



# THE INHERITANCE OF LIVER NOSE IN RHODESIAN RIDGEBACKS



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The gene for the liver nose is recessive - which means that both the sire **and** the dam have to carry the gene in order for them to produce liver nose puppies. I am using the term «liver», which can also mean «red» or «brown».

I have prepared six charts showing the **approximate** percentages of liver nose puppies that are likely to occur when breeding. These percentages are based upon hundreds of occurrences and should not be taken as absolute results:

- 1 Dominant black to dominant black
- 2 Dominant black to black with liver recessive
- 3 Dominant black to liver
- 4 Black with liver recessive to black with liver recessive
- 5 Black with liver recessive to liver
- 6 Liver to liver

**BB** .... indicates dog is dominant black; i.e., does not carry the liver recessive

**Br** .... indicates dog is black nose but carries the liver recessive

**rr** .... indicates the dog is a liver nose

	B	B
B	BB	BB
B	BB	BB

Since neither parent carries the liver gene, no liver puppies can result

	B	B
B	BB	BB
r	Br	Br

Since only one parent carries the liver gene, no liver puppies can result but approximately 50% of the litter will carry the liver gene.

	B	B
r	Br	Br
r	Br	Br

Since only one parent carries the liver gene, no liver puppies can result, but all puppies will carry the liver gene

	B	r
B	BB	Br
r	Br	rr

Since both parents carry the liver gene, approximately 25% of the litter will be dominant black, 50% will carry the liver recessive, and 25% will be liver.

	B	r
r	Br	rr
r	Br	rr

Since both parents carry the liver gene, approximately 50% of the litter will carry the liver gene and 50% will be liver

	r	r
r	rr	rr
r	rr	rr

Since both parents are liver, all the puppies will be liver.

How do you know whether a dog carries a liver recessive?

- If the dog's sire or dam was liver nose, the dog carries the liver recessive.
- If red nose puppies occurred in a previous breeding, both the sire and the dam of the litter are carrying the liver recessive
- If neither of these circumstances exist, the only other way to tell is by breeding. If after a couple of breedings to dogs known to carry the liver recessive no red puppies occur, it is relatively certain the dog is not carrying the liver gene and is dominant black.