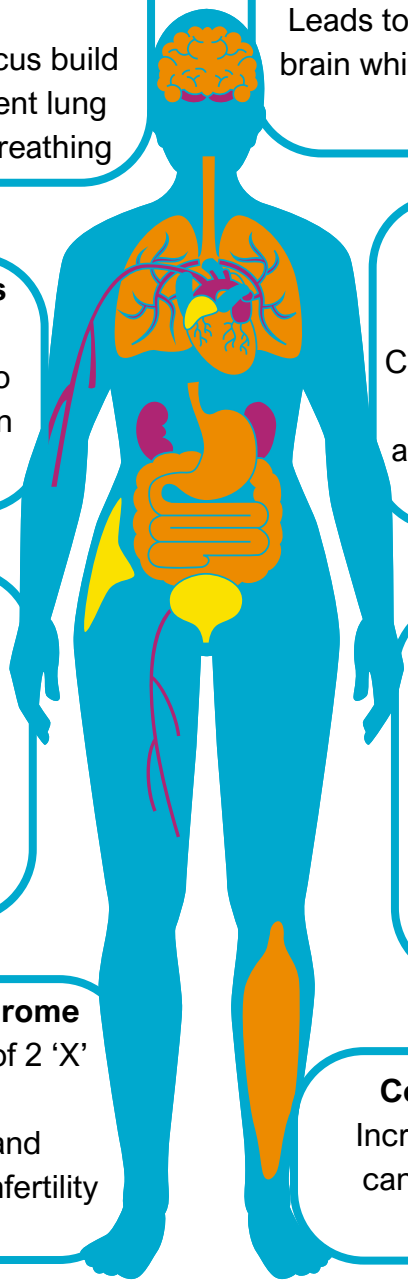
NHS
Central and South Genomics

What conditions can genomics cause?

Genomics affects us in many ways. Here are some examples of conditions that can be inherited:

Respiratory: Cystic Fibrosis
Affects the lungs and digestive system
Causes thick and sticky mucus build up which can lead to frequent lung infections and difficulty in breathing

Neurological: Huntingtons Disease
Affects nerve cells in the brain
Leads to degeneration of nerve cells in the brain which can cause movement, cognitive and emotional problems



Hepatic: Haemochromatosis
Affects the liver
Causes the body to absorb too much iron from food which can cause liver disease

Cardiac: Hypertrophic Cardiomyopathy
Affects the heart
Causes thickening of the heart muscle
Can lead to heart rhythm abnormalities, chest pain and sudden cardiac arrest

Renal: Polycystic Kidney Disease
Growth of fluid filled cysts in the kidneys which can lead to kidney enlargement, impaired kidney function and eventually kidney failure

Digestive System: Celiac Disease
Autoimmune disorder triggered by the consumption of gluten
Cases damage to small intestine lining which can lead to digestive issues, malabsorption and other issues

Reproductive: Turner Syndrome
Females born with 1 instead of 2 'X' chromosomes
Can lead to reproductive and development issues such as infertility and short stature

Colon: Lynch Syndrome
Increases the risks of various cancers including colorectal cancer

- **Cancer is a disease of the genome**
- **5-10 % of cancer is inherited**
- **Just because you inherit a change does not mean you will develop cancer**

- **80% of rare diseases have a genomic origin**
- **There are over 7000 rare diseases**
- **1 in 17 people are affected by a rare disease at some point**

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