

Nutrition

NUTRITIONAL CATARACTS

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A nutritional cataract is caused by either a deficiency or excess of a nutrient resulting in a loss of transparency of the lens. Nutritional cataracts have been identified in various species, including rats, pigs, wolves, fish and guinea pigs as well as dogs and cats. In dogs and cats the most common cause of nutritional cataracts is being hand raised on milk replacer.

It is usually possible to differentiate nutritional cataracts from inherited cataracts. The location of the cataract within the lens is fairly unique compared to other cataracts. The cataract is present within a few weeks of starting milk replacer. When combined with a history of being hand raised, the diagnosis is usually straightforward. Also, inherited cataracts rarely occur at such early ages (with a few exceptions).

Nutritional cataracts usually do not progress to interfere significantly with vision. Some will improve with age, as the young lens has some ability to repair itself. The younger the pup is when switched from bitch to hand raising, the more likely it is to develop nutritional cataracts. Also, the sooner it is started on solid food, the sooner the lens can stabilize and improve.

Numerous studies have been performed to try to identify specific causes of nutritional cataracts. Most studies have implicated abnormal amino acid levels, with the specific amino acid implicated varying from species to species. Arginine deficiency has been implicated as the most likely cause of nutritional cataracts in dogs. Most of the commercial milk replacers do not contain added arginine. One exception is Nurturall by VPL. All of the commonly available milk replacers (Esbilac, Havolac, Unilact, Veta-lac, and Nurturall) have lower protein levels than bitches milk. Bitches milk has approximately 10.7% protein, cows and goats milk 3.5% protein, and the above mentioned supplements range from 4.5% protein to 7.5% protein.

There have been no studies evaluating home made diets, but it is known that meat is a good source of arginine. Therefore, one of the most common recommendations has been to add beef or liver baby food to the milk replacers. Since no studies have been performed evaluating this combination, there are not specific recommendations as to how much baby food should be added.

The specific recommendations that I can make are the following:

1. If pups cannot be raised on the bitch, then try to find a wet nurse for them.
2. The longer the pups are on bitches' milk, the less likely they are to develop nutritional cataracts.
3. If they cannot be raised on bitches' milk, add as much beef or liver baby food to the milk replacer as you can without causing GI upset and still keep it liquid enough to drink.
4. Add puppy diet as soon as possible.
5. Consider using Nurturall since it has the highest protein level of the available milk replacers and has added arginine, if bitches' milk is not available.