



Eleven years on from the launch of the Airwave Study, funded by the Home Office, we would like to thank all police officers and personnel who have taken part in this research project.

We have collected data on Airwave radio usage, clinical and lifestyle information using questionnaires and clinic visits. Health screening has proved popular, providing valuable additional data. Long-term studies such as this are highly valued as a unique source of data for medical research. Without your participation, studies such as Airwave would not succeed. We now hold data that will help to answer questions about possible health effects related to use of Airwave.

The more data we can collect the more powerful the Study becomes. We have also been awarded Research Tissue Bank status providing a great opportunity for the Study to collaborate on other research projects aimed at investigating a wide range of health conditions.

Your participation has made us one of the largest health follow-up studies in the country!



*Professor Paul Elliott (PI)*

## Welcome

To our newsletter. We would like to thank everyone who has participated for their help in building this unique resource. This newsletter will bring you up-to-date on the progress of the study since its inception in 2004 and the plans to enhance its research value even further.

## Rationale for the Study: Recap

You are a member of a large prospective occupational cohort. A cohort is a group of people who share a common experience within a defined period (in this case it is working as a police officer or staff member in the British police forces). We are following up you and your colleagues over time to monitor your health. In this way we can gain new insights into the causes of ill-health and diseases that would ultimately lead to better treatments and prevention. Specifically, with respect to the possible health effects of TETRA, we are examining information we have captured on questionnaire and from computerised records of radio use, and are relating these to the health of participants.

This approach can also be used to link lifestyle and biological characteristics (such as clinical information, blood-based markers or genetic factors) with risks of developing a wide range of diseases. The causes of some diseases are straightforward. For example, a relatively simple DNA test can predict whether or not someone will develop cystic fibrosis. But the most common chronic diseases such as cancer, diabetes, heart disease, stroke and dementia are more complex. Genes do influence the risks of these conditions, but so do lifestyle factors such as diet and smoking and the environments in which we live and work. Only a small proportion will develop any one condition and the effects of different factors are likely to be modest. This is why we require a large number of volunteers.

If you wish to opt out of the Airwave study, then please write to us at [Airwave@imperial.ac.uk](mailto:Airwave@imperial.ac.uk). Your healthcare or legal rights will not be affected in any way. As with any project that is built upon the trust and confidence of those who take part, consent, data security and privacy are crucial. The information we hold about you will be shared with the Health and Social Care Information Centre to allow for linkage to your health records.





# 53,429

People from 23 forces took part. Clinics were set up in 35 locations across the country.

To date **53,429** people are part of this exciting research initiative and have jointly created a resource for collaborative research aimed at health promotion, diagnosis and prevention of disease and devising future treatment.

Main recruitment phase into the study ended as of 31st March 2015.

However work continues on the data analysis and follow-up.

We are grateful to the Home Office for its continued support of the Study.

## We are now a Research Tissue Bank (RTB)

In December 2013 the NRES (National Research Ethics Services of the Health Research Authority) awarded the Study 'Research Tissue Bank' status.

As a tissue bank we are a repository of biological samples, physical measurements, health outcome and behavioural data collected for research, clinical practice or public health monitoring.

This status applies retrospectively to all samples and data that have been collected.

If you gave consent for long term storage, your samples are included in the Research Tissue Bank.

For more details on the access procedures and a list of approved studies please go to our website.



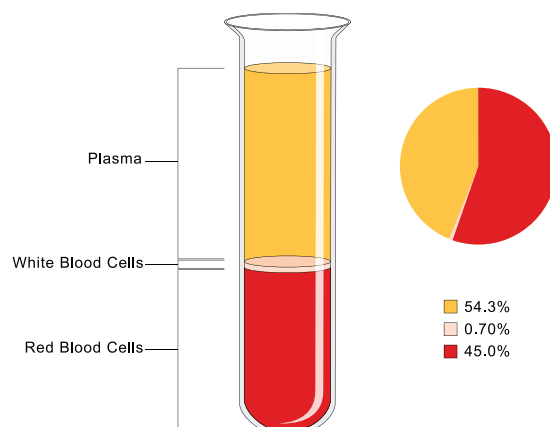
[www.police-health.org.uk/research](http://www.police-health.org.uk/research)

## Behind the scenes: In the laboratory

If you have attended one of our clinics you may have wondered what happened to the blood and urine samples that you donated.

