



PEDIGREE CHARTS

A family history of a genetic condition



What is a pedigree chart?

- Pedigree charts show a record of the family of an individual
- They can be used to study the transmission of a hereditary condition
- They are particularly useful when there are large families and a good family record over several generations.



Studying human genetics

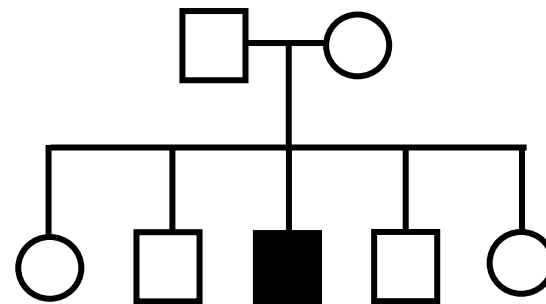
- You cannot make humans of different types breed together
- Pedigree charts offer an ethical way of studying human genetics
- Today genetic engineering has new tools to offer doctors studying genetic diseases
- A genetic counsellor will still use pedigree charts to help determine the distribution of a disease in an affected family



Symbols used in pedigree charts

- □ Normal male
- ■ Affected male
- ○ Normal female
- ● Affected female
- — □ Marriage

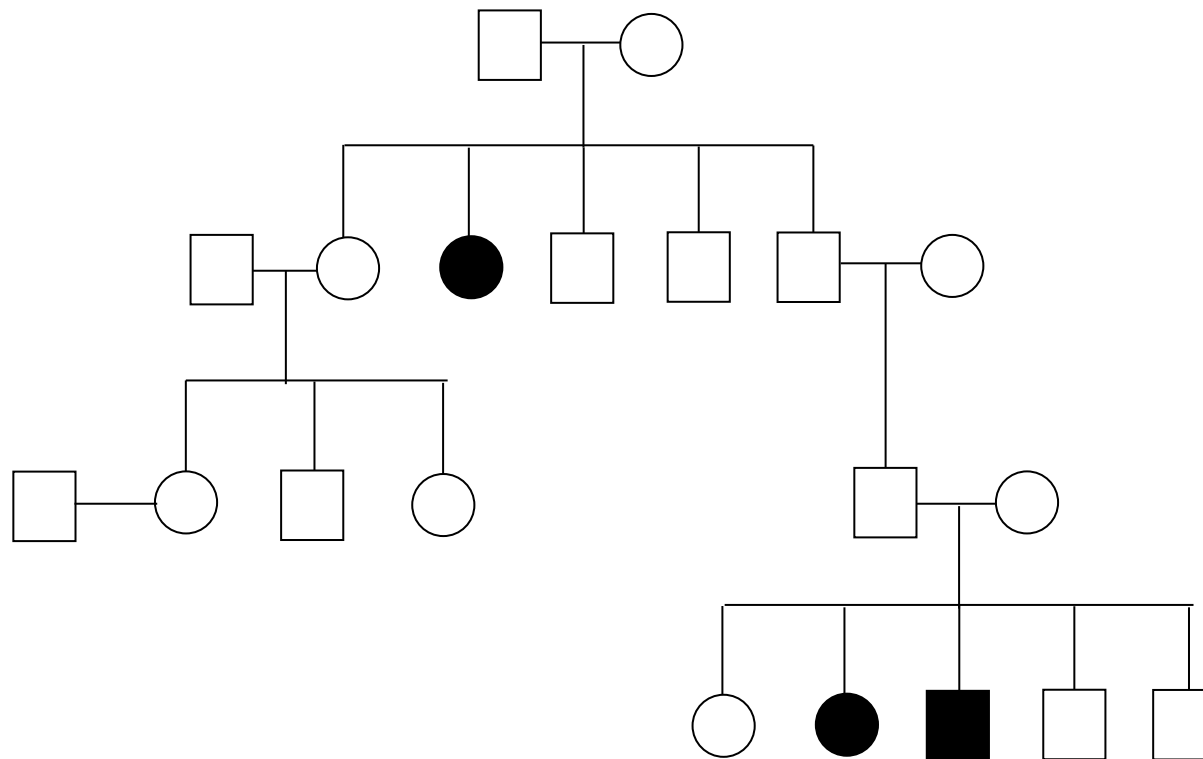
A marriage with five children, two daughters and three sons. The eldest son is affected by the condition.



