



Inheritance of Dominant Genetic Disorders

Only 1 copy of the mutated allele (gene) are needed for expression

	Clear Stallion	Homozygous Affected Stallion (2 copies of mutation)	Heterozygous Affected Stallion (1 copy of mutation)
Clear Mare	100% Clear	100% Affected (Heterozygous)	50% Affected (Heterozygous) 50% Clear
Homozygous Affected Mare (2 copies of mutation)	100% Affected (Heterozygous)	100% Affected (Homozygous)	100% Affected (50% Homozygous) (50% Heterozygous)
Heterozygous Affected Mare (1 copy of mutation)	50% Affected (Heterozygous) 50% Clear	100% Affected (50% Homozygous) (50% Heterozygous)	75% Affected (25% Homozygous) (50% Heterozygous) 25% Clear

(% probability at each mating)

- There is NO “CARRIER” state – horses are either CLEAR or AFFECTED.
- If the horse has at least one copy of the mutation in their genotype, they will express the trait and will be AFFECTED.
- Only one parent needs to possess the mutation **and** pass it along in order for a foal to be AFFECTED.

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