

Amyloidosis in Dogs

Dr. Mike Paul, DVM

Mike has more than 35 years of experience in companion animal veterinary practice and is a valued member of IDEXX's Pet Health Network team since 2013.

What is amyloidosis?

Amyloidosis is an infrequent [condition](#) in [dogs](#) that occurs when proteins, at a cellular level, are deposited abnormally in sheets. These abnormal deposits cannot be dissolved and resist normal digestion and breakdown. When these misfolded proteins are deposited into various tissues and organs in the body, "they are called amyloid," and damage/replace normal cells. Minor deposits of amyloid can be associated with normal [aging](#), but extensive deposits can cause significant and sometimes fatal [disease](#).

What causes amyloidosis in dogs?

Luckily, amyloidosis is a relatively unusual disorder in dogs. A congenital form of the disease is recognized in [Chinese Shar-Pei dogs](#) who have periodic [fever](#) and [inflammation](#), but the most common form of amyloid originates from a protein that is formed in response to inflammation that is not genetically programmed. That means that any condition that causes severe inflammation can trigger the deposition of the abnormal proteins, including:

- Chronic inflammatory disease
- Chronic [infections](#)
- [Cancer](#)

Signs that your dog has amyloidosis

Remember that the amyloid deposits can occur in any location in the body—sometimes in one place and sometimes all over. In small amounts, no damage occurs and no disease is apparent. It is only when the deposits interfere with normal organ function that clinical symptoms appear, and then they are related to the failure of the specific, affected organ system:

- [Liver](#) disease with liver amyloidosis
- [Kidney](#) disease with renal amyloidosis
- [Skin](#) disease associated with cutaneous amyloidosis

Diagnosing amyloidosis in your dog

Your veterinarian will first diagnose your dog with a specific organ based disease or disorder, and will then have to determine that the problem is the result of amyloidosis—which can be very difficult. Amyloidosis can be suspected when organ dysfunction (such as kidney or liver failure) develops in animals that have been dealing with chronic inflammatory or infectious diseases. The only way to definitively diagnosis the presence of amyloidosis is to obtain biopsy samples of the affected tissues for microscopic examination with special stains.

How is amyloidosis treated in dogs?

Unfortunately, there is no specific treatment for amyloidosis, and therefore no cure. The drug colchicine may block amyloid protein synthesis, and DMSO is also used to reduce serum amyloid protein levels, but the evidence is inconclusive for true benefits to the patient. Since there are no proven ways to stop the abnormal protein production and no way to dissolve or breakdown the already formed protein sheets, treatment is typically directed at the effects of any resultant organ dysfunction. Concurrently your veterinarian will want to identify the source of inflammation and remove it if possible, to slow down any further amyloid deposition, thus slowing down the progression of the disease.

If you have any questions or concerns, you should always visit or call your veterinarian -- they are your best resource to ensure the health and well-being of your pets.

Resources:

1. "[Overview of Amyloidoses.](#)" Merck Veterinary Manual. MERCK, 04 Sept. 2015.
2. "[Amyloidosis.](#)" Vetbook. University of Sydney. Web. 04 Sept. 2015.