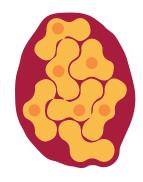
# & Genetic Diseases

## Did you know?

Genetic testing is done by using a blood or spit sample. As we share the same DNA as our family members, if you have a genetic change, they might have it too.



Breast cancer cell

#### **Treatment**

There is different methods for treating a person, due to their needs. For example, a heart defect would mostly treated by getting surgery or a heart transplant.







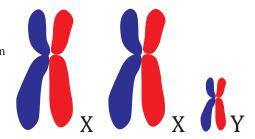


Crohn's Diease

#### **Genetic Disorders**

Genetic disorders can occur for several different reasons. Some diseases occur due to a DNA mutation in a person's gene. For example, if the sequence is TAC then the mutation can change it to TCC in some

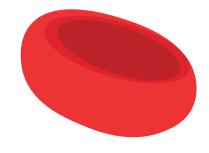
Klinefelter's syndrome is when there is an extra copy of the X chromosome. Occurs in males.



Klinefelter's Syndrome

## **Types of Diseases**

Some diseases you can get due to genetics are colon cancer, breast cancer, sickle cell, down syndrome, etc...



Normal cell



Sickle cell

#### **Gene Basics**

Everyone inherits genes from their parents, 46 in total. A female has 2 Y chromosomes while the male has 1 Y and 1 X chromosome.



The 21st pair of chromosomes has an extra genetic material.



Down Syndrome

### **Genetic Testing**

Genetic testing is a detailed analysis of a person's DNA. It tells them if there is changes in their gene makeup or reveal gene mutations that could cause the disease. The earlier the testing gets done the better.





Fragil X Syndrome in the chromosome causes intellectual disabilities.

Normal chromosome Fragile X Syndrome











