

## Y chromosome

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### Key findings:

- Researchers have discovered that **the Y chromosome possesses genes** that are vital to biological functions, including those linked **to ageing and lifespan regulation**.
- Genome sequences of the Neanderthals, an ancient relative of the modern human, harbour telltale signs of the replacement of the Y chromosome beginning from modern humans.
- The Y chromosome may have to relinquish its title of “**master of maleness**” to another chromosome in the times to come.

### What is a chromosome?

- It is a **thread-like structure** located inside the **nucleus of animal and plant cells**.
- Each chromosome is **made of protein** and a single molecule of deoxyribonucleic acid (DNA).
- It is passed from parents to offspring.
- DNA contains the specific instructions that make each type of living creature unique.
- In humans, in addition to the 22 pairs of chromosomes in each, we have a pair of sex chromosomes called X and Y.
- All biological **males have X and Y** chromosomes and all biological **females have two X** chromosomes.

- The y chromosome known as the “master of maleness,” determines the biological male sex and carries genes that play a role in sex determination.
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## Q1) What are Proteins?

Proteins are macromolecules composed of amino acids and play a crucial role in various biological processes. They are involved in nearly every aspect of cell function and are essential for the structure, function, **and regulation of tissues and organs in the human body.**

**Source:** [Explained | The remarkable endurance of the Y chromosome, ‘master of maleness’](#)

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Source: <https://vajiramandravi.com/current-affairs/y-chromosome/>

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