

*Now with dual indication:  
heart and kidney function*

# duo mega

Nutritional supplement for dogs and cats with Omega 3 EPA/DHA fatty acids + Krill Oil.

**It helps slow the progression of kidney impairment  
and maintain proper cardiocirculatory functionality**



✓ *EPA/DHA high  
concentration (80%)*

✓ *Highest purity  
and highest bioavailability*

✓ *From fish oil*



# duo@mega

INNOVATION

by  Candioli  
PHARMA

## Omega 3 EPA and DHA

- ✓ FROM FISH OIL
- ✓ HIGH PURITY thanks to PureMax™ technology
- ✓ HIGH CONCENTRATION: 80% EPA/DHA
- ✓ HIGH EPA/DHA RATIO 4:1



PureMax™ is an exclusive technology for Omega 3 purification and concentration. It was completed after many years of research, development and production experience by Croda International Plc. Oils by PureMax™ have a high concentration of fish oils from crystal clear waters. They are refined with the innovative process by PureMax™ to obtain a pure concentrated fish oil without smell or taste.

## OMEGA 3 *characteristics and properties*

### EFFECTS OF Ω3 POLYUNSATURATED FATTY ACIDS ON BIOLOGICAL SYSTEMS<sup>14</sup>

- Eicosanoid production
- Cytokine production inhibition
- Reduced blood viscosity and increased erythrocyte flexibility
- Decreased PAF (platelet activating factor) formation
- Decreased plasma triglyceride and cholesterol levels **with "high doses" of fish oil**



Omega-3s (PUFA n-3) are essential fatty acids, that are indispensable for the body to function properly. They may be of natural or synthetic origin. The main Omega-3 fatty acids are:

- α-linolenic acid (**ALA**)
- eicosapentaenoic acid (**EPA**)
- docosahexaenoic acid (**DHA**)

## Omega 3 EPA and DHA with:

- ✓ high concentration (80%) with EPA/DHA ratio 4:1
  - ✓ very high oil purity and grade
  - ✓ from fish oil, non-synthetic source
- ✓ *Maximum Omega 3 bioavailability, hence maximum effectiveness in maintaining cardiovascular and kidney function*

Duomega is packaged in tube-shaped softgels with 2 different dosages:

-  500 mg tube-shaped softgels for cats and small dogs → EPA = 325 mg
-  1000 mg tube-shaped softgels for medium/large dogs → EPA = 650 mg

## Nutritional supplement for dogs and cats

### INDICATIONS

Marine origin Omega 3 EPA and DHA fatty acids in high concentrations have proven effectiveness in slowing the progression of chronic kidney impairment, thanks to their antioxidant/anti-inflammatory activity, antiproliferative activity on a mesangial level, glomerular antihypertensive and antithrombotic activity, as well as in supporting cardiovascular function due to their anti-inflammatory, antithrombotic, antihypertensive and antiarrhythmic activity. **DUOMEGA** contains a high concentration of natural origin EPA and DHA (saltwater fish) paired with Krill oil and is recommended as an aid in maintaining proper kidney and cardiocirculatory function, either alone or in combination with diets and specific treatments prescribed by the veterinarian.

### COMPOSITION

Pure fish oil, containing minimum 90% of essential omega 3 fatty acids (80% of EPA/DHA), Krill oil; Capsule: edible gelatin **Additives per kg** Vitamin E/racemic alpha-tocopheryl acetate 2,500mg Each capsule of **DUOMEGA for cats** and **DUOMEGA 500** contains 500mg of pure fish oil (equalling approx. 400 mg of EPA/DHA).

Each capsule of **DUOMEGA 1000** contains 1000mg of pure fish oil (equalling approx. 800 mg of EPA/DHA).

High concentration Omega 3 from fish produced using PureMax™ technology. PureMax™ is a registered trademark of CRODA INTERNATIONAL PLC.

### DIRECTIONS FOR USE

Administer **DUOMEGA** for a minimum initial period of 30 days, following the instructions of your veterinarian, according to the dosage regimen provided on the last page. Open the capsule and mix its contents in the usual feed ration. The pet may also be given the whole capsule directly. **DUOMEGA** may be administered for extended periods of time, based on the pet's conditions and on the opinion of the veterinarian.

## Essential Bibliography

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# du@mega helps reduce damage ensuing from

## An evidence-based review of therapies for canine chronic kidney disease

**Table 2. Summary of evidence grades supporting recommendations for therapy of canine CKD**

Grade I evidence
Therapeutic renal foods (stages 3 and 4 CKD)*
Calcitriol therapy (hyperparathyroidism in dogs with CKD)
Grade II evidence
Angiotensin-converting enzyme inhibitors (proteinuric CKD)
Therapeutic renal foods (proteinuric CKD)
Grade III evidence
Recombinant human erythropoietin (suitably anaemic dogs with CKD)
Dietary phosphorus restriction (stages 3 and 4 CKD)
<b>Omega-3 PUFA supplementation (stages 3 and 4 CKD)</b>
Antioxidant supplementation (stages 2 and 3 CKD)
Grade IV evidence
Fluid therapy (chronically dehydrated dogs with CKD)
Angiotensin-converting enzyme inhibitors (non-proteinuric CKD)
Antihypertensive therapy (renoprotection in dogs with CKD and proven hypertension)
Alkalinising therapy (acidaemic dogs with CKD)
Assisted feeding (anorexia and malnutrition in dogs with CKD)
Therapeutic renal foods (stages 1 and 2 CKD)

CKD, chronic kidney disease; PUFA, polyunsaturated fatty acid.  
\*See International Renal Interest Society (2009) for details of CKD grading system.

