Dominant Inheritance

Information for patients

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 or disease. This gene alteration is sometimes known as a mutation.

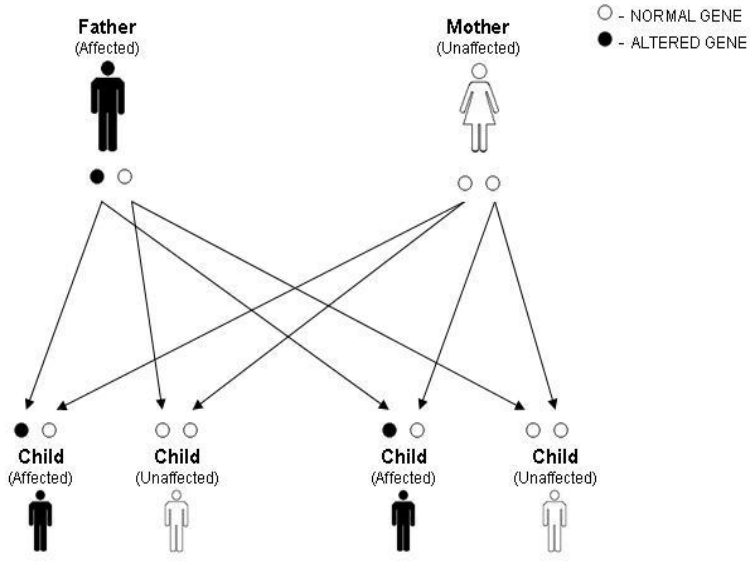
We have two copies of each gene. One copy is inherited from each of our parents. When we have children, we pass on only one copy of each of our genes.

What does dominant inheritance mean?

Some genetic conditions are passed on in the family in a dominant way. These conditions are caused by an alteration in 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.

Having children

The diagram below shows a dominant pattern of inheritance.



If a parent carries an altered gene for a dominant condition, each of their children has

- A 50%, or a 1 in 2 chance of inheriting the altered gene
- A 50%, or a 1 in 2 chance of inheriting the normal gene

For each child, regardless of their sex, the risk is the same.

Additional information

- In some dominant conditions, it is possible to inherit an altered gene without showing any symptoms of the condition.
- Even within a family, some individuals may be affected by the same dominant condition in different ways.
- Some dominant conditions are known as "late onset disorders". In other words, they only affect individuals in adulthood.
- In some families, an isolated case of a dominant disorder may be the result of a new alteration (a change which arises for the first time) in either the egg or the sperm that went to make that person.

Contact information

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