

# Types of Mutations

## Fill in the blanks:

- \_\_\_\_\_ involve a single nucleotide change or a codon is modified, resulting in the incorporation of the incorrect amino acid sequence during protein synthesis.
- A \_\_\_\_\_ involves the removal of an entire or partial sequence of DNA.
- \_\_\_\_\_ occur when an incorrect nucleotide or sequence of nucleotides are made in coding or noncoding regions.
- A \_\_\_\_\_ occurs when a single nucleotide base pair is swapped out for another; this type of mutation is an example of a substitution mutation.
- \_\_\_\_\_ refer to the insertion of stop codons. This type of mutation may occur as a result of the substitution of a single nucleotide base pair, resulting in premature stop codons.
- An \_\_\_\_\_ is the addition of a single nucleotide or sequence of nucleotides into a DNA template. These mutations may occur due to polymerase 'slipping.'
- A \_\_\_\_\_ refers to mutations that disrupt the triplet reading frame of a polymerase.
- A type of chromosomal mutation, known as \_\_\_\_\_, refers to chromosomal rearrangement that occurs due to breakage. There are two types: paracentric and pericentric.
- \_\_\_\_\_ is the process in which an organisms DNA is modified due to a variety of factors, including environmental damage or mistakes during replication.
- \_\_\_\_\_, also known as repeat expansion mutations, is the result of excessive replication of single codons, or triplets.
- A \_\_\_\_\_ occurs when genetic material or chromosomes are excessively copied, resulting in the generation of additional genetic information of chromosomes.

## Word bank:

Trinucleotide repeat expansion  
Duplication mutation    Inversion  
Mutagenesis    Deletion mutation  
Missense mutations    Point mutation  
Nonsense mutations  
Insertion mutation  
Frameshift mutations  
Substitution mutations

