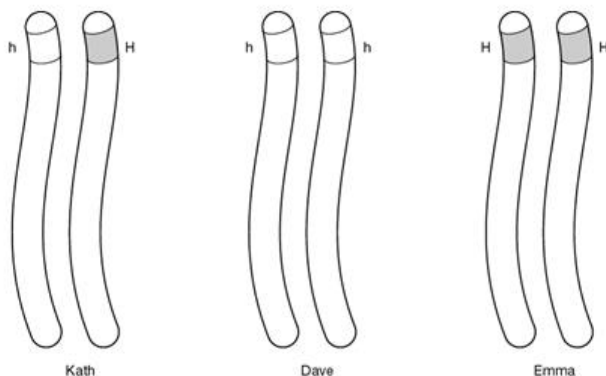


Genetic disorders

Cystic fibrosis is a very common inherited disorder in Ireland but there are other inherited diseases too.

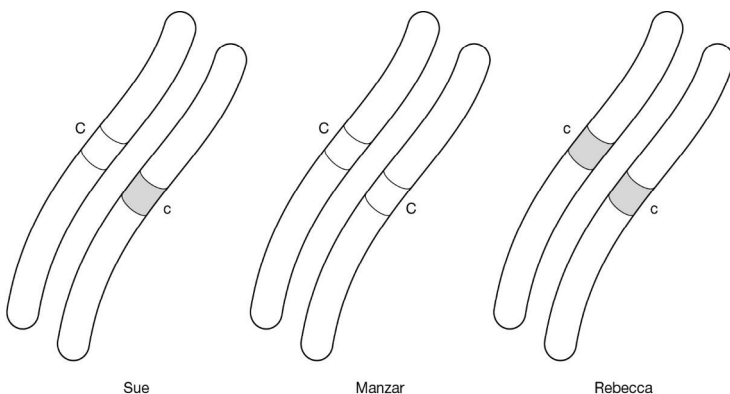
Huntington's disease is an inherited disease. It is caused by a dominant gene which is found on chromosome pair number 11. **H** is the Huntington's gene and **h** is the normal gene.

- ① Explain why you cannot 'catch' an inherited disease
- ② Look at the picture of chromosomes from three different people.



- a) Which people have the dominant disease called Huntington's? Explain your answer.
- b) Who will always pass on Huntington's disease to their children? Explain your answer.
- ③ What are the symptoms of Huntington's disease?
- ④ Cystic fibrosis is another inherited disease. It is caused by a recessive gene which is found on chromosome 7. **C** is the normal gene and **c** is the recessive allele that causes cystic fibrosis.

Which person has cystic fibrosis? Explain your answer



- ⑤ Who could be described as a 'carrier' of cystic fibrosis? Explain your answer.
- ⑥ Explain how a person with two parents without cystic fibrosis can get the disease?
- ⑦ People who suffer from cystic fibrosis often get chest infections. Bacteria can grow quickly in mucus so explain why those with cystic fibrosis suffer from chest infections.
- ⑧ People with cystic fibrosis need medication to help them digest their food. What do you think is in these tablets and why do they need them?