

SYNOQUIN[®]

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The UK's leading
chondroprotective



VetPlus

A Global Leader in Veterinary Nutraceuticals

SYNOQUIN®

1998 to 2021



SYNOQUIN® - THE FACTS

- With over 20 years experience in manufacturing nutraceuticals VetPlus is today a global leader in the field of joint management
- Since its introduction in 1998 SYNOQUIN® has been purchased by more pet owners than any other supplement
- The SYNOQUIN® tried and tested formula is now recommended by vets in at least 30 countries
- High quality glucosamine and chondroitin are recognised as key ingredients in the fight against joint degeneration
- SYNOQUIN® is a clinically proven product: "Clinical signs of osteoarthritis in dogs improved significantly after 70 days of treatment"*

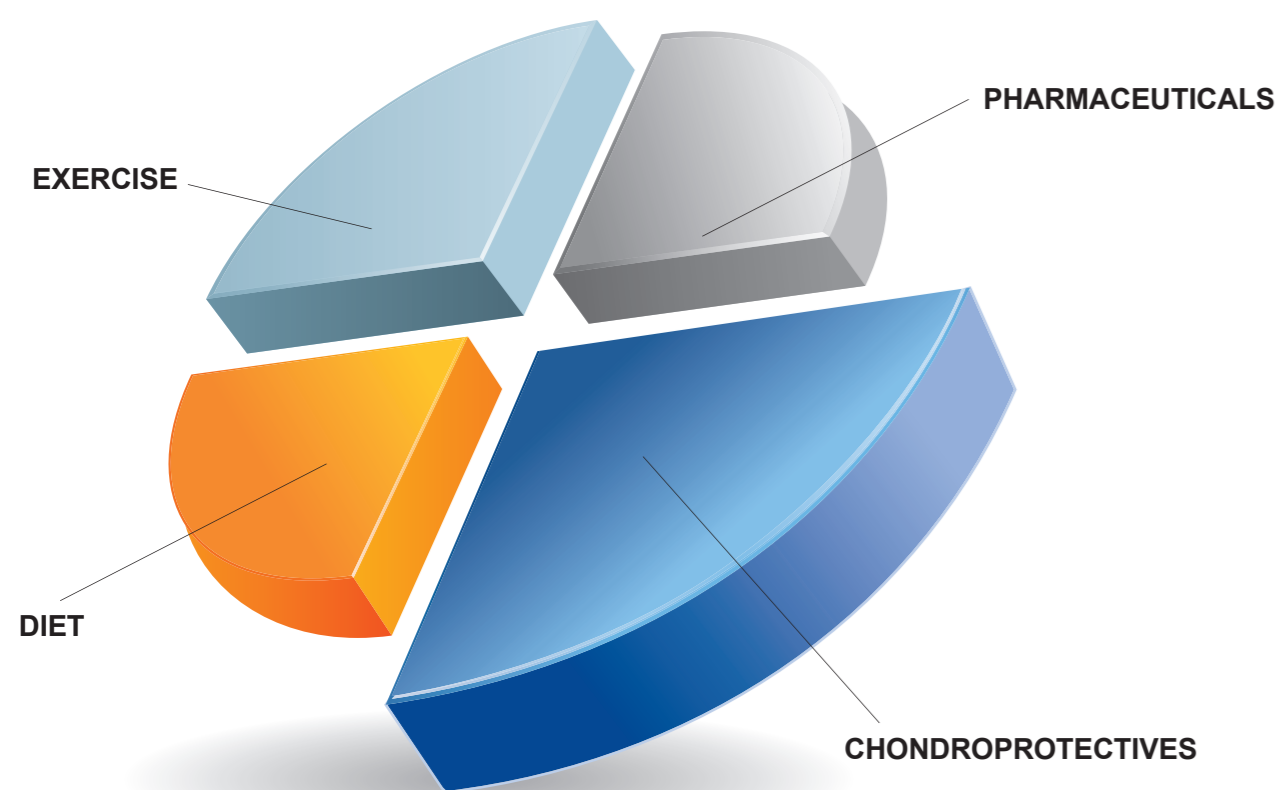
The results of this trial show that dogs with osteoarthritis had significant improvements in scores for pain, weight bearing and overall clinical condition.*



* McCarthy G et al 2007. The Veterinary Journal¹⁴

JOINT MANAGEMENT

Multi-faceted approach



- Since their introduction to the UK market in 1995 chondroprotectives have become a key part of the standard protocol in the management of joint disorders
- An estimated 72% of vets now recommend joint supplements as part of their pain management protocol

