An aid for the management of lower urinary tract disorders



# CYSTAID®

## Management of FIC...

This typically involves multimodal management. The main aims are:

#### Increase water intake

This will dilute the solute content of the urine and decrease the irritation to the urothelium. There are many ways to facilitate this, including commercially available water fountains and adding a flavour to the water.

# Restore glycosaminoglycans (GAGs) to protect the bladder wall

N-Acetyl-D-Glucosamine (NAG) has proven benefits in FIC<sup>2</sup>.

#### Control pain levels

NSAIDs and opioids can be used to help reduce pain.

#### **Decrease stress levels**

Every cat has their own stress threshold. The aim should be to lower stress levels below this threshold. This may involve environmental and husbandry modifications. Feline idiopathic cystitis (FIC) is the most common cause of lower urinary tract disease in cats under the age of 10 years.

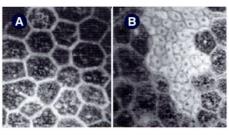
#### Feline Idiopathic Cystitis (FIC)

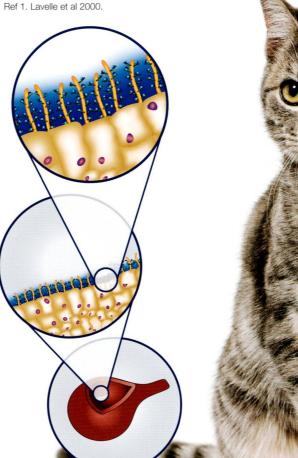
FIC is a complex condition affecting many body systems; physical bladder abnormalities and a decreased ability to cope with stress are the best documented disturbances.

#### Key elements of FIC:

- Glycosaminoglycan (GAG) deficiencies
- Urothelial damage
- Submucosal mast cell accumulation
- Chronic increases in sympathetic tone

Image A shows a normal bladder wall mosaic of umbrella cells. Image B is from a cat suffering with FIC. The decrease in protective GAG layer and disrupted tight junctions results in loss of the outer mucosal bladder layer.







A complementary feed supplement providing a multifaceted approach to aid the management of feline lower urinary tract disorders.



### **CYSTAID**° contains...

#### N-Acetyl-D-Glucosamine (NAG)

Supports the production of GAG chains that protect the urothelium<sup>2</sup>.

#### L-Tryptophan

An amino acid that is converted into serotonin. It can help with the management of anxiety and has been shown to reduce stress behaviours in cats<sup>3</sup>.

#### Curcumin

Curcumin is the active part of turmeric and has been shown to be helpful in the management of many conditions, particularly those involving inflammation<sup>4</sup>. It has been shown to help reduce the production of proinflammatory mediators<sup>4</sup> and inhibit the degranulation of mast cells, reducing histamine release<sup>5</sup>.

#### Folate

Folate can potentially reduce histamine release from mast cells<sup>6</sup>. Therefore, it may be supportive in disorders with increased levels of mast cells, such as FIC.

#### Vitamin D

Vitamin D is a fat soluble vitamin which has many roles in the body. It can act as an antioxidant and has anti-inflammatory activities including inhibition of mast cell activation<sup>7</sup>. Additionally it has been found to aid the integrity of the bladder wall by supporting cell tight junctions<sup>8</sup>.

## Supporting Data

In a prospective randomised placebo controlled trial<sup>2</sup> **CYSTAID**® administration resulted in increased levels of plasma and urinary GAG. This brought about a reduction in clinical signs and reduced haematuria in cats with idiopathic cystitis (IC). There were no adverse effects to treatment. Additionally, when the treatment was stopped (day 28) the haematuria increased in the treatment group. This further highlights the beneficial response and long-term benefit of **CYSTAID**®.

The trial explained that:

"NAG helps to maintain the amount of GAGs in the urinary bladder wall, thereby preventing development of ICinduced inflammation."





#### When should CYSTAID® be used?

To help maintain the protective glycosaminoglycan layer in the bladder and support overall bladder health.

#### Composition:

Each capsule contains	
N-Acetyl-D-Glucosamine (NAG)	125 mg
L-Tryptophan	37.5 mg
Curcumin complex (Curcuma longa/Lecithin)	18 mg
Folic acid	0.09 mg
Vitamin D	14 IU

#### **Administration:**

- Initially administer two capsules per day (one morning and one evening) for three - four weeks.
- One capsule per day to be given long term.
- Capsules can be opened and sprinkled onto food or given whole.



#### **VetPlus Ltd**

'Animal House' Boundary Road, Lytham, FY8 5LT. United Kingdom

Customer Services 0800 867 283

Fax

01253 797 409

E-mail

customer.services@vetplus.co.uk

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