Communication aid

Autosomal dominant inheritance: one affected parent

NHS England

This communication aid has been produced for clinicians to help support and guide conversations about autosomal dominant inheritance with their patients.

What causes autosomal dominant conditions?

We all have over 20,000 genes, which provide instructions for how our body works.

Our genes are packaged into structures called chromosomes.

We all have two copies of each of our **autosomal genes**, one inherited from each of our parents.

Individuals affected by an autosomal dominant condition have a **change** on one of their two copies of the gene.

How are changes in autosomal genes passed on to children?

If they have a child, they will pass on either the copy with the change or the copy without the change. This is random for each pregnancy.

This means:

- For every pregnancy, there is a **50% (1 in 2)** chance that they will have a child affected with the same condition.
- First-degree relatives of someone with an autosomal dominant condition have a **50% (1 in 2)** chance of having the same condition.

Some autosomal dominant conditions have later onset, meaning they only affect people in adulthood.

Key terms

Autosomal genes:
These genes are located on chromosomes that are not sex chromosomes.

Gene change:
Changes in a gene or chromosome used to be referred to as 'mutations'. Now, they are more commonly called changes, alterations or variants.

First-degree relative:
These are your parents, full siblings and children.

Want to learn more?

Scan to watch an animation explaining autosomal dominant inheritance

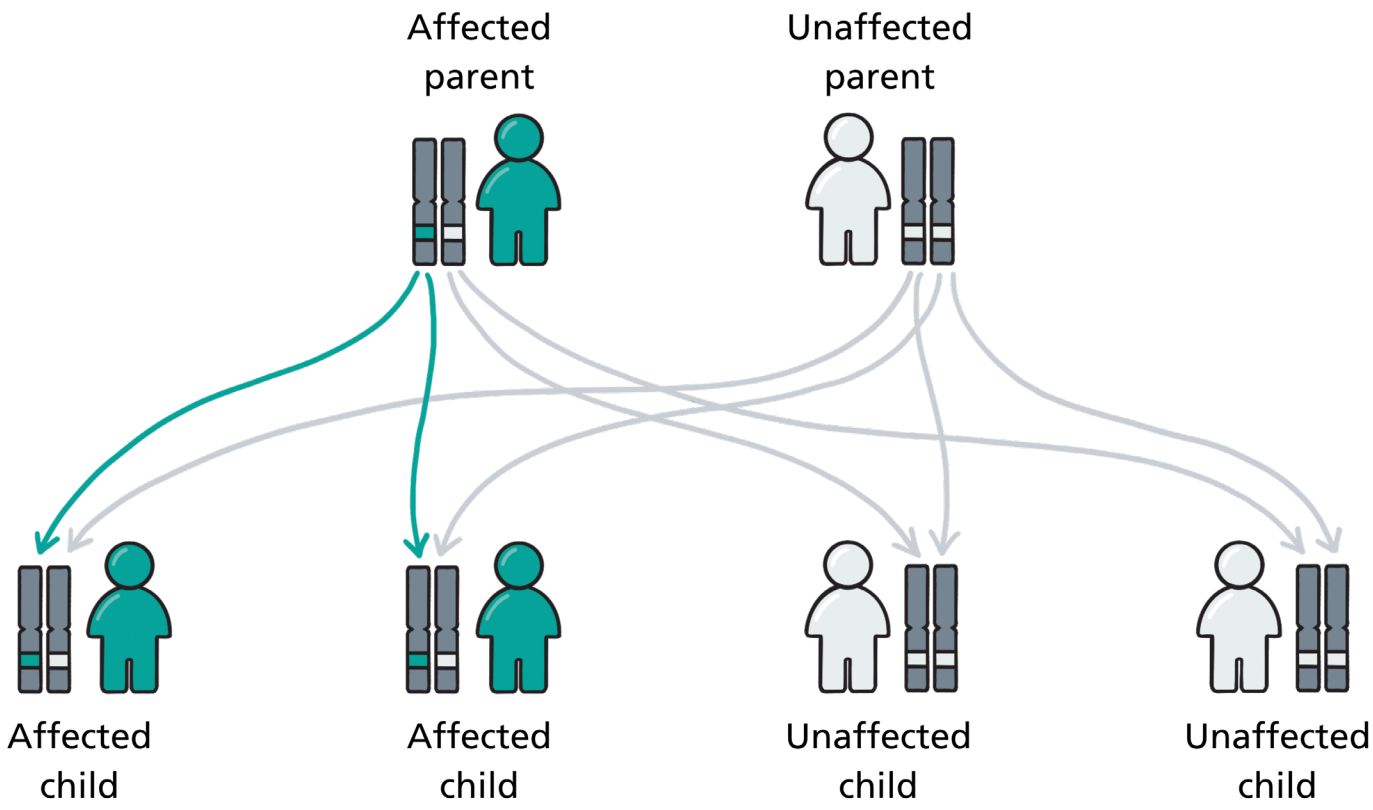
View the full collection of communication aids on GeNotes

Communication aid

Autosomal dominant inheritance: one affected parent

NHS England

This communication aid has been produced for clinicians to help support and guide conversations about autosomal dominant inheritance with their patients.



Key

Gene or chromosome without a change

Gene or chromosome with a change

50% (1 in 2) chance of having an affected child

50% (1 in 2) chance of having an unaffected child

Please scan to leave feedback about this resource

Last reviewed: 14 February 2025