

JOINT PROBLEMS IN COMPANION ANIMALS

In all land animals which have limbs **joint problems** are a question of fundamental importance: if animals have difficulty moving or experience pain when they do the quality of their life is heavily limited in many aspect, from being able to move on their own to difficulties in feeding and, in extreme cases, even to death¹.

Joint problems in companion animals, as in many other animal species, can be due to ageing: as is known to happen even in humans, the more an animal grows old the more arthritis becomes an issue. Especially in dogs, however, because of genetic selection, there is often also a propensity to develop joint problems, especially to the lower limbs, even at young age: this problem is called hip dysplasia, and it's estimated to affect millions of companion animals throughout the world². It's very common in some specific breeds, for example the ones which have rapid growth and an adult weight which is relatively high³.

Breed	Rank	Number eval.	% dysplastic
Bulldog	1	443	73,6
Pug	2	377	62,6
Dogue De Bordeaux	3	312	55,8
Otterhound	4	325	53,5
Neapolitan Mastiff	5	143	48,3
St. Bernard	6	2010	46,9
Clumber Spaniel	7	726	45,3
Sussex Spaniel	8	233	42,5
Black Russian Terrier	9	265	42,3
Cane Corso	10	543	40,1
Argentine Dogo	11	160	38,1
Basset Hound	12	194	37,6
Boykin Spaniel	13	2317	36,3
Perro De Presa Canario	14	146	34,9
French Bulldog	15	603	34,0
Norfolk Terrier	16	218	33,0
American Bulldog	17	1512	32,9
Glen Of Imaal Terrier	18	101	30,7
Fila Brasileiro	19	587	29,5
Bloodhound	20	2573	26,2

Top 20 dog breeds by hip dysplasia incidence⁴

Risk factors for hip dysplasia are as said genetics, but they also depend on environmental factors and nutritional factors, among which the levels of trace nutrients in the diet, the ratio between calcium and phosphorus, and the presence or absence of specific nutrients which can positively influence the development of cartilage and joints⁵.

¹Martinec R, Pinjatela R, Balen D, Acta Clin Croat **2019**; 58:157–166.

²Corley EA, Hogan PM, J Am Vet Med A **1985**; 187:805–809.

³LaFond *et al.*, J Am Anim Hosp Assoc **2002**; 38:467–477.

⁴Adapted from 1974-2008 data from the Orthopedic Foundation for Animals, Columbia, MO, United States.

⁵Hand *et al.*, *Small Animal Clinical Nutrition*, 5th edition, Mark Morris Institute, ISBN 0-615297-01-3.



X-ray view of canine hips with and without dysplasia (L and R respectively)⁶

SUBSTANCES FOR JOINT HEALTH

As said, there are many substances which are known to have a beneficial effect on the development and maintenance of joints in all animals; this is of specific importance for animals such as cats and dogs, which are faithful companions for human beings and which have a long life and deserve to live it well and without any pain.

Eurofeed Technologies has developed a product for the feeding of companion animals (cats and dogs) which can help in the development of joints in categories which are known to be subject to joint issues, to the maintenance of the health of the joints themselves, up to and including the recovery and regeneration of the cartilage: this product is called **ArthroPet**.

ArthroPet is a specific complex of ingredients for companion animal feeding, to be included in complete or complementary feed to be given to those animals to prevent or treat joint problems.

ArthroPet contains chelated trace elements, vitamins, vegetables, and antioxidants.

Methionated manganese, a chelated trace element, is manganese complexed with the amino acid methionine. They both have specific functions in favour of cartilage: manganese is indispensable to catalyse the formation and regeneration of cartilage, and methionine is a sulphur amino acid, which is an essential component of cartilage itself.

Vitamin E has a protective and regenerative function for cartilage, and works as an anti-inflammatory, reducing joint pain.

Turmeric contains curcumin, an antioxidant complex which is known to have an effect which promotes growth and regeneration of cartilage.

Linseed is a source of omega-6 fatty acids, which have an anti-inflammatory effect and therefore contribute to decreasing pain and promoting movement.

Antioxidants help preservation of the product and prevent cartilage oxidation.

ArthroPet can be included starting from 1-2 kg per ton of feed, up to 4-5 kg per ton for premium products.

⁶Joel Mills, Wikimedia Commons, CC-BY-SA.