SYNOQUIN® a unique proven formula

DEXAHAN® is a unique, highly purified form of Krill – the purest and most bioactive source of Essential Fatty Acids (EFAs) available today

- Because of its unique phospholipid structure, DEXAHAN® provides Eicosapentaenoic acid (EPA) and Docosahexaenoic acid (DHA) in a form that is 60% more bioavailable than standard fish oils¹. It also contains the powerful antioxidant Astaxanthin.
- EPA and DHA have been shown to decrease inflammatory mediators such as prostaglandin E₂ (PGE₂) and leukotriene B₄ (LTB₄) and increase levels of anti-inflammatory mediators such as prostaglandin E₃ (PGE₃) and leukotriene B₅ (LTB₅)^{2,3,4}.
- Omega 3 Fatty Acids reduce gene expression of the COX-2 enzyme without affecting COX-1 and reduce gene expression for cartilage degrading proteinases such as aggrecanases and matrix metalloproteinases (MMP)², thereby exerting a positive effect on cartilage and its metabolism⁵.
- The combination of glucosamine, EPA and DHA has been shown to have a better effect on osteoarthritic pain than just glucosamine alone⁶.
- DEXAHAN® contains ten times the amount of Astaxanthin found in regular fish oil¹³, plus the Astaxanthin in DEXAHAN® has greater bioavailability because it is esterified, thus enabling its incorporation into the micelles formed by the Omega 3 phospholipids, necessary for absorption¹².
- There is a proven link between oxidative stress and the pathogenesis of osteoarthritis¹¹. Astaxanthin is the most powerful antioxidant in the carotenoid family and has been shown to have anti-inflammatory effects^{7,8}, to relieve joint pain in arthritis⁹ and to have anti-MMP activity¹⁰.



Composition

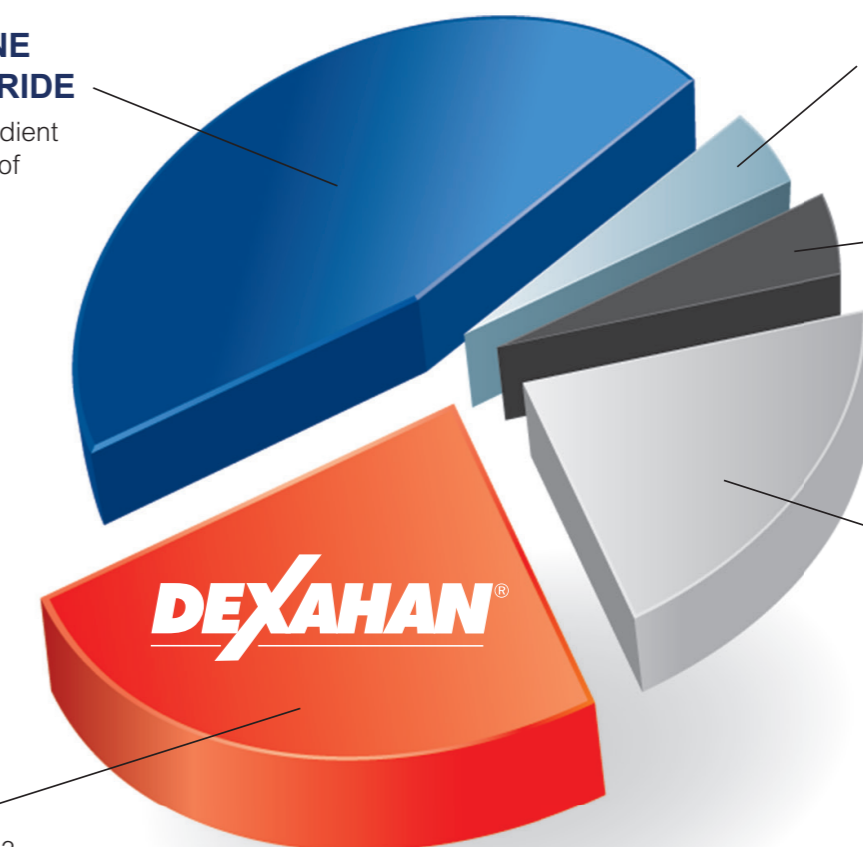
GLUCOSAMINE HYDROCHLORIDE
An important ingredient for the production of healthy cartilage

ASCORBIC ACID
Helps to tackle oxidative stress in the joint

ZINC
Supports healthy cartilage production

CHONDROITIN SULPHATE
Essential to give cartilage its shock-absorbing properties

DEXAHAN®
Contains omega 3 essential fatty acids, to aid joint comfort and mobility



SYNOQUIN®

When should SYNOQUIN® be used?

