



VET CHAT



## Fading Puppy Syndrome

Fading puppy syndrome is a term used to describe puppies that are apparently normal at birth but die within 5-10 days of birth. It can affect a single pup or multiple pups in a litter. Many of these puppies are vigorous and healthy at birth, but lose interest in suckling over time. The bitch is usually in good health, with no known association between this syndrome and dystocia, poor mothering or poor lactation.

Fading puppy syndrome is not a specific diagnosis or disease. The proposed causes for this condition include but are not limited to poor mothering, inadequate lactation, constipation, trauma, congenital abnormalities, low birth weights and infection.



### Understanding the vulnerability of a neonate

A newborn puppy is an immature animal that is highly dependent on the bitch for survival in the first few weeks of life. This is due to four main factors:

- **Unable to regulate body temperature**

A puppy in the first week of life is vulnerable to hypothermia. They rely on the warmth from the bitch to maintain their body temperature. A puppy is not able to shiver to increase its core temperature until 6-8 days of age.

- **Prone to dehydration**

As 82% of the neonate's body weight is water and kidney function is immature, the neonate is particularly susceptible to dehydration.

- **Risk of hypoglycaemia**

Failure to nurse results in a rapid depletion of energy reserves leading to hypoglycaemia by the second day of life.

- **Immature immune system**

It is important that colostrum (the first milk) is ingested during the first 12-24 hours of life that passively provides the neonate with the antibodies required to fight infection in the first few months of life.

- **The Normal Neonate**

Observation of a neonate's behaviour is usually one of the best ways to observe for early signs of fading puppy syndrome. A normal newborn puppy exhibits the following behaviours:

- The eyes open at approximately 2 weeks but eyesight is poor up to 5 weeks of age.
- Puppy should purposefully crawl and search for a teat.
- A normal puppy has a rounded abdomen full of milk, a warm body and elastic skin.
- Spends long periods in deep sleep, interrupted by short periods of body twitching. This behaviour disappears after four weeks.
- Puppies should be able to stand at 3 weeks of age.

## Colostrum: passive immunity

Colostrum is the first milk the bitch produces in the few hours after whelping. One of the key functions of colostrum is to pass on maternal antibodies to the neonate to provide immunity against common infections. Colostrum is only absorbed in the first 12 hours of life due to gut closure. Gut closure is where the intestinal wall in the puppy loses the ability to absorb colostrum, and is completely closed at 24 hours after birth.

Royal Canin performed a study on neonatal puppies looking at the levels of antibodies in the blood and association with neonatal death. The study demonstrated that neonatal death in puppies was strongly associated with the quality of the passively acquired immunity (level of antibodies). This emphasises the need to ensure all neonatal puppies receive adequate colostrum intake.

Without appropriate colostrum intake, the risk of infection greatly increases for the neonate.

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## Treatment & Prevention

There is no reported treatment for fading puppy syndrome. Early supplementary feeding of suspected fading puppies may improve survival. If you suspect a fading puppy, it is best to seek veterinary attention for the puppy.

Prevention is difficult to describe as no specific cause has been identified for fading puppy syndrome. A variety of breeding management systems have been studied with no common management-linked factors associated with neonatal death. There is a tendency for certain dams to have successive fading litters, whilst other bitches experience no problems.

Review of breeding management especially at the time of whelping and through the neonatal period may help to decrease losses.

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