



## **Brewer's Yeast**

### **Reasons for its Inclusion in the Arden Grange Recipes**

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Yeast (along with corn and beet pulp – please see my Myths About Pet Food article) is yet another pet food ingredient which is often misconstrued as being undesirable. This fact sheet covers the reasons why it is included in the Arden Grange recipes and the facts behind the fallacy.

It is easy to see why yeast per se is considered a baddie. Dogs, and to a lesser extent, cats, are susceptible to yeast infections and it's a common misperception that nutritional yeast is a common dietary allergen. Furthermore, it is widely believed that foods containing yeast may trigger allergies or "feed" existing yeast colonies thus helping them to replicate more quickly. However the main diet of the Candida albicans family is not yeast but sugars and fats.

#### **Just as there are good and bad bacteria, there are good yeasts and bad yeasts!**

Yeasts are single cell organisms, which are found on the surfaces of all living things, including our pets' (and our own) bodies. Yeasts also live on the mucous membranes of the digestive and reproductive tracts. When the immune system is healthy, the body is able to keep potentially harmful yeasts such as Candida at safe levels. However, when the immune system becomes compromised, the yeast, which is highly opportunistic (and thus replicates swiftly when it knows the body's defenses are down), may then reproduce to a toxic level (a condition known as candidiasis). These toxins may then travel throughout the body via the bloodstream wreaking havoc on the immune system, the nervous system and the endocrine system (the system of hormone-producing glands that help to control bodily metabolic activity).

#### **Brewer's yeast is a dead/inactivated yeast so it cannot replicate/multiply.**

The large intestine is host to the beneficial bacteria (*Lactobacillus acidophilus* and *Lactobacillus bifidus* which aid the digestion and inhibit the growth of harmful bacteria). Candida is usually kept in check by the *Lactobacillus* bacteria, partially by the production of lactic acid. Candida actually provides growth factors for *Lactobacillus*. They exist in a natural balance, until something causes an upset to this natural balance.

**An overgrowth of yeast toxins may be related to allergies, skin disorders and bladder infections, but the ingestion of nutritional yeast is rarely the primary cause.**

Another common bad yeast is *Malassezia pachydermatis*. This again is ever-present and harmless at low levels. This yeast likes warm, moist habitats meaning that the ears are a favourite breeding ground. It also thrives in skin folds but is often also found proliferating on the underside of the neck, the belly and the feet. It can affect the whole body in severe cases. Classic symptoms of dogs with *Malassezia* over-growth are: red, sore areas, increased pigmentation, loss of hair, scurfy skin and/or greasiness. The skin may have a yellow tint and is usually extremely itchy. Dogs with *Malassezia* usually smell musty.

The main causes of yeast infections are not pet foods which contain yeast, but :-

- 1) **Ingestion of mycotoxins** from contaminated grain-based foods.
- 2) **Chemical overload.**
- 3) **Over-vaccination.**
- 4) **Antibiotics** (these can kill the friendly bacteria who would normally suppress yeast over-growth).

To help prevent yeast infections, or to aid in preventing them from worsening in pre-existing cases (in conjunction with appropriate veterinary treatment in the case of the latter); dog and cat owners can :-

1) Feed a super-premium quality pet food such as Arden Grange which contains **high levels of protein and fat and lower levels of grain ingredients**. The Arden Grange Sensitive is completely grain-free. Mycotoxins are toxic metabolites produced by fungi and are widely regarded as amongst the most serious of naturally occurring toxins that can contaminate cereal crops. At Arden Grange, **stringent control measures are taken to ensure that the both the raw materials and finished product are safe for consumption**. Of particular concern are aflatoxin, vomitoxin (so-called because of the vomiting symptoms associated with ingestion of this type of mycotoxin) and zearalenone contamination. Tests for all 3 are undertaken whenever a new batch of raw materials arrives at the factory. Any batch with a problem is immediately returned to the supplier. Because mycotoxins have the potential to contaminate both primary and processed food stuffs, **random tests are also carried out on the finished products to further safeguard our canine and feline consumers**. In order to prevent fungal growth, **we always advise storing your pet food in a cool place within an airtight and moisture-proof container**. We also recommend **that if the food is fed moist, then it is soaked for no longer than 20 minutes to prevent possible fermentation**.

2) Choose a diet such as Arden Grange that includes **no artificial additives, growth hormones or added sugars** (remember sugar is a primary food source for yeast). **Take care not to exceed recommended doses for routine parasite control**. If you have any doubts about the quality of your tap water supply, **use bottled water. Also read your pets' treats ingredients labels carefully and**

**avoid any products containing unspecified ingredients and added sugar and salt.**

3) Speak to your vet about **serum testing** and **the 3 year vaccination protocol** that may help reduce the potential risks associated with over-vaccination.