For all dogs or cats suffering from, or predisposed to joint issues.

Composition:

EACH CAPSULE OR TABLET CONTAINS	LARGE BREED >25 KG (mg)	MEDIUM BREED 10 - 25 KG (mg)	SMALL BREED <10 KG (mg)	CAT (mg)
Glucosamine HCl (99%)	475	360	225	225
Chondroitin Sulphate (95%)	200	135	95	95
Dexahan®	200	135	95	95
Ascorbic Acid	50	35	22	22
Zinc Sulphate	30	20	15	15

Administration:

SYNOQUIN® should ideally be given with food.

Initial Loading Programme - every day for six weeks:

BODY WEIGHT (kg)	
Cat	Two SYNOQUIN® FOR CATS capsules daily
<10	Two Small Breed capsules or tablets daily (one morning and one evening)
10 - 25	Three Medium Breed capsules or tablets daily (two morning and one evening)
25 - 40	Three Large Breed capsules or tablets daily (two morning and one evening)
>40	Four Large Breed capsules or tablets daily (two morning and two evening)

Maintenance Programme - long term:

All animals vary in their response to supplementation. However, in general after the initial six weeks' Loading Programme the daily intake can be reduced as follows:

BODY WEIGHT (kg)	
Cat	One SYNOQUIN® FOR CATS capsule daily
<10	One Small Breed capsule or tablet daily
10 - 25	One Medium Breed capsule or tablet daily
25 - 40	One Large Breed capsule or tablet daily
>40	Two Large Breed capsules or tablets daily (one morning and one evening)

If the reduction causes regression in the dog or cat's condition, intake should be increased until an optimum level is reached.

SYNOQUIN® is manufactured to GMP standards

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References

1. Ulven S.M. et al 2011. Lipids 46: 37-46. Metabolic Effects of Krill Oil are Essentially Similar to Those of Fish Oil but at Lower Dose of EPA and DHA, in Healthy Volunteers.
2. Zainal Z. et al 2009. Osteoarthritis and cartilage Vol. 17, pp. 896-905. Relative efficacies of Omega-3 polyunsaturated fatty acids in reducing expression of key proteins in a model system for studying osteoarthritis.
3. Roush J.K. et al. 2010. J Am Vet Med Assoc, Vol. 236, No. 1, pp. 67-73. Evaluation of the effects of dietary supplementation with fish oil omega-3 fatty acids on weight bearing in dogs with osteoarthritis
4. Lopez H.L. 2012. PM&R. Vol. 4, Iss. 5S, pp. S145-S154. Nutritional interventions to prevent and treat osteoarthritis.
5. Budsberg S.C and Bartges J.W. 2006. Vet Clin Small Anim. Vol. 36, pp. 1307-1323. Nutrition and Osteoarthritis in Dogs: does it help?
6. Gruenwald J et al 2009. Adv Ther Vol. 26(9), pp. 858-871. Effect of glucosamine sulphate with or without omega-3 fatty acids in patients with osteoarthritis.
7. Park J.S et al 2010. Nutrition and metabolism Vol. 7:18. Astaxanthin decreased oxidative stress and inflammation and enhanced immune response in humans
8. D'Orazio N et al 2012. Marine Drugs, Vol. 10, pp. 812-833. Marine Bioactives: Pharmacological Properties and Potential Applications against Inflammatory Disease
9. Nir Y, Spiller G and Multz C 2002. J Am Coll Nutr, Vol. 21, pp. 490 (Abstract 110). Effect of an astaxanthin containing product on rheumatoid arthritis
10. Bikádi Z, Hazai E, Zsila F and Lockwood S.F 2006. Bioorg Med Chem, Vol. 14(16), pp. 5451-8. Molecular modelling of non-covalent binding of homochiral (3S, 3'S)-astaxanthin to matrix metalloproteinase-13 (MMP-13)
11. Ziskoven C et al 2010. Orthopaedic Reviews, Vol. 2:e23, pp. 95-101. Oxidative stress in secondary osteoarthritis: from cartilage destruction to clinical presentation?
12. Odeberg J.M, Lignell A, Pettersson A and Höglund P 2003. European Journal of Pharmaceutical Sciences, Vol. 19, pp. 299-304. Oral bioavailability of the antioxidant astaxanthin in humans is enhanced by incorporation of lipid based formulations
13. Maoka T 2011. Marine Drugs, Vol. 9, pp. 278-293. Carotenoids in Marine Animals
14. McCarthy G et al 2007. The Veterinary Journal. Randomised double-blind, positive-controlled trial to assess the efficacy of glucosamine/chondroitin sulphate for the treatment of dogs with osteoarthritis