The samples were sent to our laboratory, analysed and the blood separated into its constituent parts, transferred into barcode labelled tubes and then stored at extremely low temperatures to preserve the samples for use in future research.

To date we have processed and are storing more than 700,000 samples of blood and urine!



# Airwave Radio Users

## As the journey continues

We are working on developing a classification of the amount of radio usage by individuals from information that was provided to us. Through this we will examine whether there is any association between use of the radios and health conditions.

Few occupational studies have examined relationships between microwave radiation exposure (specifically TETRA) and health. And most of them had relatively short periods of follow-up and limited information on microwave exposure. We are addressing these shortcomings in the present study.

Here focus is on users of handsets, not exposure to masts or data terminals.

## Interesting Facts!

- 1 In press-to-talk mode, the radio is emitting radiation when you are talking, not when you are listening.
- 2 When asked, participants reported using the radio for 12.4 minutes on average in their last shift.
- 3 You also told us that on average you made 11 calls in your last shift.

## Other research activities:

*While the primary aim of the study is to investigate whether there are any long term health problems associated with TETRA use, scientists have come up with other remarkable research questions, for example:*

*The association between shift work, diet and metabolic risk in the police force.* Metabolic syndrome is the medical term for the combination of insulin resistance (a pre-cursor of diabetes), high blood pressure and obesity. It puts you at greater risk of heart disease, stroke and other conditions affecting blood vessels. Shift work as you know may have an impact on diet and other health related behaviour. The findings from this research should inform nutritional policy for shift workers and development of work place interventions to decrease diet related disease risk.

*Stress and the risk of chronic diseases and sickness absences in police force.* Policing can be a stressful job! We will evaluate whether different stress markers (e.g. job strain, depression) in police force employees are associated with the risk of chronic diseases and how they affect sickness absence rates. If you have a research question that you would like to be considered please do not hesitate to contact us with your suggestion! [airwave@imperial.ac.uk](mailto:airwave@imperial.ac.uk)

