

Swab Out

Crime

Development of a
UK Y Chromosome
Reference Database



Forensic
Capability
Network



Home Office

www.fcn.police.uk/swaboutcrime

We need your help

Swab Out Crime is a national project to establish a UK specific Y Chromosome reference database which will help forensic scientists assess the significance of DNA evidence.

The database will be created from samples donated by UK resident, adult male volunteers. Samples are completely anonymous and no identifying data is gathered as part of the collection process.

It just takes a minute or two. We'll use a simple swab to take a sample from the inside of your cheek.



Who are we?

Forensic Information Databases Service (FINDS) is part of the Home Office and are the service provider for forensic DNA databases.

The Forensic Capability Network (FCN) is the National network for supporting the use of forensic sciences in policing in England and Wales.

What is DNA and Y-chromosome DNA?

DNA stands for Deoxyribonucleic Acid. It is the genetic material found in nearly all cells within our body. It determines our genetics and many of our physical characteristics.

Males carry a specific piece of DNA called the Y-chromosome. This Y-chromosome DNA is passed down from father to son. Men in the same family will usually share exactly the same type of Y-chromosome.

What are we trying to do?

DNA profile testing of the Y-chromosome is a vital investigative method, often used to investigate sexual offences. Very small amounts of male DNA recovered from a female victim can provide a Y-chromosome profile to help identify and convict an assailant.

Part of this process requires the determination of how often a particular Y-chromosome profile occurs in the general population. This is done by checking large reference databases which provide a statistical estimate of how often that profile has been seen. Currently a worldwide reference database called Y-Chromosome Haplotype Reference Database (YHRD) is used to obtain this statistical data when reporting on matches.

We want to develop a database of Y-chromosome DNA profiles specifically for the UK. This will enhance capabilities for our forensic scientists when estimating the rarity of a particular profile in the UK population.

Why are we trying to develop a UK Y-Chromosome Reference database?

The UK needs a Y-chromosome DNA database to better represent the complex ancestry and different ethnic groups within the UK population. This will be beneficial for police investigations and the criminal justice system.

What does your participation mean?

To enable us to develop the Y-chromosome Reference DNA database, we need to collect DNA samples from males from a variety of ethnic groups reflecting the general UK male population.

What will you be asked to do?

The sampling process will involve swabbing the inside surface of your mouth cheeks to collect a DNA sample. This uses a swab, which is similar to a cotton wool swab and is a painless procedure.

We need and would welcome your support with the project. If you would like to donate a sample for this purpose, we will provide you with a Research DNA sampling kit. Enclosed in the DNA sampling kit will be:

- 2 mouth swabs
- 2 sample tubes
- A sheet of barcodes
- 1 small tamper evident bag
- 1 large re-sealable bag
- 1 pair of disposable gloves

Accompanying the kit will be a 'Research Donor Consent Form' and a 'Survey form', which will need to be completed in full.

The survey form will ask you to detail the population group of your biological father and paternal grandfather. This information is not necessary, if you don't know it.

Frequently asked questions

Q: What will happen to my DNA and the information contained within my Y-chromosome profile?

A: DNA will be purified from your cheek cells and will be tested using a specific Y-chromosome profiling system. Your Y-chromosome profile will be identified using a barcode that came with your sampling kit. No personal information such as your name or date of birth will be taken from you. You will not be able to be identified by your DNA profile. Your anonymous DNA profile will be one of thousands used to develop a UK Y-chromosome Reference Database and will also be shared with the worldwide Y-Chromosome Haplotype Reference Database (YHRD).

Q: How will my DNA and information be held?

A: Your cheek cell sample and the purified DNA sample will be destroyed once an adequate Y-chromosome DNA profile has been obtained from your sample. Your Y-chromosome profile will be kept securely in compliance with the Data Protection Act 2018. We will not keep any of your personal information and your DNA profile cannot be linked back to you.

Q: Can I withdraw consent?

A: You will not be able to withdraw your consent once you have returned your sample, as we will not hold any of your personal details and as such, we will be unable to identify which sample/profile is yours.

Q: Will my Y-chromosome profile be searched on the National DNA Database

A: The National DNA Database (NDNAD) contains DNA profiles from crime samples and from individuals arrested or convicted for certain offences. Your Y-chromosome profile will not and cannot be searched against this database. The NDNAD utilises a different form of DNA profiling not compatible with the Y-chromosome profile from your sample. Your information cannot be matched with information on any other database, in order to establish identity, or for any other reason.

Q: Will my Y-chromosome sample or profile be made available for medical, insurance or paternity testing?

A: No, your Y-chromosome DNA profile and DNA sample will not be made available to anyone for these purposes.

Q: How else will my Y-chromosome profile be used?

