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Health Information Series

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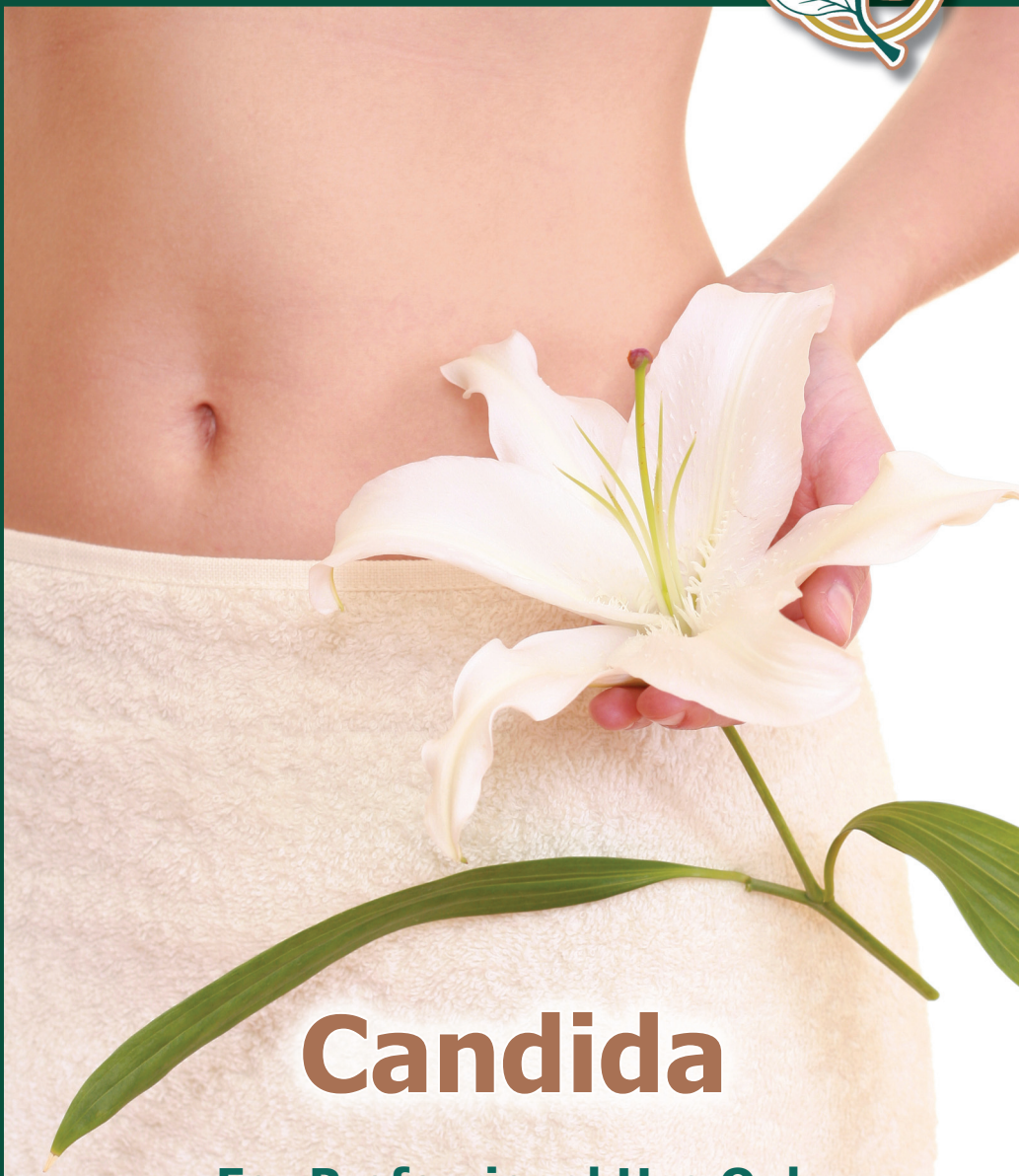

Candida

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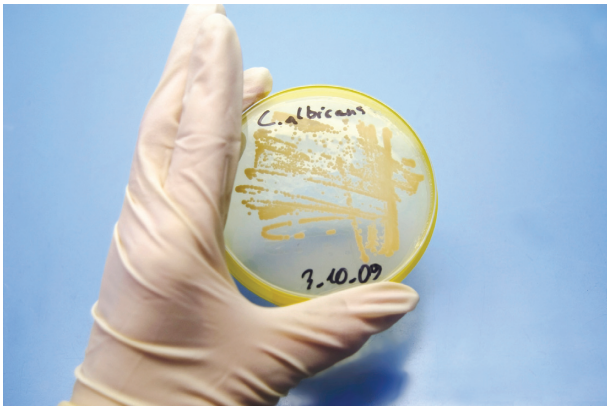
What is Candida?



