

Regular (marietal) sex trigger ovulation and fertility(and earn you rewards from GOD)/No celibacy

## Does having sex make women more fertile? Semen found to trigger ovulation

• The vital protein has been found in the semen of a wide variety of mammals from llamas to rabbits to humans

By Claire Bates

Semen isn't just vehicle for carrying sperm - it also plays a crucial role in triggering ovulation, according to a new study.

Scientists have discovered the protein in the sexual fluid acts as a hormonal signal on the female brain. This triggers the release of other hormones that signal the ovaries to release an egg.

Human sperm surrounds an egg: Scientists have found a protein in sperm that could play a vital role in fertility

The international team led by Gregg Adams at the University of Saskatchewan, said they found this protein in a variety of mammals from llamas to rabbits to humans. They say this implies it plays an important role in reproduction in all mammals.

Male mammals have accessory sex glands that contribute seminal fluid to semen, but the role of this fluid and the glands that produce it are not well understood.

'From the results of our research, we now know that these glands produce large amounts of a protein that has a direct effect on the female,' Professor Adams said.

The protein, which was dubbed the 'ovulation-inducing factor' (OIF), works through the hypothalamus of the female brain. This part of the brain links the nervous system to the endocrine system (a system of glands that secrete hormones into the blood stream) via the pituitary gland.

'The idea that a substance in mammalian semen has a direct effect on the female brain is a new one,' Adams said.

The scientists discovered it is the same molecule that regulates the growth, maintenance, and survival of nerve cells. For this latest study, the team looked at two species: Ilamas and cattle. Llamas are 'induced ovulators,' that is, they ovulate only when they have been inseminated. Cows - and humans - are 'spontaneous ovulators,' meaning that a regular buildup of hormones stimulates the release of an egg.

Using a variety of techniques, the researchers found OIF present in semen samples taken from both animals. However, while injecting the llama with this protein caused them to ovulate, the same effect wasn't seen in cattle. But while the molecule doesn't appear to induce ovulation in spontaneous ovulators, it did affect fertility in different ways. The protein was found to effect the timing of when cattle developed the fluid-filled sacs in the ovary which carry the eggs. It also promoted the development of a temporary endocrine structure needed to sustain pregnancy. 'This latest finding broadens our understanding of the mechanisms that regulate ovulation and raises some intriguing questions about fertility,' Adams said.

The team said further research was now needed to see what role it could play in human fertility. For instance, they theorised that men with high concentrations of the OIF could potentially be more fertile.

The study appears in the latest issue of the Proceedings of the National Academy of Sciences.