

Genetic Disorders

Caused by	Alleles inherited from parents
	Genetic mutations
	Chromosomal damage
	Environmental factors
	X-linked traits

Types of Genetic Disorders

Single-gene Disorders	One gene is affected by a mutation that is passed through parents; can be x-linked, autosomal, dominant or recessive
Complex Disorders	More than one gene is affected by a mutation, not always passed through parents
Chromosomal Disorders	Chromosomes (or parts of) are mutated or missing, not always passes through parents

Chromosomal Disorders

Down Syndrome (trisomy 21)
Turner Syndrome (monosomy X)
Edward Syndrome (trisomy 18)
Patau Syndrome (trisomy 13)

Complex Disorders

Asthma
Diabetes
Hypertension
Schizophrenia

Autosomal Disorders

Autosome	A chromosome (not a sex chromosome)
Autosomal Disorders	Diseases caused by genes on autosomes
Autosomal Dominant	Disorders that are passed from one parent (homozygous dominant or heterozygous)
Autosomal Recessive	Disorders that are passed from both parents (homozygous recessive)

Autosomal Dominant Disorders

Huntington's Disease	Neurological disorder; progressive degeneration of brain cells, muscle spasms, personality disorder
Marfan Syndrome	Inherited disorder; affects the body's connective tissue causing disproportionately long limbs, weakened aorta, and poor eyesight
BRCA 1 & BRCA 2	Inherited in autosomal dominant pattern; hereditary breast cancer,

Autosomal Recessive Disorders

Cystic Fibrosis	Mucus in bronchial tubes and pancreatic ducts; shortened lifespan
Sickle-cell Anemia	Mutated shape of red blood cells causing frequent blockages in blood vessels
Tay-Sachs	Degeneration of central nervous system occurring in children

X-Linked Traits

Y Chromosome	Color blindness
	Hemophilia
X Chromosome	Barr body