A Discussion of Nose Color in the Akita

By
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The description of the correct nose for an Akita seems pretty straightforward in the AKC standard. It is: “Broad and black. Liver permitted on white Akitas, but black always preferred.” A “butterfly nose or total lack of pigmentation on nose” disqualify. Faced with the reality of an actual dog, however, people from novices to experienced dog-show judges have trouble reconciling what they see in front of them with the words of the standard.

The questions posed by them are actually complex:

1. What does the nose of a white Akita look like when it is not black?
2. Is “liver” an accurate description?
3. What is a butterfly nose?
4. What is an unpigmented nose?
5. What is a white Akita?

Because the nose section of the standard causes so many problems, the same dog can be awarded a major one day and be disqualified the next. Worse, the correct decision on the part of a judge could have been made in either instance. This confusion can drive off all but the most stalwart fanciers. People who want to show honest dogs that conform to the standard often give up and those who want to win, continue but give in.

This article is an attempt to clarify misunderstandings by putting pictures with the standard’s words. Before beginning, however, I have a few disclaimers and notes.

First, I’d like to thank the people who have allowed me to use their pictures.
Then, I’d like to point out that these are my opinions based on discussions with other
breeders and my own experiences and knowledge. As you read this, you should also keep in mind that inconsistencies in terminology among the breeds bedevil any discussion of canine coat color. Sometimes the same color or marking has different names from one breed to another; while other times, the same term is used but has a different meaning. I discuss this more thoroughly in the Spotting Discussion on this website.

TYPICAL WHITE AKITAS

Curiously, understanding the typical nose of a white Akita poses a far greater problem for people who are more rather than less knowledgeable. Owners and breeders concentrated only on Akitas don’t have a problem taking the standard’s “liver” at face value since they are often unfamiliar with other breeds and the terminology associated with them. People with a broad range of experience in dogs, however, get into trouble when they take what they know about liver coat color in other breeds and transfer it to Akitas.

The crux of the problem is that the “liver” nose of a white Akita isn’t really a liver nose at all, or, at least, it shouldn’t be. Maybe the people who wrote the standard weren’t familiar with genetic livers or maybe they thought liver was a close enough description, or maybe they’d just finished cooking up some bait for shows. What is clear is that the term isn’t in the standard to allow genetic livers as a breed color. The standard states unequivocally that the nose should be black regardless of coat color.

The diluted color on the nose of whites is an exception to this, although it is permitted but not preferred, and is the recognition of the genetic realities associated with white coat color. The dilution that most often causes white coats isn’t always confined just to the hair. A failure to note this in the standard would have excluded many fine Akitas from breeding and showing. Akitas could ill afford loosing quality dogs from the gene pool, since the original breeding base, even in the native country, was extremely small after World War II.

So it’s doubly unfortunate that wording intended to protect whites sometimes proves damaging to them when judges misunderstand or misinterpret. Showing a white can be so difficult that breeders and exhibitors avoid even worthy white dogs.

Typical Whites

On the following page is a gallery showing the noses of white Akitas. Although they are different colors, they are all less than black. They are all correct by the standard, although black is always preferred. So, if you were faced with that may-we-all-be-so-lucky, mythical choice between two dogs of absolutely equal quality, pigment might make the difference in your decision. Otherwise, you have to accept that the color is natural and goes hand-in-hand with the color.

This is in part because the enzymes responsible for melanin production can be and often are very sensitive to minute changes in temperature, and we all know that dogs have cold noses. I suspect that when this sensitivity is coupled with the genes that fade coat color to white, the melanin of the nose is affected more so than when fading alleles are not present.
Sunlight can affect the depth of the nose color on whites. Whether this is because of heat or exposure to some radiation wavelengths, I don’t know. Many breeds living in cold climates develop a “snow nose” in winter, and the same causes may further affect the already reduced nose pigment of white Akitas.

**A LIVER NOSE?**

In solving one problem, the typical nose of a white, the standard set up another, because the writers picked the wrong terms to describe the color. As soon as you compare the noses of white Akitas with those of genetic liver dogs in other breeds, you have a problem. The nose of a white Akita isn’t liver because Akitas don’t or at least shouldn’t be genetic livers.

The term isn’t such a problem for most Akita owners and/or breeders because many of them aren’t familiar enough with liver-colored dogs to notice the difference, or else they understand that the term is descriptive and not literal. On the other hand, you can bet that anyone in the sport long enough to judge knows what a real liver nose looks like.

