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Male pill: gene discovery may lead to contraceptive



Healthy sperm manufacture needs the *Katnal1* gene

It may be possible to develop a new male contraceptive pill after researchers in Edinburgh identified a gene critical for the production of healthy sperm.

Experiments in mice found that the gene, *Katnal1*, was vital for the final stages of making sperm.

The authors of [a study in PLoS Genetics](#) said a drug which interrupts *Katnal1* could be a reversible contraceptive.

A fertility expert said there was "certainly a need" for such a drug.

Contraception in men is largely down to condoms or a vasectomy.

Infertility search

Researchers at the Centre for Reproductive Health at the University of Edinburgh were investigating the causes of male infertility.

They randomly altered the genetic code of mice to see which became infertile. They then traced the mutations which led to infertility, which led them to *Katnal1*.

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Dr Lee Smith University of Edinburgh

It contains the blueprints for a protein which is important in cells which support the development of sperm. Without the protein, sperm do not fully form and the body disposes of them.

Scientists hope they will be able to perform a similar trick in humans to stop sperm developing,

without causing lasting damage.

One of the researchers Dr Lee Smith said: "If we can find a way to target this gene in the testes, we could potentially develop a non-hormonal contraceptive.

"The important thing is that the effects of such a drug would be reversible because *Katnall* only affects sperm cells in the later stages of development, so it would not hinder the early stages of sperm production and the overall ability to produce sperm.

He said it would be "relatively difficult" to do as the protein lives inside cells, however, he said there was "potential" to find something else that protein worked with, which might be an easier target.

'Holy Grail'

Dr Allan Pacey, senior lecturer in andrology at the University of Sheffield, said there was "certainly a need" for a non-hormonal contraceptive for men and that this had been a "Holy Grail" of research for many years.

He added: "The key in developing a non-hormonal contraceptive for men is that the molecular target needs to be very specific for either sperm or other cells in the testicle which are involved in sperm production.

"If they are not, then such a contraceptive could have unwanted side effects on other cells and tissues in the body and may even be dangerous.

"The gene described by the research group in Edinburgh sounds like an exciting new possible target for a new male contraceptive, but it may also shed light on why some men and sub-fertile and why their sperm does not work properly."