



accord<sup>®</sup>  
animal health

# PerNic<sup>®</sup> Cox

## Joint Supplement for dogs - the next step in osteoarthritis.



PerNic<sup>®</sup> Cox is a specialised formulation of high-quality oils containing a high proportion of omega-3 fatty acids. The New Zealand green-lipped mussel (*perna canaliculus*) contains 2.5 times more eicosapentaenoic acid (EPA), 40% more decosahexaenoic acid (DHA) and 30% more  $\alpha$ -linolenic acid (ALA) than premium salmon oil.

In addition there is a broad spectrum of mono and polyunsaturated fatty acids contained in PerNic<sup>®</sup> Cox totaling more than 25% of unsaturated fatty acids.

### PerNic<sup>®</sup> Cox: Facts & Figures

PerNic<sup>®</sup> Cox is a highly specialised supplement for dogs to support joint metabolism in conditions of osteoarthritis. It can be used as an accompanying measure for prophylaxis in dogs with genetic predisposition to the development of osteoarthritis. It consists of water, high-purity olive oil, **oil of the New Zealand green-lipped mussel** and vitamin E. The dispenser has a volume of 30ml and can be accurately dosed in 1ml steps.

Loading dose PerNic<sup>®</sup> Cox should be given for at least 14 days

Dogs < 20kg bw = 1ml/daily  
Dogs 20 – 40kg bw = 2ml/daily  
Dogs > 40kg bw = 3ml/daily

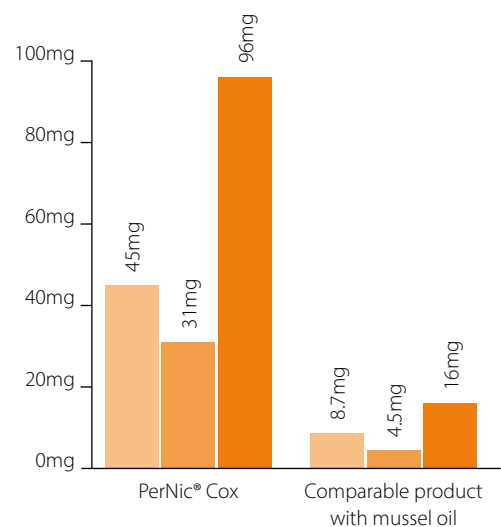
After improvement, the dosage can be reduced by half. In acute cases, the initial loading dose can be doubled upon veterinary advice.

Recommended duration of use 3 months.



The following diagram illustrates the increased concentrations of PerNic Cox compared to current gel capsule products containing oil from the New Zealand green-lipped mussel.

Legend:  
EPA/Dosing unit<sup>1</sup>  
DHA/Dosing unit<sup>1</sup>  
Omega-3/Dosing unit<sup>1</sup>



## What makes PerNic<sup>®</sup> Cox unique?

**PerNic<sup>®</sup> Cox is a prefilled multi-dose syringe, easy to administer with excellent palatability.**

With the daily dose of PerNic<sup>®</sup> Cox, a dog receives a concentrated amount of polyunsaturated fatty acids. In particular, the eicosapentaenoic acid (EPA) and decosahexaenoic acid (DHA) have shown to have an inhibitory effect on the enzymes, necessary for the formation of leukotien and prostaglandin (COX-1, COX- 2 and LOX-5).

The enrichment of EPA and DHA in the organism aims to replace the proportion of omega-6 fatty acids (which have an anti-inflammatory effect) in the cell membranes with omega-3 fatty acids and thereby reduce the formation of inflammation-promoting eicosanoids. (Budsberg & Bartels, 2006)<sup>1</sup>.

Furthermore, EPA and DHA promote the formation of active molecules - resolvin and protectin - which have independent anti-inflammatory (anti-inflammatory) and imunmodulatory properties. They are involved in the dissolution phase of inflammation (Serhan & Chiang, 2008)<sup>2</sup>.

Dogs can only produce long-chain, unsaturated fatty acids such as EPA and DHA in insufficient amounts themselves (from short-chain unsaturated fatty acids as e.g. linolenic acid). The only way to significantly increase their availability is through supplementation.

### Additives / kg:

10.000mg Vitamin E as Alpha-Tocopherol  
Preservative – potassium sorbate  
Thickening agent - xanthan gum

### Composition:

Water, Olive oil, Mussel oil of the New Zealand green-lipped mussel (perna canaliculus).

Extract from the analysis of the fatty acid spectrum by the chemical laboratory Dr. Wirts & Partner, 2017:

#### Fatty acid spectrum:

Linoleic acid (C18:2)	64 mg/ ml
Linolenic acid (ALA) (C18:3)	9 mg/ ml
Octadecatetraen acid (C18:4)	9mg/ ml
Eicosapentaenoic acid (EPA) (C20:5)	45 mg/ ml
Clupanodon acid (C22:5)	2mg/ ml
Decosahexaen acid (DPA) (C22:6)	31 mg/ ml

#### Distribution of fatty acid/fat:

Saturated fatty acids	21.1%
Monounsaturated fatty acids	60.2%
Polyunsaturated fatty acids	16.7%

PerNic<sup>®</sup>Cox is a registered trademark of PharmaWorld 2000 GmbH

#### Reference

- 1 S. C. Budberg & W.C. Bartges: Nutrition and Osteoarthritis in dogs: Does it help?, Vet Clinic Small Animal 36 (2006): 1307-1323
- 2 C. N. Serhan & N. Chiang: Resolving inflammation: dual anti- inflammatory and pro-resolution lipid mediators, Nature Reviews Immunology May (2008); 8(5): 349 - 361
- 3 = PerNic<sup>®</sup> Cox in mg / ml, comparable product in mg / capsule (Data are based on analyzes by the chemical laboratory Dr. Wirts & Partner GmbH)

