GASTROINTESTINAL

Protexin® VETERINARY | Smarter pet care, powered by biotics.

Synbiotic D-C for Dogs & Cats

The natural response to gastrointestinal microbiome imbalance.

PETBIOTIX® GOOD GUT HEALTH
✔PROBIOTICS
✔PREBIOTICS

CLINICALLY PROVEN

Petbiotix®

Our Petbiotix have been expertly developed to support a healthy microbiome. The microbiome is essential for the normal functioning of the gastrointestinal (GI) tract and for the gut's interaction with the rest of the body. Our Petbiotix help support the natural balance in the animal's gut and keeps them at their best.

Probiotics

Probiotics are live microorganisms shown to support the microbiome.

Probiotics promote a healthy microbiome and support gut health.[1-3] The mode of action can vary between different probiotic strains.[4-12] Possible modes of action include competitive exclusion,[13,14] mucosal barrier support,[3-5] short-chain fatty acid (SCFA) production[4,7,15] and immune stimulation.[3-5,16] Probiotics are particularly effective when delivered together with a prebiotic.[17-21]

Enterococcus faecium

Synbiotic D-C contains the probiotic *Enterococcus faecium* (DSM 10663/NCIMB 10415) 4b1707.[1,2] The *Enterococcus faecium* in Synbiotic D-C has been shown to survive exposure to a low pH, intended to mimic the acidic stomach environment.[22-25] Each capsule contains 2x 10^9 colony forming units (CFU) of *E. faecium*.

Prebiotics

Prebiotics selectively feed beneficial bacteria, supporting a diverse and healthy microbiome.

Prebiotics resist being broken down by the host; instead, they reach the distal intestine where they are fermented by beneficial bacteria[26] to produce SCFAs which have been shown to provide many health benefits in humans.[9,10]

Preplex®

Preplex prebiotic is a combination of oligofructose (also known as fructo-oligosaccharide, FOS) and acacia (gum arabic). Oligofructose is a short-chain molecule. Generally, short-chain molecules are fermented fairly rapidly, whereas longer-chain structures, like acacia, would be expected to undergo slower fermentation.[26] This combination allows Synbiotic D-C to support the growth of beneficial bacteria throughout the colon.[27-29]

The microbiome and dysbiosis

The term microbiome not only refers to the microorganisms present on/within the body, but also encompasses their 'theatre of activity'. The collection of microorganisms is called the microbiota, whilst the 'theatre of activity' includes metabolites, microbial structures and other mobile genetic elements.[30]

There are many functions of the microbiome, with one of the main functions being to protect the host against pathogenic bacteria.[31] Other functions of the microbiome may include digestion and nutrient absorption,[32,33] immune system regulation,[34,35] synthesis of vitamins,[36] metabolism and energy regulation,[33] neurotransmitter production,[37] maintenance of gut barrier integrity,[38] influencing the gut–brain axis[39,40] and digestive tract development.[41]

Due to all of its complex roles, a balanced microbiome is important not only for maintaining GI health, but also for general body health.[42-47]

The term 'dysbiosis' describes an imbalance of the microbiome. Should this occur within the GI tract, it may disrupt GI homeostasis.[48] There are many causes of dysbiosis.[48-50] Due to the functions of the microbiome, this imbalance has wide-ranging impacts on immune function, nutrient metabolism and overall health.[46-49,51-53]

Causes of gastrointestinal dysbiosis

Any factor that affects the GI tract environment may contribute to the development of a dysbiosis. Common examples include:[48-50]

Antibiotics
Indiscriminately kill or inhibit the growth of both beneficial and pathogenic bacteria that colonise the GI tract.[54-56]

Gastrointestinal disease
Changes in motility, substrate or pH can affect bacterial populations.

Dietary change or indiscretion
Sudden alterations in the diet, or scavenging.[52,57]

Stress
For example, kennelling and travelling. Cortisol can cause an increase in intestinal pH which may favour the growth of pathogenic bacteria. Activation of the hypothalamic–pituitary–adrenal (HPA) axis – a major component of the stress response system – can also lead to alterations in GI barrier integrity and alterations in the immune response.[58,59]

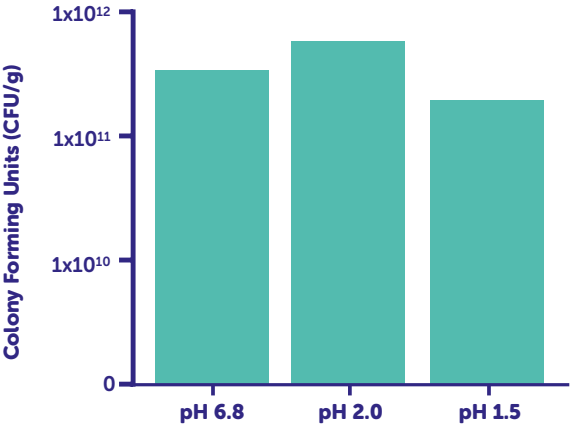
Indicators of dysbiosis

When a GI dysbiosis occurs, there can be a reduction in beneficial bacteria, a loss of microbial diversity[47,60,61] and excessive growth of potentially pathogenic organisms.[61] This can trigger diarrhoea, lethargy, loss of appetite, abdominal pain, bloating and flatulence.[62,63] An effective protocol can help minimise the impact of microbiome imbalances.

