

Information for Patients and Families

Autosomal Dominant Inheritance

What are Genes?

Genes are the unique set of instructions inside our bodies which make each of us an individual. There are many thousands of different genes, each carrying a different instruction. If a gene is altered, it can cause a genetic condition. This gene alteration is sometimes known as a **gene variant**.

We have **two copies of most genes**. One copy is inherited from each of our parents. When we have children, we pass on only one copy of each of our genes.

What does Autosomal Dominant inheritance mean?

Some genetic conditions are passed on in the family in a **dominant** way. These conditions are caused by an alteration in just **one copy** of a gene. They are called **dominant** because the altered copy of the gene is dominant over the other copy of the gene.

- Some people with a dominant gene variant may not show any symptoms.
- Even within the same family, symptoms can vary from person to person.
- Some dominant conditions are late-onset, meaning they only appear in adulthood.

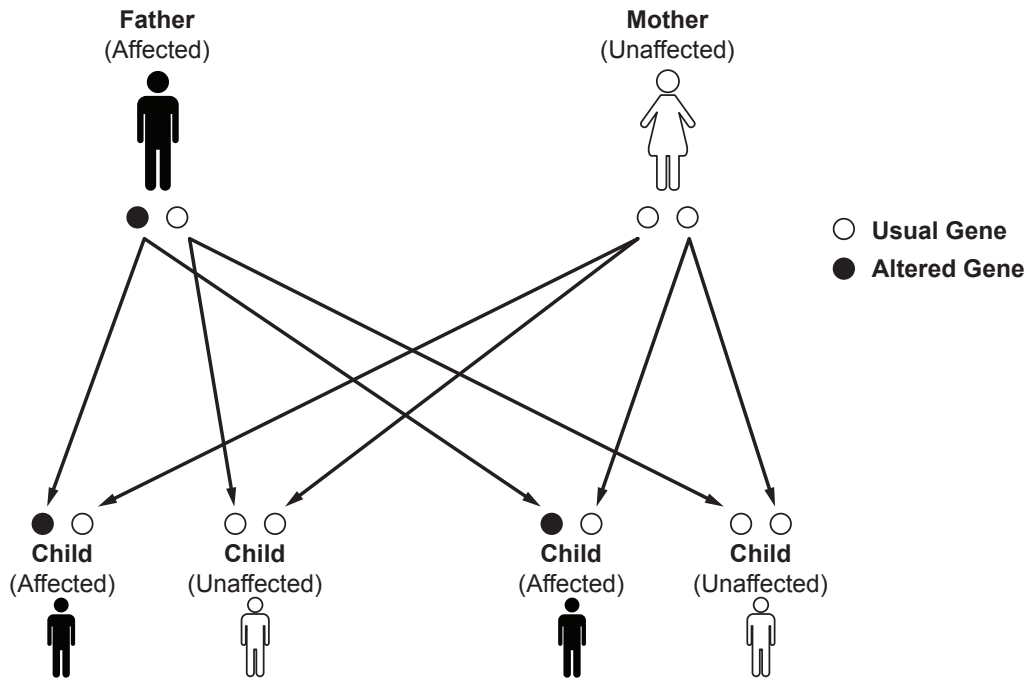
In some cases, a dominant condition may occur for the first time in a family due to a new gene variant in the egg or sperm.

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Having children

The diagram below shows an autosomal dominant pattern of inheritance.



If a parent carries an altered gene for a dominant condition,

- Each child has a 50% (1 in 2) chance of inheriting the usual (unaffected) gene
- Each child has a 50% (1 in 2) chance of inheriting the altered gene

This chance is the same for each child, regardless of their sex

Further information

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