Can genetics explain why women live longer than men?

Existing research has shown that, on average, women tend to live longer than men, and many mammals show this same pattern, with females outliving males.

No one is yet sure exactly why this is the case, but a new study by researchers from the University of California, San Francisco (UCSF) may now offer an explanation.

Their findings, which feature in the journal Aging Cell and are available to read online, reveal that the XX chromosomal pairing comprises genetic material that can extend lifespan, but only in the presence of corresponding female hormones.

…

In the new study, the research team used a mouse model to try to understand what might give females an advantage in terms of lifespan.

The researchers genetically engineered mice so that they would belong to one of four categories. Thus, some of the mice had XX chromosomes and developed ovaries, and some had XY chromosomes and developed testes, which is what would usually happen in nature. The remaining mice had either XX chromosomes and testes or XY chromosomes and ovaries.

…

The researchers found that all the mice with the XX chromosomal pairing tended to survive longer than those with XY chromosomes, regardless of whether they had ovaries or testes.

However, when it came to enjoying a truly prolonged lifespan, only the mice who had both XX chromosomes and ovaries experienced extended life.

Read full, original post: What is the secret to women's longevity?