



THE UNIVERSITY *of* EDINBURGH

News Release

Issued: April 2014

EMBARGOED UNTIL: 20.00h GMT MONDAY 21 APRIL 2014

Male health linked to testosterone exposure in womb, study finds

Men's susceptibility to serious health conditions may be influenced by low exposure to testosterone in the womb, new research suggests.

A study has revealed how men's testosterone levels may be determined before they are born.

Understanding why some men have less of the hormone than others is important because testosterone is crucial for life-long health. Low levels of the hormone have been linked to obesity, diabetes and heart disease.

Researchers have shown that the cells responsible for producing testosterone in adults – known as Leydig cells – are derived from a specific population of stem cells found in the testes.

The team found evidence of these stem cells in the developing testes of babies, rats, mice and marmosets in the womb.

Leydig cells do not develop until puberty but the team showed that their function is impaired if their stem cell forefathers are exposed to reduced levels of testosterone in the womb.

The study is the first to provide evidence of how events in the womb could influence male health in later life. It was led by scientists from the Medical Research Council (MRC) Centre for Reproductive Health at the University of Edinburgh.

Professor Richard Sharpe said: "There is increasing evidence that a mother's diet, lifestyle and exposure to drugs and chemicals can have a significant impact on testosterone levels in the womb. We need a better grasp of these factors so that we can give reliable advice to pregnant women to protect the health of her unborn child."

The study is published today in the journal Proceedings of the National Academy of Sciences of the USA (PNAS).

For further information, please contact:

Jen Middleton, Press and PR Office, tel 0131 650 6514; email jen.middleton@ed.ac.uk

Ranked among the top universities in the world