

AUTOSOMAL DOMINANT INHERITANCE

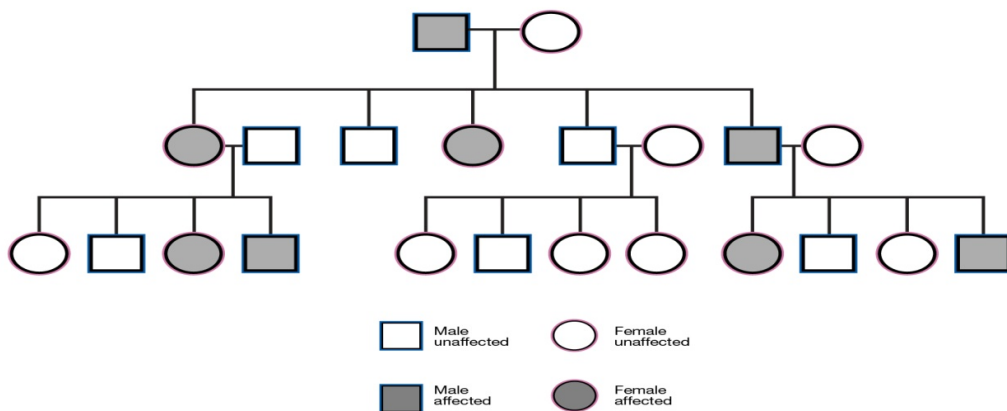
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INTRODUCTION

There are two types of chromosomes namely Sex chromosomes (which determine male or female gender) and Autosomes (which are non-sex chromosomes). Autosomal inheritance of a gene means that the gene is located on one of the autosomes. This means that males and females are equally likely to inherit the gene. "Dominant" means that a single copy of the gene can cause a particular trait.

PEDIGREE



FEATURES OF AUTOSOMAL INHERITANCE

1. In autosomal dominant inheritance, only one copy of a disease allele is necessary for an individual to be susceptible to expressing the phenotype.
2. With each pregnancy, there is a one in two (50%) chance the offspring will inherit the disease allele.
3. Unless a new mutation has occurred, all affected individuals will have at least one parent who carries the disease allele.
4. Autosomal dominant inheritance is often called vertical inheritance because of the transmission from parent to offspring.
5. Across a population, the proportion of affected males should be equal to the proportion of affected females.
6. Male-to-male transmission can be observed.

EXAMPLES

Autosomal dominant inheritance include **myotonic muscular dystrophy** and **Huntington disease**.