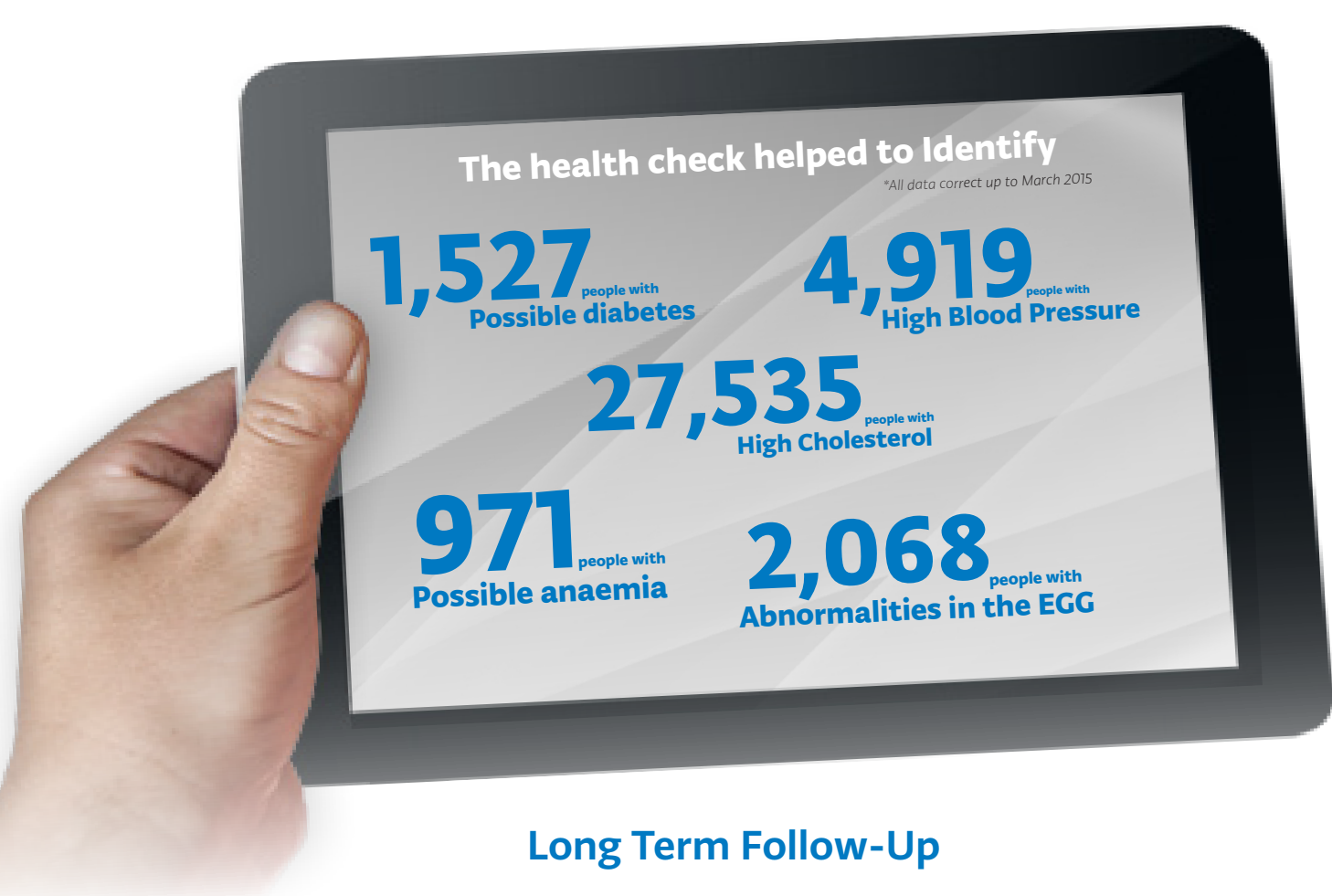
## Meet the Team

The team has a varied range of professionals who have kept the study running smoothly for the last 10 years. There is an epidemiologist, statistician, clinician, data analyst, database manager and an admin to keep us on our toes!



From right to left:  
1st row: Maria Aresu, Deepa Singh  
2nd row: Dennis McRobie, Andy Heard, Anne-Claire Vergnaud, Jeanette Spear & Louisa Cavaliero





## Long Term Follow-Up

With your consent at enrolment you gave permission for us to access your past and future medical and other health-related records, for long-term follow-up. These health records are used to supplement information recorded at enrolment about your previous medical history, family history, investigations, treatments and lifestyle exposures.

### Admissions to hospital

In England, a national statistical database (Hospital Episode Statistics) contains over 200 million coded records about admissions to hospital. There are similar national systems in Scotland and Wales. Data on diagnoses made and the procedures carried out during hospital admissions in England, Scotland and Wales are being added to the Study resource.

### Cancer

The UK has one of the most comprehensive cancer registration systems in the world. A process for regularly updating the Study with information about participants who have developed cancer since joining the study is already in place. We therefore are notified by the NHS whenever a participant is diagnosed with a new cancer.

## Online follow-up questionnaire:

We would be grateful if you could complete an online follow-up health questionnaire, the details of which are provided in the covering letter, and update your contact details. We want to keep in touch by e-mail as it is cost effective and environmentally friendly. If you do use e-mail, then please let us know your address.

We have published a scientific paper in the journal *Environmental Research*. It explains the study methods, rationale and design.

Read More?  
Scan the QR code



**Watch out!!**  
In the next few years, we plan to offer a repeat health screen.

Look out for your invitation letter in the post or visit our website for any updates on this.

