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The Police DNA database:
balancing crime detection and human rights

Using DNA to trace people who are suspected of committing a crime is one of the biggest advances in tackling crime since fingerprinting. When DNA profiling is used wisely it can bring major benefits to society by helping to convict serious criminals including murderers and rapists. Concerns arise, however, when tissue samples, genetic information and personal data are stored indefinitely on a DNA database, like the police forensic database – known as the National DNA Database (NDNAD). There are fears that this information may be misused in ways that threaten the rights of individuals and their families.

The limits on police powers relating to the use of the NDNAD were extended in April 2004. In England and Wales, the police are now allowed to take samples *without consent* from anyone who is arrested on suspicion of any recordable offence. This includes all but the most minor crimes. The police can keep this information indefinitely, even if the person arrested is *never charged*. The database now contains DNA profiles from more than 2 million individuals and is expected to expand to include some 5 million people, many of whom will never have been convicted of any criminal offence. It is the most extensive DNA database in the world.[1] As well as storing the identification data obtained from analysis of a sample on a computer, the actual sample is also retained, even though a fresh sample is needed to confirm any match if a the case comes to trial.

No other police force has greater freedom to obtain, use and store genetic information from its citizens. However, there are important questions about the extent to which DNA samples and profiles should be kept indefinitely as part of the NDNAD.

GeneWatch UK believes that there are important changes that can be made to the operation of the NDNAD which would protect people's rights and increase public confidence without compromising its role in tackling crime.[2]

The Science and Technology Committee is conducting an inquiry into forensic science following the decision to develop the Forensic Science Service (FSS) as a public private partnership. It is next taking evidence on 12th January 2005. GeneWatch UK considers that the management of, and sample retention by, the police National DNA Database – currently managed by the FSS - must form part of the committee's inquiry.

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How the police forensic DNA database operates

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The NDNAD is currently managed by the Forensic Science Service (FSS) for the Association of Police Chief Officers (ACPO).[3,4] The NDNAD relies on the fact that DNA can be obtained from any sample of human tissue left at the scene of a crime.[5] Data from every new crime scene is now routinely analysed to see if it matches a known individual on the database or any other crime scene sample. However, DNA is very different from other types of forensic data because it has the potential to reveal a lot more information about a person.[6,7] Unlike a fingerprint, DNA may:

- provide some hints about what a person looks like;
- indicate whether a person is at *risk* of developing an illness in the future or has a rare genetic condition;
- reveal who a person is related to – your brothers, sisters, parents or children.

Balancing the rights of individuals and the interests of society

If your DNA is held on the NDNAD it could be used to trace your brothers, sisters, parents or children.

Society has an interest in reducing crime. Most people want criminals to be caught, detained if necessary and, if possible, rehabilitated. A temporary removal of some rights is widely agreed to be a reasonable punishment for committing a serious crime. But current use of the NDNAD has the potential to threaten the individual's right to privacy and civil liberties much more widely.

The DNA profiles stored as part of the NDNAD are thought to contain very limited amounts of genetic information. However, the companies which analyse the DNA samples to produce these profiles are paid an annual fee to store the original DNA indefinitely. The retention of DNA *samples* could provide unlimited amounts of genetic information about known individuals. The usefulness of retaining samples after the DNA has been analysed and included on the NDNAD is questionable, even in the case of convicted criminals – the profiles are all that is needed for identification purposes. The law in England and Wales is unique in allowing samples from large numbers of innocent people to be retained indefinitely.[8]

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The NDNAD could also be used as an instrument of surveillance. Expanding the database puts increasing numbers of people on a permanent 'list of suspects' even though they may never have been charged or convicted of a crime. This may subtly alter the way they are viewed both by the state and by their fellow citizens, potentially undermining the principles of 'innocent until proven guilty' and of rehabilitation. Permanent records of arrest could be used in future to restrict people's rights and freedoms, for example to make it difficult for them to obtain employment. In contrast, the period of time that data is retained on the National Police Computer is not indefinite, but is limited according to the seriousness of crime or charge.

The increasing threats to our 'genetic privacy'

The current DNA data used for identification purposes contains very limited information about a person's genes but new techniques are being developed that could change this. Researchers are now looking at predicting ethnicity, appearance and health status from DNA. Some even believe it will be possible to predict a person's personality or behaviour. However, there are serious scientific problems with most of these approaches and they are unlikely to produce particularly useful or accurate predictions. There is also a danger that the information will be used selectively to reinforce existing prejudices, for example about race or skin colour. Nevertheless, a few genetic tests can reveal important information about some people's health. If use of this new technology were expanded to stored samples from known individuals on the database, the increase in police access to genetic information could pose an even greater threat to privacy.

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A lack of transparent mechanisms of governance and oversight

Some uses of the NDNAD are particularly controversial or sensitive. For example, familial searches can be used to trace suspects if they have any relatives on the database. There is a risk this may uncover family relationships that people do not know about, including cases of non-paternity. As yet there are no published guidelines on when such an approach can be considered ethical and what the implications might be for data protection. Similarly, researchers using the NDNAD do not have to seek consent from participants or the approval of an independent ethics committee to carry out their research. They have only to seek permission from the NDNAD Board. Some genetic research could be highly controversial, for example on ethnicity and criminal behaviour. The main organisation currently carrying out forensic research, the Forensic Science Service, is also heavily represented on the NDNAD Board creating a serious conflict of interest.

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Increasing police and Government access to personal data

Other national databases are being planned and developed, including the National Identity Register to support the use of
ID cards, and the new NHS Electronic Care Record Service, which may contain some genetic data in the future. It is not clear under what circumstances the police will be allowed access to this information. If any of these databases are linked, other Government bodies could find out who is on the NDNAD. Expanding and/or linking these databases would give the state unprecedented abilities to monitor the UK population, greatly increasing the threats to privacy.

The criminal justice system may not always take sufficient account of the possibility of errors and people may be wrongly convicted either by mistake or even by being 'framed'.

Errors in DNA profiling

There is no such thing as an error-free database. Mistakes can lead to 'false positives' where an innocent person is wrongly identified. A 'trawl of the database' is not enough to secure a conviction in court: a fresh sample from the accused and corroborating evidence is also needed. But in some cases DNA evidence can be difficult to interpret, particularly when samples from the crime scene are degraded or contain more than one person's DNA. The criminal justice system may not always take sufficient account of the possibility of errors and people may be wrongly convicted either by mistake or even by being 'framed'. The likelihood of false matches will increase as the database expands.

Hurried law making

In England and Wales, the Criminal Justice and Public Order Act 1994 created the conditions under which the police can legitimately take, retain and use DNA samples. Although this led to the NDNAD in 1995, the database was never formally established in any legislation. Since 1994, the UK Government has provided financial and legislative support to expand the use of DNA profiling for a widening range of offences. Britain has made some of the swiftest changes in law to make such extensive use of the NDNAD possible.[9]

These rapid and far-reaching changes in legislation have been made with very little public debate. The latest changes to the legislation, which came into effect in April 2004, extending powers once again, were introduced via a late amendment to the Criminal Justice Bill, tabled less than a week before the Bill was debated in the Commons.

Conclusions

The hasty introduction of wider police powers to take and retain DNA samples has placed human rights at risk. GeneWatch believes it is possible to correct this without compromising the role of the NDNAD in fighting crime through:

1. more independent, transparent and accountable governance of the NDNAD;
2. destruction of individuals' DNA samples once an investigation is complete;
3. an end to the practice of allowing genetic research without consent;
4. independent assessment of the effectiveness of the NDNAD and the potential role of new technologies;
5. public debate about who should be included on the database and for how long.

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