Confronted with some of the noses on the previous page, the first they think is, “The standard says liver nose and that nose is not liver.” Well, look at the real livers here and you can see that this is absolutely right!

The discrepancy still wouldn’t matter except that the next logical step is:

“This color nose must be a fault, therefore it should be penalized in accordance with its degree.”

Further underpinning this decision is the standard’s disqualification of butterfly and totally unpigmented noses. Some whites come very close to this.

**A Word About Liver**

The most obvious difference between the noses of white Akitas and those of genetic livers is that the former have black pigment somewhere, although it may just be visible at the edges. Liver dogs have no black pigment—anywhere. For the purposes of this discussion, liver refers to any shade or color that results from the presence of two recessive alleles of the liver gene.

The color has various names depending on the breed, including liver, chocolate, brown, copper, and red, although these terms may also refer to tan or brown which is different genetically. Regardless of whether the end result is the dark copper seen in Siberians or the light cream of a Labrador and regardless of what it is called in any breed where it is present, dogs that are genetic livers do not have black pigment in either their coat or on the “leather” which is the skin of the nose, lips, pads, eye-rims, and anus.
In a liver-colored dog, the leather is liver, even the eye may be affected and show a reddish-brown cast. Those with one or both dominant alleles have normal coat color since the “liver” gene only affects black pigment wherever it occurs on the dog. If the normal coat color has no black in it, as with a yellow or fawn, the dog will be distinguishable as a liver only by the color of the leather.

“Red” Dobermans are a good example of this gene’s effect. As you can see, from the two dogs pictured above, the “tan/brown/rust” pigment of the points is the same color in both dogs, because the liver gene changes the black pigment but does not affect that responsible for brown pigment. This is particularly obvious when you look at the distribution of the coat colors as opposed to the color of the points.

Liver color occurs so seldom in Akitas that most people don’t realize the alleles exist in the breed. Those unfamiliar with the color in other breeds may fail to recognize it in their own dogs, especially if those dogs do not have black in their coat color.

The Akita puppy on the previous page is readily identifiable as a liver at this stage in his life because many puppies are very black. The more obvious the black would be in the absence of the liver gene, the more obvious the liver is when it is present. That’s why a liver Doberman is more easily identified as a liver than a liver Ridgeback.

The dog on the right is much easier to miss, and if he were self-masked he might pass as a cream with light eyes. Any dog, including a white, that doesn’t have black hairs in the coat will be hard to identify as a liver without inspection of the leather.

Indeed, liver alleles may be harbored in self-colored fawns and creams as well as whites because the liver can easily be confused with faded pigment. You can tell which is which by looking at all the leather. Dogs with totally faded nose pigment will still have black in other areas if they are not livers. If all the leather is liver-colored, you are looking at a dog that is genetically a liver.

**Dudley Nose**

The white Akita’s nose more closely approximates a “Dudley” or “flesh-colored” nose than a liver. In *Canine Terminology*, Spira defines them as:

“Dudley The name given to a weakly pigmented, flesh-coloured nose. Other names apply to the dudley nose syndrome including ‘cherry nose’, ‘putty nose’ and ‘flesh nose.’

“Flesh or Flesh-coloured nose An evenly-coloured nose, similar in all respects to the so-called ‘dudley’ nose, the difference being that the term ‘dudley’ is used to describe a fault, while ‘flesh-coloured’ is used in breed standards where such pigmentation is acceptable.” (Spira, 100)
Although the white Akita’s nose often is putty, cherry, or flesh colored, it’s less likely to be evenly colored as you see with the noses of Ibizans or Clumbers. Rather, it resembles a “snow nose,” most common in Arctic breeds like this Malamute’s (left). The depigmentation probably arises from similar causes since both will darken on exposure to sunlight.

By Spira’s definitions, the white Akita’s nose is more correctly termed “partly unpigmented” which he goes on to explain is not necessarily the result “of a permanent nature nor is it always to be regarded as a fault as climatic, environmental and nutritional factors may cause temporary loss of nasal pigment.” (Spira 100)

This type of nose can have areas that become completely depigmented. If this happens to a snow-nose, then it becomes a “butterfly” nose, which in Akitas is a disqualification. The loss of pigment may be temporary, but owners should realize that the dog shouldn’t be shown until it repigments.

