

Rudolph's Red Nose Pedigrees

Reindeer with a shiny nose are a valued part of Santa's sleigh team. Reindeer with bright shiny noses have the recessive trait (n), while those with the traditional black nose have the dominant trait (N).

Santa is famous throughout the world for his sleigh and team of nine reindeer. (You know, Dasher, Dancer, Prancer, Vixen, Comet, Cupid, Donner and Blitzen, and of course the most famous reindeer of all, Rudolph!) In this story we'll focus on Rudolph's history and the genetics behind his famous nose.

Rudolph was the only fawn of his parents. Donner, Rudolph's father, was heterozygous for the trait of his black nose. Charity, Donner's mother and Rudolph's grandmother, had a luminescent red nose that she hid with makeup. Donner's father Nicholas, Rudolph's grandfather, had a black nose. His bloodline was pure, making him homozygous for his black nose.

Rudolph's mother, Mrs. Carol Donner, also had a black nose. Like her husband she was heterozygous for her black nose. Her parents, Mr. and Mrs. Rockefeller, were also heterozygous. Her two younger brothers both had black noses, but Klaus was homozygous while Giftson was heterozygous. Her younger sister, Rose, luckily was born with a red nose since she was afraid of the dark!

Donner and Mrs. Donner married and gave birth to their famous son Rudolph. Rudolph is famous for having the recessive trait and saving Christmas with his bright red nose. What doesn't get mentioned in the story is that a few years later Donner and Mrs. Donner gave birth to another fawn, a girl named Noel, who had the traditional black nose. They weren't sure if she was homozygous or heterozygous until she married a reindeer from the South Pole, Boris, who had a shiny red nose. They gave birth to two fawns with shiny red noses. Since they were girls they named them Holly and Ivy.

As time passed Rudolph caught the eye of a pretty reindeer named Claudia. Claudia had a traditional black nose, but she had a few relatives with red noses, so she assumed she was carrier for the trait of a red nose. Rudolph and Claudia went on to have three fawns. The oldest Gabriel and the youngest Yule were born with the same luminescent nose as their father and loved to play flashlight tag with their noses when they should have been sleeping. But, the middle fawn, a girl named Joy, had a plain black nose.