

KEY FACTS

- Cystic fibrosis: **RECESSIVE** (f) — thick mucus. Need ff to be affected. Carriers = Ff (unaffected).
- Polydactyly: **DOMINANT** (D) — extra digits. Only **ONE** copy needed.
- Ff × Ff cross: 25% FF, 50% Ff (carriers), 25% ff (affected)
- Sex: Females XX, Males XY. Sperm carries X or Y — determines sex
- Embryo screening: IVF embryos tested for genetic disorders before implantation

KEY TERMS

Carrier	Heterozygous individual (Ff) — has recessive allele but NO symptoms
Cystic fibrosis	Recessive — needs ff genotype — thick sticky mucus
Polydactyly	Dominant — needs only one D allele — extra fingers/toes

■ **EXAM TIP:** CF = **RECESSIVE** (need 2 copies). Polydactyly = **DOMINANT** (need 1 copy). Confusing these two is the most common genetics error at GCSE.