**BUTTERFLY NOSE**

Of course, many dogs with butterfly noses have them all their lives. Despite the examples I have here, they are most common on colored dogs with white face markings; whereas dilution of the pigment is most common with whites.

Exactly what constitutes a butterfly nose is also subject to review. The AKC Complete Dog Book defines a butterfly nose as a “parti-colored nose; i.e. dark, spotted with flesh color. (AKC, 742). Spira, on the other hand, says:

“Butterfly nose syn. Spotted nose. A partially unpigmented nose of irregular flecked appearance. Typical of harlequin-patterned or merle-colored dogs, e.g. Great Dane, Cardigan Welsh Corgi, but listed as undesirable in numerous breed standards. The time of completion of full nasal pigmentation tends to vary from breed to breed and even strains within a given breed. When judging it is important, therefore, not to penalize too severely for incomplete pigmentation at too early an age.”* (Spira, 100)

He also discusses unpigmented spots or “flesh marks,” which are “poorly coloured or unpigmented areas on an otherwise correctly coloured nose...Flesh marks joining into one another make up into a butterfly nose.” (Spira, 60)

*NOTE: Spira is speaking generally. Any Akita with a butterfly nose in the show ring should be disqualified even if it is a puppy.
If you go by the AKC definition, two colors on the nose make it parti-colored and so one flesh mark would make a butterfly nose. If you go by Spira, a butterfly nose is comprised of flesh marks, but one flesh mark doesn’t make a butterfly. The question is then: What distinguishes one large flesh mark from several joined together? How large is a flesh mark before it’s considered two together?

Whether the dog on the left has a butterfly nose is subject to debate, but there can be none over the dog on the right. This is clearly a butterfly nose.

One problem in recognizing unpigmented skin is that it doesn’t’ always look the same. It can be the bubble-gum pink we associate with albino rabbits, a color often found in the noses of whites and very faded dogs in that same genetic family. In non-whites, however, unpigmented skin can be fish-belly white. This same color, or lack of it, can also be found inside the ear.

Puppies often lack leather pigment at birth. Tiny black dots appear and gradually spread until they are all united. White face markings result from the actions of the S or spotting series genes which prevent production of melanin. We associate them with coat hair, but these genes also affect skin.

The unpigmented nose of the puppy on the left is a good illustration of this. His nose is fish-belly white rather than pink. It was completely filled in by the time he was a year old, but he had a patch of unpigmented skin on his muzzle that showed through the white markings there. He also had a tiny bit left on the inside of on nostril, but the leather was black.

While this wouldn’t concern me at all as a judge, as a breeder, my choice of partners for him would have been solid-colored heads. Breeders who ignore the suggestions of pigment problems do so at some peril. If the nose hasn’t filled in naturally by the time the dog is 18 months old, it probably will never do so without artificial help, which unfortunately does occur.

In contrast to the faded nose of whites, where color is most often missing on the top, unpigmented areas of the butterfly nose are usually at the base around the front of the nostrils. Judges may fail to even notice a butterfly nose unless they make a point of lifting the
dog’s head up during the examination so that they can see the base clearly. Pigment may also be restricted in other areas of the dog’s face, including the eye rims and/or lips. Extending a line from the white markings of the coat can often make the reasons for this obvious.

POP QUIZ: Decide for yourself if these are butterfly noses? Number 1 is the benchmark—you get no credit for a yes on this one!

Decided? 1 is a yes and 10 is a fake. Missing pigment on the eyes and mouth should make you very suspicious of a coal black nose, especially where white is on the face. You have to decide for yourself how much depigmentation you consider disqualifying.

TOTAL LACK OF PIGMENTATION

The photos above are good illustrations of noses where pigment is missing. A nose that is completely lacking pigment is a disqualification, and one which, incidentally, I’ve never seen on an adult.

I have, however, seen whites that were so close many judges would consider disqualification warranted. The trick here is the word “total,” because even whites with bright pink noses have a rim of pigmented skin around the margin of the nose leather.

The two dogs here provide good cases in point. The nose here is about the same color as the tongue. Like the dog on the next page, black pigment is present at the borders of the nose. Both have very black lips, so much so that the bottom of the nose and the hair between the nose and lips in the front is black. It’s not the best nose possible on a white, but it is certainly permitted.

