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Genetics

- **Chromosome** = a bundle of DNA and histones that form a condensed structure in the nucleus
  - Some people experience an irregular number of chromosomes
  - **Trisomy** = three chromosomes in a pair
  - **Monosomy** = only one chromosome in a pair
  - Irregularities usually happen in sex chromosomes(23ˆrd pair)
  - **Turner's Syndrome** = monosomy 23; *only* one X as 23ˆrd pair
  - **Down Syndrome** = trisomy 21
- **DNA(Deoxyribonucleic acid)** = long strand of nucleotide bases that serves to encode hereditary information
  - **Duble Helix** = geometric shape of DNA; described as a ladder that is twisted
- **Histone** = a protein that DNA can wrap around to reduce overall volume
- **Codon** = a group of three nucleotide bases that match with tRNA to assemble proteins
  - 1 codon corresponds to 1 amino acid instruction(INSERT, START, END, etc)
- **Allele** = a specific version of a gene
- **Genotype** = the collection of alleles one posesses
- **Phenotype** = the physical traits you exibit
- **Dominant Allele** = an allele whose expression takes precedence over that of **recessive** alleles
- **Recessive Allele** = an allele whose expression is inhibited by the presence of a **dominant** allele

Sex-Linked Traits

- **Sex-Linked Traits** = phenotypes involved with the X or Y chromosomes
- typically *recessive* and located on X chromosome
  - Y chromosome actually contains very few genes
- Examples
  - Color blindness
  - Baldness
  - Hemophilia