

Cleft palates in dogs and cats: 21 facts breeders need to know.

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We did several talks on canine and feline neonatology lately. And each time we spent some time discussing cleft palates in newborn kittens and puppies. These are indeed from far the most common congenital defects reported in dogs and cats. I also often receive questions about it, so I thought it would be good to write a post about it. Here are therefore the 21 facts I believe breeders should know concerning this disease.

- **Cleft palates: the most common congenital defect in puppies and kittens**

Fact #1: Cleft palate is an anatomic defect that can be found in both newborn kittens and puppies. The soft palate (=the upper part of the mouth) is not closed, leading to a direct access to the above anatomic compartment, the respiratory tract.

Fact #2: Cleft palate is a congenital defect, which means it is present at birth. As a matter of fact, breeders should always check all their newborns for presence or absence of this defect asap after they're delivered.

Fact #3: Keep in mind that there are various degrees of cleft palates. Most of the times the defect is easy to detect, but sometimes it might just be a very small opening at the back of the soft palate which can be easily missed. If you have a doubt, show the puppy/kitten to your vet.

Fact #4: Cleft palates can sometimes be due to a trauma (falls, hit by a car) but then obviously this form of the disease will usually only affect older animals, and not newborns.

Fact #5: Cleft palates are defects of an embryological structure called the neural tube. Its development stops at 30 days of gestation.



- **Predisposition and risk factors**

Fact #6: There is a predisposition for the development of this disease in brachycephalic breeds.

Fact #7: Beagles, Cocker Spaniels, Dachshunds, German Shepherd Dogs, Labrador Retrievers, Schnauzers, Shetland Sheepdogs and Siamese cats also show increased incidence.

Fact #8: In most cases, cleft palate is a genetic disorder. The genetic determinism of the disease however varies from one breed to the other. In the Brittany Spaniel, cleft palates are thought to be autosomal

recessive (1 defective allele carried by the two parents and passed on to the offspring's). In Westies, it is however thought to be polygenic. In most cases, the genetic determinism remains unknown.

Fact #9: Exposure of the bitch/queen to teratogenic drugs during pregnancy can also lead to the development of the defect. Before administering anything to your animal during its gestation, speak with your vet to be sure it will do no harm to the developing fetuses.

Fact #10: Folic acid participates to the neural tube development of the canine and feline embryos during gestation. Its needs are increased in pregnant mothers. In case of folic acid deficiency in the mothers, cleft palates can occur.

The 11 remaining facts will be published in our next post!

▪ **About clinical signs and treatment**

Fact #11: Affected animals often develop signs of upper respiratory disease, including sneezing, coughing and discharge of milk from the nostrils. This is because liquids (like milk from the mother) are allowed to pass in the respiratory airways.

Fact #12: These patients are predisposed to aspiration pneumonia, laryngotracheitis and chronic rhinitis. If nothing is attempted, they might choke or develop a fatal bronchopneumonia.

Fact #13: Surgical correction can be attempted. However, the procedure has to be delayed until 8-24 weeks of age, when there is enough tissue to close the cleft and when the puppy/kitten anesthesia is easier to manage.

Fact #14: More than one surgical procedure might be required to achieve complete repair.

Fact #15: If the surgical option is picked, it is important to keep in mind that the affected puppy/kitten will need to be tube-fed until weaning. Even after that, extra-precautions must be taken to avoid development of aspiration pneumonia.

Fact #16: A puppy/kitten with a cleft palate requires LOTS of care. For instance, these animals need to be tube-feed 8 times a day during their first week of life. This is NOT an easy task, seek your vet's advices in case you wonder if you're up to the challenge.

Fact #17: Puppies that will make it to surgery will usually have a totally normal life. It is however not recommended to use them as breeding dogs, because of the potential genetic determinism of the defect.

▪ **Folic acid and cleft palates' prevention**

Fact #18: In women, folic acid supplementation is recommended during gestation to prevent development of cleft palates in newborn infants. In dogs, 3 scientific studies showed that folic acid supplementation has the same preventive effect.

[Folic acid and cleft palates in dogs](#) from [Emmanuel Fontaine](#)

Fact #19: In order to supplement your pregnant bitch/queen with folic acid, there are two options: oral supplements can be used (see with your vet) or feed a diet already supplemented in folic acid (like our Ht42D for bitches or our Queen for queens). The supplemented diets make it easier in terms of observance.

Fact #20: As previously said, the development of the neural tube stops at 30 days of gestation. Folic acid supplementation must therefore be initiated since the beginning of pregnancy to be fully efficient. No point starting supplementing after 30 days of gestation.

Fact #21: Keep in mind that folic acid supplementation will have no effect if the problem is of genetic origin, or induced by drugs administered during pregnancy.



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