4) Feed a high quality food such as Arden Grange which is **antibiotic free**. Should your dog require a course of antibiotics to treat a medical problem, then **redress the balance by adding probiotics to the diet for 6-8 weeks**. The Arden Grange recipes all include **prebiotics** (which act as a good food source for the healthy gut flora) and **nucleotides** to support both the immune and digestive system.

The nucleotides in the Arden Grange recipes are actually derived from yeast, so this is another good example of how not all yeasts are bad! These natural short-chain proteins allow optimum levels of nutrients to be absorbed by the body, as well as facilitating a more rapid cell replication in response to an outside challenge.

Some types of prebiotics (MOS or manno-oligosaccharides) are derived from the outer cell wall of brewer's yeast. This prebiotic limits pathogenic bacterial development. It has a positive effect on nutrient digestibility, improves faecal quality and assists with natural immune defenses. The prebiotic MOS is found in all of the Arden Grange recipes, alongside prebiotic FOS (which is derived from the chicory plant).

Brewer's yeast is made from a one-celled fungus called *Saccharomyces cerevisiae* and is used in making beer. It also can be grown specifically to make nutritional supplements. Brewer's yeast is used in the Arden Grange recipes because it is a **rich natural source of minerals**. Arden Grange prefer to use natural minerals where possible as they have a **greater bioavailability** to our cats and dogs than those derived artificially (and are thus more effectively utilised).

Brewers yeast is :-

1) **Rich in selenium and chromium** which are important trace mineral that help the body to maintain stable blood sugar levels. The chromium in brewers yeast is more easily absorbed than that from other sources.

2) **Rich in the B vitamins** including: B1 (thiamin), B2 (riboflavin), B3 (niacin), B5 (pantothenic acid), B6 (pyridoxine), B9 (folic acid), and H or B7 (biotin). These vitamins help to break down carbohydrates (and also fats and proteins) and ensure an efficient supply of energy to the body. They also support the nervous system, help maintain the muscles used for digestion and promote the health of hair, skin, mouth, eyes and liver.

3) **Rich in selenium**, a trace mineral which is used to produce antioxidant enzymes. These antioxidant enzymes are shown to prevent cell damage. Selenium is also needed for proper immune system function and thyroid function.

4) Brewers Yeast also contains **vitamins, 16 amino acids and many other minerals.**

In human nutrition, some studies have shown that brewer's yeast can help people who are having difficulty sleeping. This is due to the Vitamins B3 and B6, which work together to produce serotonin. The B-complex vitamins are also considered important during times of physical or psychological stress, so may be **beneficial in both people and animals with ongoing illness and those recuperating from injuries and wounds.**

So overall, the brewer's yeast added to the Arden Grange recipe is not one of the bad guys. However, whilst it may be suitable for the majority of canines, it is not appropriate for dogs with a primary allergy to the protein within yeast. Fortunately, allergies to yeast are rare. Food allergies to the more common dietary allergens (wheat gluten, beef, soya and dairy products) often manifest in secondary opportunistic fungal infections which may then be mistaken for symptoms of a primary allergic response to yeast itself, when it may be down an adverse reaction to another protein source within the diet. Atopy (immunological hypersensitivity to common substances in the environment such as house dust mites) may also cause similar symptoms to food allergies meaning that the diagnosis of such conditions is often difficult.

Feeding a hypoallergenic diet such as Arden Grange may be helpful in cases of food allergies, atopy and yeast infections because **the 4 most common dietary allergens are avoided**, and **many natural healthcare supplements to help to promote a healthy immune system are included.** Feeding a complete diet such as Arden Grange which contains a carefully formulated selection of nutrients is the ideal way to ensure that your dog eats a healthy, balanced diet with optimal levels of the most bioavailable vitamins and minerals (remember an excess can often be just as harmful as a deficiency).

**Brewer's yeast also helps to ensure that the Arden Grange recipes are highly palatable.** The amino acids it contains combine with carbohydrates in the food to form favours that are particularly appealing to cats and dogs.

### **Important Notice**

As a responsible and ethical company, Arden Grange fully appreciate the caution that must be taken when discussing the potential benefits of nutritional supplements and ingredients. It is against the law to make medical claims. Whilst ingredients such as the brewer's yeast included in the Arden Grange range are very safe, and may be beneficial to some of the cats and dogs fed on Arden Grange, we must highlight that their inclusion is not a substitute for veterinary intervention in the case of a sick animal.

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