A: We may wish to publish the outcomes of this project in a scientific journal paper. This could assist others in research and further development of Y-chromosome testing. In any such publication, your profile will be totally anonymous and could not be linked to you.

For further information, please contact:

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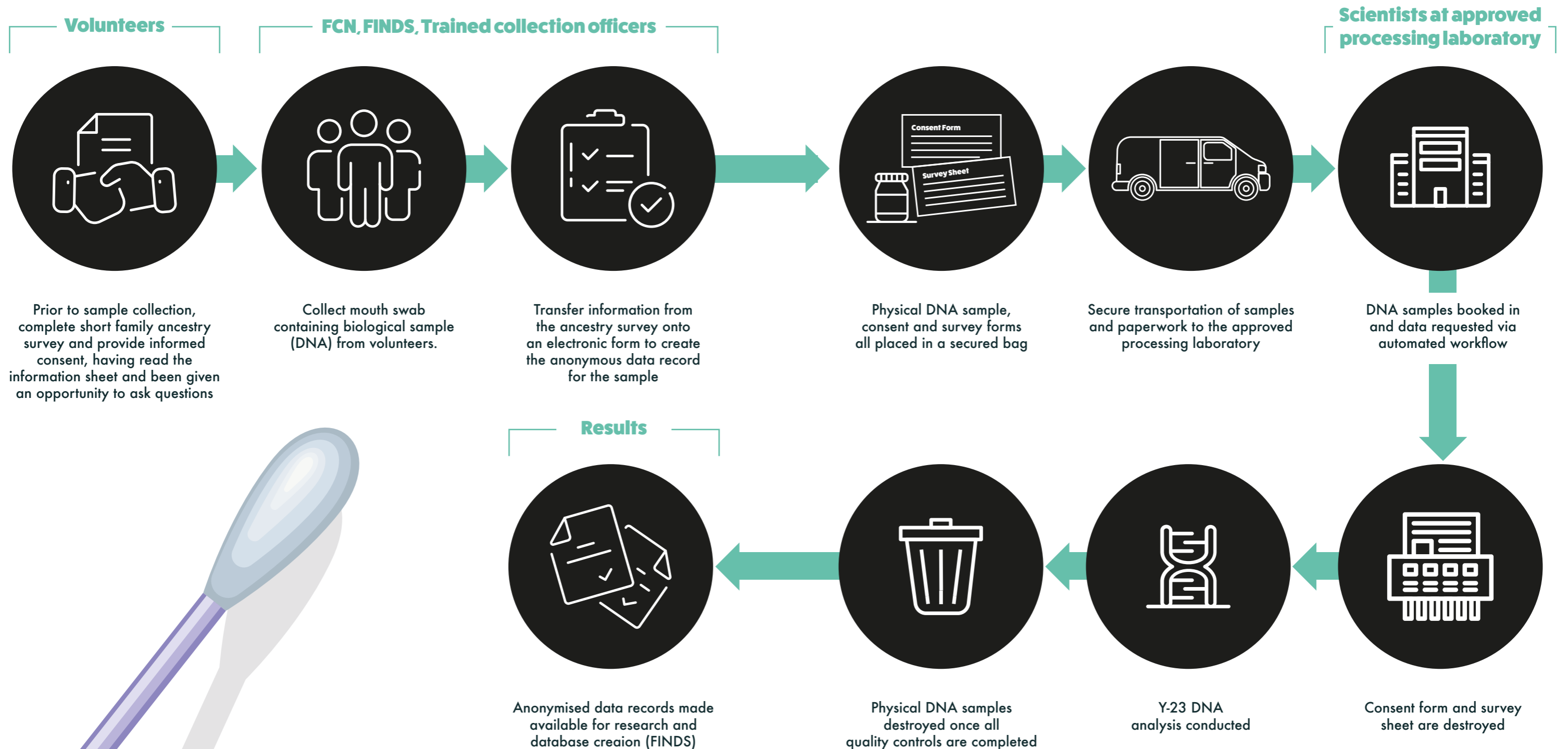
Or visit our dedicated webpage at www.fcn.police.uk/ystr

Anonymised Data Record Example

Donor Barcode 12058253			
Donor Population Group	White	Donor Country of birth	England
Donor's father population group	White	Donor's father Country of birth	Wales
Donor's paternal grandfather population group	White	Donor's paternal grandfather Country of birth	Northern Ireland

Y-STR DNA Profile					
DYS576	DYS3891	DYS448	DYS38911	DYS19	
18	13	19	31	15	
DYS391	DYS481	DYS549	DYS533	DYS438	DYS437
10	28	11	13	11	14
DYS570	DYS635	DYS390	DYS439	DYS392	DYS643
10	28	11	13	11	14
DYS393	DYS5458	DYS385	DYS456	GATA H4	
14	19	11-14	17	11	

Process Flow Diagram



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