Pigment loss can be due to other factors as well. One of my black Akitas whose nose was much darker than his coat had a ball with a large handle that he loved it so much, he
If you compare the unpigmented skin next to the left nose, you can see that even if black weren’t present, depigmentation would not be total. A fine point but one that is essential to understand when you are evaluating whites.

even slept with his head resting on it. After a few months of carrying it around all day long, at the age of 6, he developed true butterfly nose! The pigment on the front of his nose, the skin at the front of his muzzle and on his lips was pinkish-white. I found a new toy and disposed of the ball, but it took about a year for all the pigment to return. (This is of some cause for alarm because this kind of depigmentation can also be the result of an autoimmune disorder). Of course, a judge faced with such a dog in the ring must follow the standard, but breeders should realize that not all pigment problems are due to serious genetic problems.

WILL THE REAL WHITE PLEASE STAND UP

The next problem in applying the words of the standard involves determining which whites are white. This may seem silly until you are faced with real dogs, and then the issue isn’t so clear cut. Since the standard has no preference regarding color other than that its being clear and brilliant, the only reason to distinguish whites from non-whites arises because of nose color. Faded or dilute nose pigment is permitted in whites, but colored dogs should have black ones. The faded pigment on the red dog on the right is probably a snow nose, but it should be considered a fault. In weighing the degree to which it should be faulted, I think you need to consider the extent of the deviation from the ideal. Certainly this nose is much less faded than the Malamute pictured earlier and faded nose pigment is not a disqualification in any Akita. However, since the standard permits dilute noses only in whites, again, in my opinion, fading pigment in a colored dog should be regarded more seriously than it is in a white.

Just the snippet of photo available shows clearly that this dog isn’t white, but what about the dog on the left? Many people refer to dogs like this as being “white,” but, in fact, they are the product of a different set of genes and always have color left somewhere, especially on the head about the ears, in a spot on either side of the back in the middle of the body, and around the base of the tail. My favorite term for these Akitas is “hooded” because it so aptly describes their look.
The real problem is that dogs have several genetic pathways available to produce what would be considered a solid white, although not all of them exist in every breed. (Note: Although we refer to white as a coat color, technically, it is the absence of color. See also; Spots Before Your Eyes, on this Website) Remember, white hair and skin have no melanin (color granules) in them. They can result from injury or age, but when they are the result of genetics, white hairs occur because the melanin production has stopped.

Genes that affect melanin production are found in several locations. One controls merling, another one spotting, and another fading. Merling doesn’t occur in Akitas but spotting and fading do.

White Akitas occurs when alleles of the “C” series genes cause pigment to oxidize or bleach. The liver gene does this to some degree, also, but it only works on black melanin; whereas C genes affects both brown and black. In simpler terms, it causes fading of almost all pigment in the coat and may affect the leather as well. This is quite different from the action of the spotting genes which actually stop melanin production, resulting in white hair.

If this is hard for you follow, think of the body as a huge city, the genes as a board of directors, and the different alleles (genetic possibilities or expressions available for each gene) as individual directors on a board.

In the case of color, then, each hair is like the smokestack of a factory that makes and distributes color granules. These are pumped up into the hair or skin cells, producing what we see as color.

The S series Board controls power to these factories. The combination of individuals (alleles) on the board determines the pattern of power distribution. If they’re especially generous, they supply power to all the factories and all parts of the city/dog have color. Stingier boards cut off power to whole areas, resulting in hair that is white.

Each factory’s is controlled by a C series board. Production varies according to the board’s composition. Some push for more production than others. Those that run all out produce as much pigment as possible, and those that have fallen on hard times, produce little or none.

Valid to this analogy, sometimes factories fail for other reasons. They may be destroyed or damaged by external factors, such as injury. They may also be affected other gene series whose boards may change the product or alter the production rate.

While the end product of the S and C series genes is white hair, the methods used to produce it are very different. Power, controlled by the S series, is either on or off (mostly); whereas, production controlled by the C series fluctuates. The end product of one factory can then be a pale copy of another’s because that factory wasn’t allowed to work all-out. Of course, if the power isn’t there to begin with, what the C series would produce is irrelevant.

In real examples, a self-colored dog like a black Labrador, then, would have full power and all-out production. A black and white Border Collie might have full production on the part of the Cs, but not full power from the S series.

Whites typically have some buff or biscuit color in their coat which is typical and acceptable. This puppy has biscuit on his ears. The pigment on his mouth may fill in with maturity.
Hooded Akitas occur because the C’s allow all-out production, but the S group shuts off almost all the power. White Akitas have a few factories functioning at quarter power. The rest are so low that you can’t tell whether the resulting white is because of an S power shut off or a factory shut-down. Either way, the effect is the same.

