**Autosomal recessive**

In this example, two unaffected parents each carry one copy of a gene mutation for an autosomal recessive disorder. They have one affected child and three unaffected children, two of which carry one copy of the gene mutation.



**Autosomal dominant**

In this example, a man with an autosomal dominant disorder has two affected children and two unaffected children.



**X-Linked dominant (affected father)**

In this example, a man with an X-linked dominant condition has two affected daughters and two unaffected sons.



**X-Linked dominant (affected mother)**

In this example, a woman with an X-linked dominant condition has an affected daughter, an affected son, an unaffected daughter, and an unaffected son.



**X-Linked recessive (affected father)**

In this example, a man with an X-linked recessive condition has two unaffected daughters who each carry one copy of the gene mutation, and two unaffected sons who do not have the mutation.



**X-Linked recessive (carrier mother)**

In this example, an unaffected woman carries one copy of a gene mutation for an X-linked recessive disorder. She has an affected son, an unaffected daughter who carries one copy of the mutation, and two unaffected children who do not have the mutation.



**Codominant**

The ABO blood group is a major system for classifying blood types in humans. Blood type AB is inherited in a codominant pattern. In this example, a father with blood type A and a mother with blood type B have four children, each with a different blood type: A, AB, B, and O.



**Mitochondrial**

In one family, a woman with a disorder caused by a mutation in mitochondrial DNA and her unaffected husband have only affected children. In another family, a man with a condition resulting from a mutation in mitochondrial DNA and his unaffected wife have no affected children.

