

Evolutionary significance of mutation

Mutations are essential to evolution. Every genetic feature in every organism was initially the result of mutation. A mutation that occurs in body cells that are not passed along to subsequent generations is a **somatic mutation**. A mutation that occurs in a gamete or in a cell that gives rise to gametes are special because the impact they impact the next generation. Such changes are called **germline mutations**. If the mutation has a deleterious effect on the phenotype of the offspring the mutation is called **genetic disorder**. If it has a positive positive effect on fitness of organism it is called **adaptation**.

The new genetic variant allele spreads via reproduction. A mutation that allows an organism to feed grow or reproduce more effectively could cause the mutant allele to become abundant overtime. Soon the population becomes quite ecologically or physiologically different from the original population that lacks the adaptation. Even deleterious mutations can cause evolutionary change especially in a small populations by removing individuals that might be carrying adaptive alleles at other genes. Most mutations occur in a single point in a gene changing perhaps a single protein and thus could appear an important.