*This is the **Foundation Combined** version — Higher Tier and Separate-only content removed.*

In humans, biological sex is determined by a pair of sex chromosomes — one inherited from each parent.

- Females have two X chromosomes: XX.
- Males have one X and one Y chromosome: XY.
- Eggs all carry an X chromosome. Sperm carry either X or Y.
- If X sperm fertilises egg → XX → female. If Y sperm fertilises egg → XY → male.
- Probability of each sex: 50% male, 50% female in each pregnancy (independent of previous children).

Key Terms

Sex chromosomes	The pair of chromosomes determining biological sex — XX (female) or XY (male)

■ **Exam Tip:** In a Punnett square for sex determination: show X■ X■ (mother — all eggs carry X) on one side and X Y (father — sperm carry X or Y) on the other. All four boxes: XX, XX, XY, XY → 50:50 ratio.