Clinically proven

Efficacy of Synbiotic D-C on the incidence of GI disturbances in a canine rehoming shelter. Prospective double-blind, randomised, placebo-controlled trial.

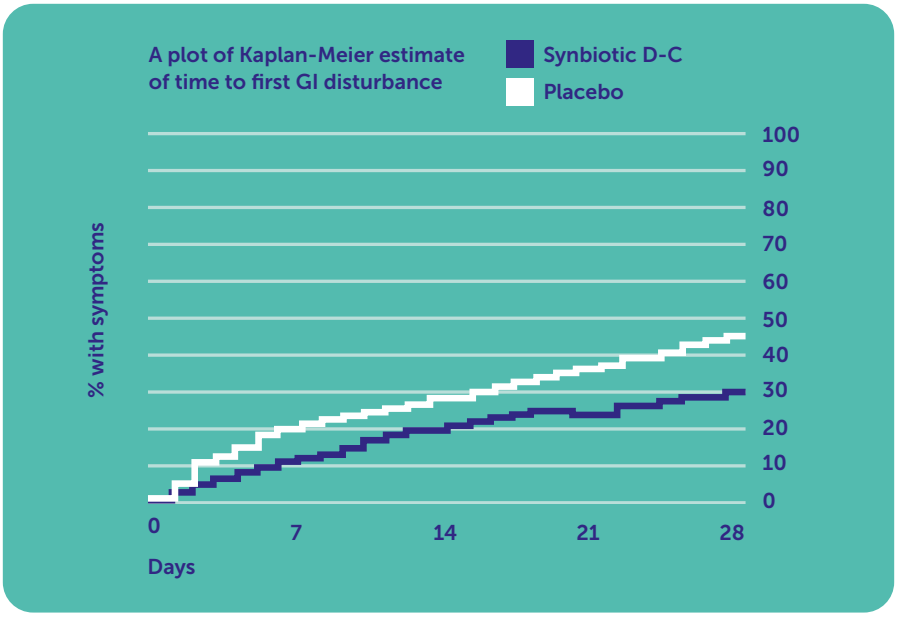
Acid stability of Protexin *Enterococcus faecium* (NCIMB 10415) 4b1707. *In vitro* unbuffered growth for 2 hours contact time[22]



Laboratory tests show that when held at pH 2.0 and pH 1.5 for a 2-hour period there is no significant loss in viability or concentration of *Enterococcus faecium* (NCIMB 10415) 4b1707

Results

Supplementation with Synbiotic D-C significantly decreased the incidence of GI disturbance in dogs entering the animal shelter. By day 14, 18.8% of dogs in the Synbiotic D-C group and 27.2% in the placebo group had experienced at least one episode of GI disturbance (p=0.0022).[64]



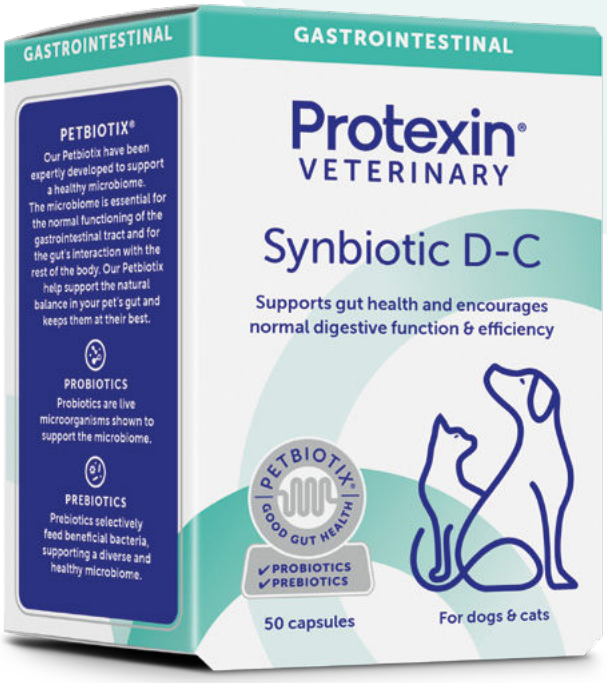
Instructions for use

Synbiotic D-C is a daily capsule containing highly concentrated probiotics and prebiotics.

Give one capsule daily by mouth

Capsules can be given whole or opened and the contents sprinkled onto food

Synbiotic D-C is available in boxes containing 50 capsules. Make sure your practice always has a supply of Synbiotic D-C on the shelf, so you can effectively support a balanced microbiome.



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GASTROINTESTINAL | DERMATOLOGY | URINARY | CALMING | HEPATIC | JOINT

For information on our full range of products for dogs, cats and rabbits, please visit our website.

For references please visit protexinvet.com/synbiotic-refs or scan

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