A sort of genetic power struggle goes on in almost all whites between what you could consider the factory designers (these would be the A series which is basic coat color) and the C group. Wherever the A group is the very strongest, some vestige of color will show up.

This means that whatever area would be darkest on a colored dog is more likely to have some residual pigment in a white. For instance, a dog with a dorsal strip or a dark saddle will probably have some cream or buff that remains in that area.

Without looking at test breedings or the actual genes, exactly what genetic combinations are present in a white are impossible to determine. Anything characteristic of another gene’s actions can still exist in a white. Although these may not be apparent, some features may hint at these. For instance, missing pigment on the leather, including a true butterfly nose, may indicate part of the white on the face is from S series. The stripes of a brindle may be completely faded out, but bred to a non-brindle, this white will produce brindles. Ice-whites with strong color remaining in areas common to hooded dogs may be mainly hooded and will breed that way if the recessives from the C series are lost.

The C series has several identified alleles. The normal and most dominant form allows full expression of color. In other words, a black dog will be black. The other alleles are neither completely dominant nor recessive. Depending on which are present, they can interact with each other to produce gradations of color fading.

Just as the Spotting series alleles allow varying degrees of color deposition in
the coat, the C series results in gradations of bleaching. In the most extreme cases, the dog is considered white.

Obviously, dogs can and do fall on either side of the line. The dog on the right, shown with a close up of his head is an example. Is he white or red? Since he has excellent pigment, it doesn’t really matter for purposes of the standard, but what about the dog below? Yes, she’s long-coated and has no tail, but with regard to color and nose pigment, is she a white or a red?

Compare the middle and bottom dogs on the right. Although the color is distributed over more of the bottom dog’s body, it is actually lighter than the red on the dog above him. His mask makes this dog indisputably colored rather than “white.”

According to the standard, the presence or absence of a mask is one of the defining points of a white. Perhaps the intention was to differentiate whites from “hooded” dogs and issues associated with that marking pattern. “White dogs have no mask” could just as well be written to differentiate between dogs that are light colored rather than less-diluted whites. I suspect that when a dog is so close to white you have to ask yourself whether it is or isn’t, you might as well consider it white. It will probably produce as if it were. Regardless of where it occurs, judges and breeders alike need to realize that because of the genetics involved in producing whites, some areas of the coat will have color. It is always some form of bleached or faded red, varying from orangish

The color of this female’s nose is consistent with her coat color, although dilution of the underlying color isn’t as complete in this female as in other Akitas. The vestiges of what would have been a very black mask remain on her ears and muzzle, expressed as an orange-tan. Still she should be considered a white.

These three are whiter than the dog at the top of the page. Buff or biscuit is clearly visible in the coats of the two on the left. Marks on the elbows and legs of the one above right are stains and calluses from lying on concrete.
tan to pale cream ("biscuit") and can occur anywhere on the dog.

For the standard’s purposes, I think a dog that doesn’t have color on its head and is predominantly white should be considered a white. Such a dog shouldn’t be penalized in the ring for having a dilute nose, although it might have to give way because of poor pigment to a dog of equal quality with black leather. Further, whites should not be penalized for having biscuit shadings nor should they not be considered white.

The Best for Last

I hope this discussion clarifies some of the issues surrounding the Nose section of the standard even if it doesn’t provide pat answers for all the questions that section provokes. I’d like to thank all the people who provided photos and invite you to send me more. You can email them to me or send them for me to scan and I’ll return them immediately.

I’ve saved a little something for last.

One of the most confusing things about Akitas is that you cannot always predict the color of the adult from puppies. You can rule out some things. For instance, a black puppy will not end up a white. You cannot say, though, that it will not be red or gray.

Take a look at this series of photos where a puppy has clear biscuit markings and a classic butterfly nose even as he ages. The picture of the two littermates is a good comparison of the difference between butterfly and dilute noses. What a surprise then to see this same dog as an adult, a typical white!

Because color deposition results from different genetic operations, whether it increases, decreases, or remains the same is going to depend
on which genes are causing it. So, you can’t really predict it even in whites.

For a last little puzzler, I’ve included the entire photo of the example for butterfly noses. I wish we had a side view of her! She certainly has no mask, and she has a lot of white on her face, but I’ll leave it up to you to decide whether she is red or white.