



Robertsonian chromosome translocations

This communication aid has been produced for clinicians to help support and guide conversations about Robertsonian chromosome translocations with their patients.

What is a Robertsonian chromosome translocation?

We all have over 20,000 genes, which provide instructions for how our body works. Genes are made of DNA. Our genes are packaged into structures called **chromosomes** (see right).

Individuals usually have 46 chromosomes in each cell in their body. These are arranged into 23 pairs.

Sometimes, when cells divide to form eggs or sperm, or during early development of a baby, chromosomes may break and repair themselves incorrectly.

Robertsonian translocations occur when two chromosomes, known as **acrocentric chromosomes** (chromosomes 13, 14, 15, 21 and 22), fuse together. This means an individual's genetic information has a different arrangement than usual.

Generally, Robertsonian translocations are **balanced** and do not affect an individual's health. A small amount of DNA, known as the short arm of a chromosome, is usually lost but this does not cause health problems.

If either parent of a pregnancy carries a balanced Robertsonian translocation, this can affect the outcome of the pregnancy. Please see another communication aid in this series 'Robertsonian chromosome translocations: pregnancy outcomes' for more information.



Key terms

Chromosomes: Packages of DNA which are found in our cells.

Acrocentric chromosomes: The term used for certain chromosomes with very small short arms (chromosomes 13, 14, 15, 21 and 22).

Balanced translocation: The term used when two or more chromosomes have been rearranged, but no DNA is lost or gained.

Want to learn more?

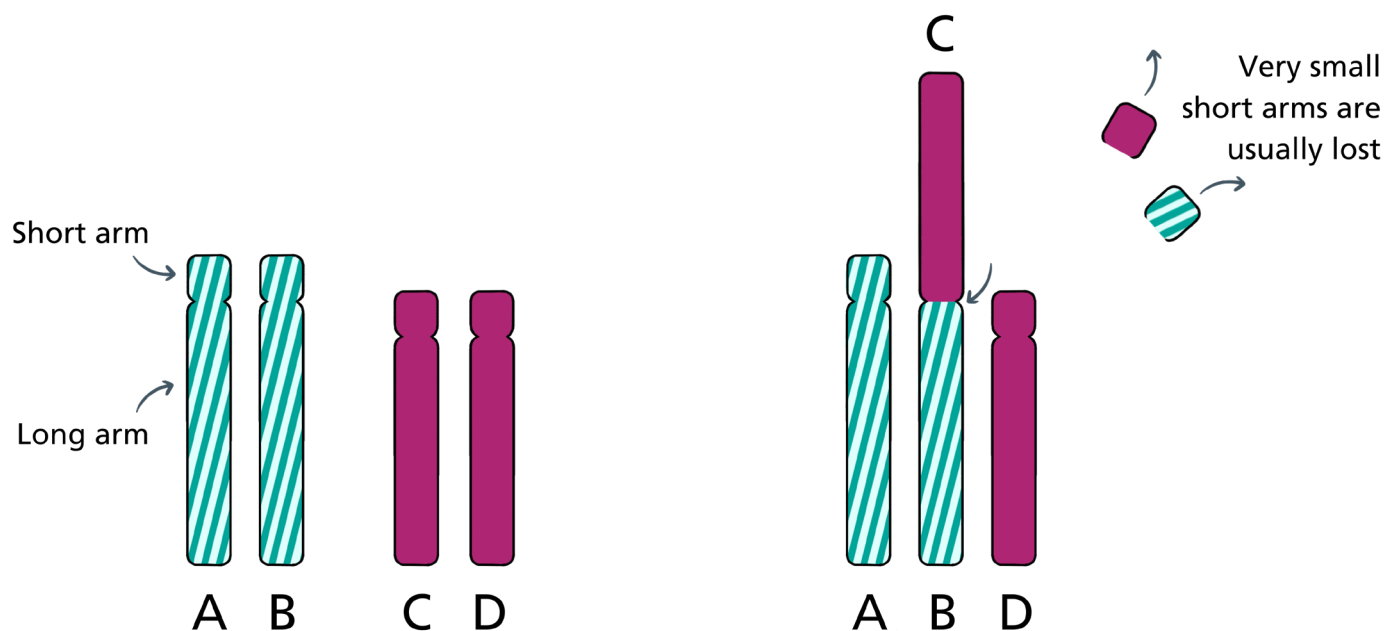
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Two pairs of
chromosomes

Two chromosomes lose
their short arms and
join together

This is known as a **Robertsonian translocation**.

This type of translocation only involves chromosomes with very small short arms,
known as acrocentric chromosomes.



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