effectively at times!
- Driving around in the dark and rain, lost trying to identify houses - a police officer would probably say looking decidedly dodgy and up to no good!
- Supervising the nurses on visits to ensure activities are carried out to a set standard; fishing out car keys that the nurse has dropped down the drain at the roadside!

The SWS holds a special place in my heart and that is thanks to the amazing people who are part of the study, yourselves, the staff - front of house and behind the scenes. Despite leading busy lives you continue to give so much time and effort, this has made the SWS a special, important and world renowned study. Working on the SWS has been full of variety and an absolute privilege, it has become very much a family to many of us - it has been a complete pleasure - so Thank You to you, your families and especially your children!

## Staff involved in the studies

### Professor Nick Harvey says ...

The SWS has provided important information which helps us to understand what factors during pregnancy are important for the development of the baby's bone strength. Since joining the MRC LEU as a Clinical Research Fellow, charged with the 4 year follow up of the SWS children, I have undertaken many different analyses linking early growth, and factors in early life, such as maternal nutrition, physical activity and lifestyle during pregnancy, with offspring bone mass. A key finding that lower levels of vitamin D in the mother during pregnancy are associated with reduced offspring bone mass at birth and 6 years old has been really important in helping us to design and carry out a randomised controlled trial, in which we have compared the effect of vitamin D supplementation with a dummy (placebo) tablet through pregnancy on the baby's bone development. The MAVIDOS Maternal Vitamin D in Osteoporosis Study, led by Professor Cooper and me, (see page 9), is an excellent example of how we can use findings from the SWS to inform future studies, and eventually make a difference to public health.



### Dr Sarah Crozier says ...

I work as a statistician, analysing the data that are collected from SWS participants. Having such great data makes my job very interesting, enabling us to answer some important scientific questions. The study is of particular interest to me because I was one of the young women originally interviewed as part of the SWS, when I had just started working at the MRC Lifecourse Epidemiology Unit in June 2000. Although I had my children after the SWS finished recruiting, I did take part in the MAVIDOS study (see page 9), during one of my pregnancies.



I used SWS data in my PhD where I was interested in using different statistical techniques to describe women's diets, and to then work out what kinds of women have different dietary patterns. Of particular interest to me at the moment is looking at our growth data (see page 3). We are fortunate to have data collected on fetal size using ultrasound, and have a wide range of measurements taken from children as they are growing up; this rich source of data enables me to characterise growth and relate this information to later health outcomes.

### Dr Janis Baird says ...

I am a public health doctor and researcher. I'm interested in understanding the factors that affect people's health. Studying mothers and their children, taking part in the SWS, tells us a lot about these factors and helps us understand how the growth and development of children affects their health now and when they are adults. The SWS is unique in having studied women before they became pregnant and this is very important as it allows us to study links between a mother's health and the development and health of her children.



I am particularly interested in how we might use the evidence from the SWS to develop ways of improving the health and lifestyles of women and their families. For example, our work in SWS has shown that maternal anxiety before pregnancy is linked to the behaviour of their children at age three. These findings will help us to identify the right time to intervene to help mothers and prevent problems for their children.

# Other people involved in the studies

## Councillor Ivan White

Ivan was Mayor of Southampton from 2013-14 and kindly agreed to be part of the Medical Research Council's centenary celebrations and to cut our birthday cake (he's pictured here with the MRC Lifecourse Epidemiology Unit director Cyrus Cooper). Ivan became very enthusiastic about the work of the Unit and we are delighted that he has taken on the job of chairing our Research Review Panel, to provide external advice on our work. There are many studies being conducted in the Unit, including the SWS. Ivan says: **"I, and I'm sure all members of the Research Review Panel, are pleased to help in our small way to support and contribute to the wonderful and exciting work of the MRC Lifecourse Epidemiology Unit, including the SWS, at the University of Southampton."**



**If you are interested in joining our Research Review Panel, please e-mail: Tina Horsfall, [mch@mrc.soton.ac.uk](mailto:mch@mrc.soton.ac.uk)**



## Children's P.P.I.

The Wellcome Trust Research Facility, WTCRF, based at Southampton General Hospital has established a Patient and Public Involvement forum (PPI) for children and young adolescents aged between 7 and 17 years. The reason for forming this group is to include young peoples' input into the planning and delivery of research and to get the children's thoughts and ideas on the design and running of studies. The children who attend the forums help the researchers by discussing relevant topics, help to re-design forms or information leaflets and advise the researchers on how to improve the research experience for the participants taking part in the research. Some of our SWS children are already involved in the forums; if you are interested in joining and would like to bring a brother, sister or friend along with you, then please contact Tina Horsfall on 02380 777624 or e-mail [mch@mrc.soton.ac.uk](mailto:mch@mrc.soton.ac.uk)

## Staff Public Engagement

Each year some of our staff and colleagues from LifeLab take part in public engagement events that are held locally. In March 2016 at the University of Southampton's science week we featured our nutrition activity focusing on the sugar content in snack foods and why we should be restricting sugar in our diet. Visitors enjoyed using iPads to scan cereal boxes and measure the sugar content in each pack. Sugar and teaspoons were provided and the children measured how much sugar was in their favourite snack or drink. They were also encouraged to think about what they had learnt in the other two activities and write a 'healthy' pledge on a brightly coloured post-it note. These pledges were attached to a large rainbow poster displayed next to the activities.

The Southampton General Hospital Open day in September 2016 had a fantastic turnout. Visitors

enjoyed taking part in our Hands-on X-ray and grip strength activities, based on our research into osteoporosis and sarcopenia. The children made a model of the bones in their hand using special modelling material and engaged with the volunteers about how to keep their bones healthy. Grip strength was plotted on a graph and people of all ages were able to see how their grip compared to boys and girls, men or women of a similar age. Grip strength is a good indicator of muscle strength so the message was to keep active and try to maintain muscle mass!



Very informative! learnt alot myself. Great for the children

MRC

Lifecourse  
Epidemiology  
Unit

UNIVERSITY OF  
Southampton

Mavidos



Southampton  
Initiative for Health



SPRING  
Southampton Pregnancy Intervention  
for the Next Generation



Look out for our **free** future events!

**18<sup>th</sup> March** - University of Southampton Science Week

**June 2017** MRC Festival of Science Quiz, *date and venue to be displayed on our website*

## Contact Information

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**Please keep us up to date with any change of contact information for yourself**

## Change of Address / Phone Number

We would love to keep in touch with you in the future, so if any of your contact details change please complete and return the enclosed Reply Card, in the pre-paid envelope provided. Or email or phone us using the details above.