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*Journal of Small Animal Practice* (2010) **51**, 244–252

*EPA and DHA activities*

- ✓ anti-inflammatory<sup>8,19,24</sup>
- ✓ antithrombotic<sup>24</sup>

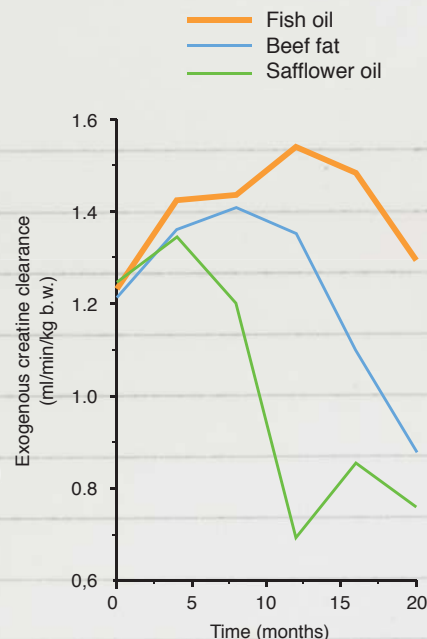
**NEPHRO-PROTECTIVE Action**  
*(scientifically proven in dogs)*

**EPAS AND DHAS CONTAINED IN DUOMEGA MAY SLOW THE INCREASE IN GLOMERULAR PRESSURE AND THE RESULTING DAMAGE FROM CKD**

## Is There a Role for Dietary Polyunsaturated Fatty Acid Supplementation in Canine Renal Disease?

Scott A. Brown, Delmar R. Finco and Cathy A. Brown

[...] In particular, dogs ingesting diets supplemented with (n-6) PUFA exhibited severe glomerular hypertension associated with rapidly progressive renal failure. In contrast, dietary supplementation with (n-3) PUFA prevented deterioration of the glomerular filtration rate and preserved renal structure. [...]



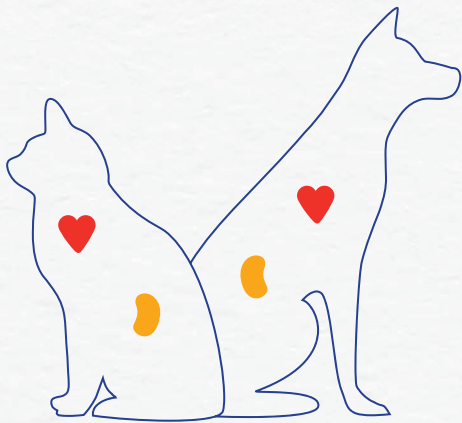
*Proven to be effective*

in **slowing** the progression of chronic renal impairment

# CKD and improve cardiovascular function

have the following:

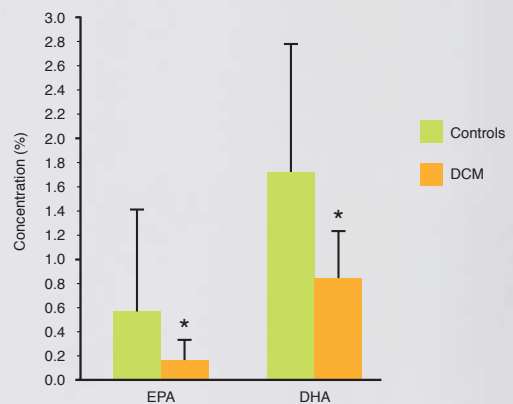
- ✓ antihypertensive<sup>5,6,8,24</sup>
- ✓ antioxidant<sup>3,24</sup>



## CARDIOVASCULAR Action (scientifically proven in dogs)

It has been proven (Freeman *et al* 1998; Rush *et al* 2000) that, regardless of the underlying condition, **dogs suffering from heart failure show significantly lower EPA and DHA plasma concentrations than healthy dogs**

Plasma concentrations of fatty acids in dogs with dilated cardiomyopathy (DCM) and heart failure (N=28) compared to healthy control dogs (N=5)



### POSITIVE EFFECTS OF EPA AND DHA IN DOG AND CAT CARDIOVASCULAR DISEASE<sup>9,11</sup>

- Anti-inflammatory activity, with reduced protein catabolism and prevention of cachexia<sup>11,12</sup>
- Antiarrhythmic activity<sup>2,18,25</sup>
- Increased survival time in the event of heart failure from dilated cardiomyopathy and chronic valvular disease (Slupe *et al*, 2008)
- Improvement in vascular endothelial function and reduced blood pressure<sup>20</sup>
- Antithrombotic activity by inhibiting platelet aggregation, especially useful in cats suffering from hypertrophic cardiomyopathy<sup>11</sup>

*Now with dual indication:  
heart and kidney function*

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**It helps slow the progression of kidney impairment  
and maintain proper cardiocirculatory functionality**

- ✓ *EPA/DHA high concentration (80%)  
and EPA/DHA ratio 4:1*
- ✓ *Highest purity and highest bioavailability*
- ✓ *From fish oil*

**Daily dosage:**

*Each Duomega jar  
contains 30 tube-  
shaped softgels*

			
Cats ≤ 5 kg			
Cats > 5 kg			
Dogs < 7 kg			
Dogs 7-14 kg			
Dogs 14-28 kg			
Dogs 28-40 kg			
Dogs > 40 kg			

Administer DUOMEGA for a minimum of 30 days, following your Veterinarian's instructions, according to the dosage above.