oldest child → youngest child

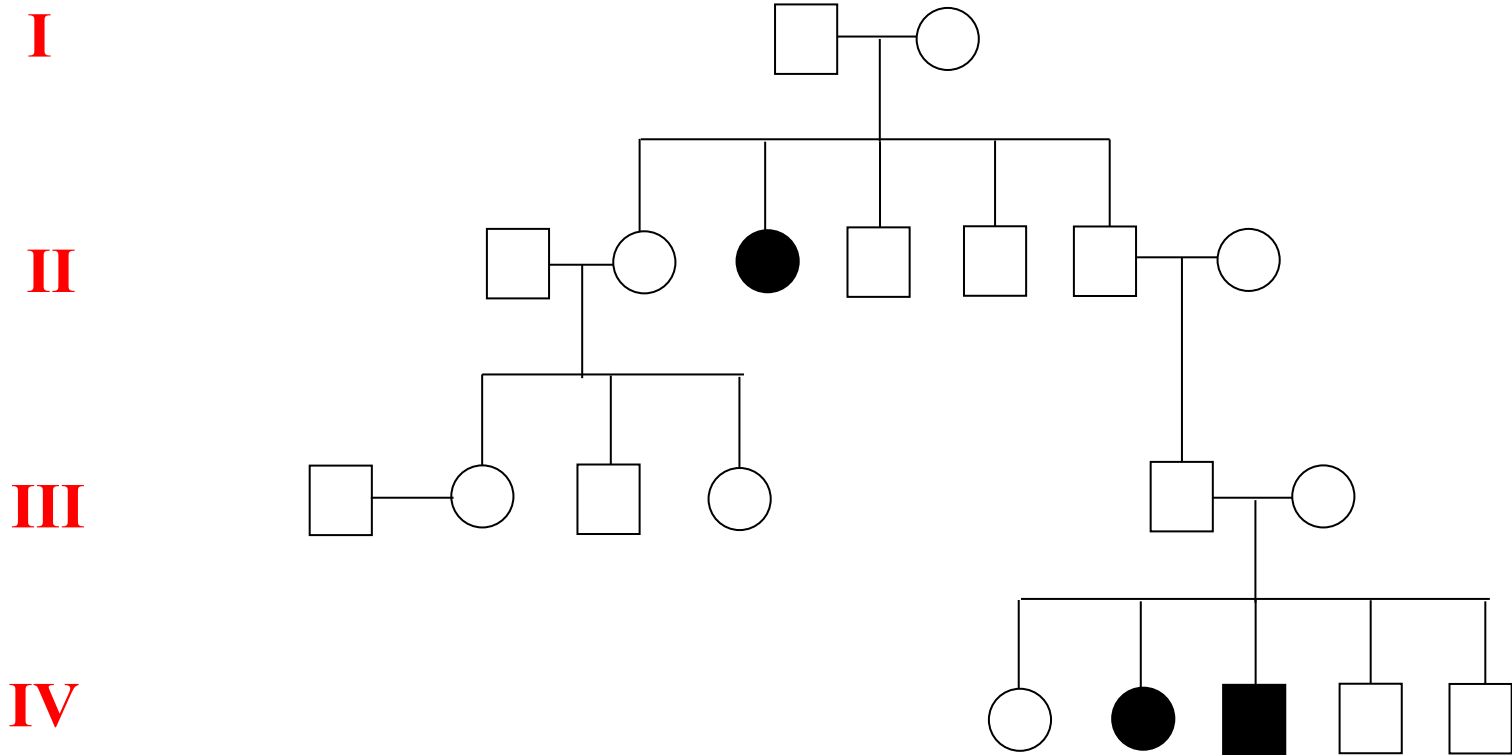
Organising the pedigree chart

- A pedigree chart of a family showing 20 individuals



Organising the pedigree chart

- Generations are identified by Roman numerals



Organising the pedigree chart

- Individuals in each generation are identified by Arabic numerals numbered from the left
- Therefore the affected individuals are **II3**, **IV2** and **IV3**

