

Media release from the Wellcome Trust

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For immediate release

Prison study to investigate link between diet and behaviour

Trials will soon be underway in three UK prisons to investigate the link between nutrition and behaviour. Funded by the Wellcome Trust, the study will look at which nutrients are most important and at what dosage.

In the study, volunteers from three young offenders institutions housing male prisoners aged 16 to 21 will take nutritional supplements on top of their normal choice of food to ensure they receive the necessary vitamins, minerals and essential fatty acids to meet daily guidelines. The results will be compared with a control group under double blind conditions. Researchers will monitor how levels of nutrients affect a range of behaviours including violence, drug-related offences and incidents of self-harm.

The new trials build on previous research carried out at the then maximum security HM Young Offenders Institution Aylesbury, Buckinghamshire, funded by Natural Justice, a research charity that investigates the social and physical causes of offending behaviour. In that study, nutritional supplements were given to ensure that inmates' diets reached recommended UK dietary standards. The researchers found that the prisoners who consumed the active nutrient capsule committed on average 26% fewer disciplinary offences overall than those taking the placebo and 37% fewer violent offences

"Our initial findings indicated that improving what people eat could lead them to behave more sociably as well as improving their health," said Professor Stein. "This is not an area currently considered in standards of dietary adequacy and little is currently known about optimum nutrient dosages required for brain function or behaviour. We are not saying that nutrition is the only influence on behaviour but we seem to have seriously underestimated its importance."

The new study will be led by Professor John Stein at the University of Oxford and Natural Justice. Professor Stein and colleagues believe that the reason why supplements can have such a large effect is because the proper functioning of nerve cell membranes and signalling molecules depends upon adequate amounts of minerals, vitamins and essential fatty acids in the diet.

"This is a positive approach to preventing the problems of antisocial and criminal behaviour," says Bernard Gesch, Director of Natural Justice. "It is simple, it seems to be highly effective and the only 'risk' from a better diet is better health. It is a rare win-win situation in criminal justice."

The study is being funded through a £1.4 million award from the Wellcome Trust, the UK's largest medical research charity.

"If this study shows that nutritional supplementation affects behaviour, it could have profound significance for nutrition guidelines not only within the criminal justice system, but in the wider community, in schools, for example," says Dr Mark Walport, Director of the Wellcome Trust. "We are all used to nutritional guidelines for our physical health, but this study could lead to revisions taking into account our mental health, as well."

The new three year study will start in May and has been facilitated by the Ministry of Justice, HM Prison Service and the Scottish Prison Service. It will be carried out at three HM Young Offenders Institutions – Hindley, Greater Manchester; Lancaster Farms, Lancashire; and Polmont, Falkirk.

Prisons Minister David Hanson MP said: "I welcome this study by the Wellcome Trust and I hope that it will shed further light on the possible links between nutrition and behaviour among young people. Sound, further research in this area will have the potential, dependent on the findings, to inform the development of policy on behaviour management."

The University of Oxford and Natural Justice will be working in collaboration with a team of leading researchers including academics from Imperial College London, the Institute of Psychiatry, the University of Surrey, the University of Liverpool, University College, Cork and the Medical Research Council Human Nutrition Research.

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Contact

Craig Brierley
Media Officer
The Wellcome Trust
T: 020 7611 7329
M: 07957 468218
E: c.brierley@wellcome.ac.uk

Notes for editors

1. **The Wellcome Trust** is the largest charity in the UK. It funds innovative biomedical research, in the UK and internationally, spending around £500 million each year to support the brightest scientists with the best ideas. The Wellcome Trust supports public debate about biomedical research and its impact on health and wellbeing.

<http://www.wellcome.ac.uk>

2. **Oxford University's** Medical Sciences Division is one of the largest biomedical research centres in Europe. It represents almost one-third of Oxford University's income and expenditure, and two-thirds of its external research income. Oxford's world-renowned global health programme is a leader in the fight against infectious diseases (such as malaria, HIV/AIDS, tuberculosis and avian flu) and other prevalent diseases (such as cancer, stroke, heart disease and diabetes). Key to its success is a long-standing network of dedicated Wellcome Trust-funded research units in Asia (Thailand, Laos and Vietnam) and Kenya, and work at the MRC Unit in The Gambia. Long-term studies of patients around the world are supported by basic science at Oxford and have led to many exciting developments, including potential vaccines for TB, malaria and HIV, which are in clinical trials. <http://www.ox.ac.uk>

3. **Natural Justice** is a UK charity based in Oxford and Cumbria that is working to develop a fundamentally new approach to violent and anti-social behaviour. Natural Justice has overseen extensive research in the past twenty years to understand the role nutrition may play in shaping social behaviour both in the community and in closed conditions.

<http://www.naturaljustice.org.uk>