Contained within the gastro-intestinal tract (GI) there are a wide range of bacterial strains representing over 400 species including fungi or yeasts. Fortunately, many of these are healthy or friendly bacteria, which make up our protective intestinal flora.

The term 'Candida' usually refers to the species Candida albicans. Candida albicans is a yeast-like fungus, a single celled organism, which in normal circumstances is a harmless part of our intestinal flora. Candida albicans is normally found in the GI tract, only causing problems when overgrowth occurs. Candida albicans is also responsible for the class of infections described as thrush, when the fungus involves the skin or mucous membranes of the lining of the mouth, throat, vagina or urethra.

Those at most risk

Candida overgrowth occurs in people whose normal immune system defences are weakened by illness or poor diet, such as those high in refined carbohydrates and sugars and deficient in the essential micro nutrients. Stress is considered a further factor, as this alters the balance of the healthy flora. Prolonged stress will also lower immune function, further impacting on the protective balance of the gut flora and increasing susceptibility to infections. A number of prescription medications are considered to predispose to the overgrowth of candida: these are antibiotics, oral contraceptives, hormone replacement therapy and glucocorticoid therapy.

Prevention

Not all of us are troubled by Candida overgrowth, and prevention is possible. Having good general health, remaining stress-free and eating a healthy diet are good starting points which, regrettably, may not be achievable all of the time.

However, the above lifestyle factors help in the prevention of Candida and other gastro-intestinal infections.

Poor digestive function may be present, particularly in those suffering from repeated Candida and gastric infections.

The hydrochloric acid present in the stomach assists in digestion, maintains a

low pH and acts to destroy bacteria and some strains of fungus. Low levels of hydrochloric acid are frequently found in people who suffer from repeated candida. But our levels of hydrochloric acid naturally reduce as we age and, of course, are also reduced by antacids and some other prescription drugs.

Candida, along with other less desirable bacteria remain, in the minority if we ensure a healthy balance of the good or friendly bacteria. Consumption of yogurts and drinks containing live probiotic bacteria will assist maintaining a healthier digestive tract. Regrettably, these products often contain a limited number and variety of probiotic species restricting the benefits they provide.

Many also contain high levels of sugar, which is not ideal. The protective benefits of these bacteria are increased when we consume a wider range of active species and increased active numbers.

Another way in which we can improve the balance of good bacteria and extend their presence is by feeding them with prebiotics such as fructo-oligosaccharide. These specific carbohydrates encourage the probiotics to multiply, tipping the balance in favour of the good bacteria. Prebiotics are non-glycaemic carbohydrates that are only digestible by the friendly bowel bacteria and act as a food source for them. They are not digestible by the pathogenic strains, and as such have pathogen excluding potential.

They are naturally present in some foods, including onions, leeks, oats, pulses, beans and Jerusalem artichokes. Prebiotics have many other health-promoting benefits and are a worthwhile dietary or supplemental inclusion.

Overgrowth

Once Candida or other fungi have managed to multiply and outnumber our healthy intestinal flora, they become rather more aggressive and develop the ability to cling to our intestinal walls. The fungal overgrowth can irritate and damage the cells of the gut wall, allowing undigested food molecules to pass into the blood stream. This permeability of the gut has been linked to various health concerns, including allergic reactions and auto-immune conditions.

Fungi, including those of Candida albicans, give off gas and toxins resulting in a range of symptoms. The most common experience is heavy bloating, especially after eating, and an alternation of diarrhoea or constipation may occur, giving symptoms very similar to that of Irritable Bowel Syndrome.

Other symptoms which can be experienced are acid reflux, fatigue, lethargy, nausea, recurrent cystitis and sweet cravings. It is easy to see why diagnosis (in particular, self-diagnosis) is difficult with such wide-ranging symptoms, which equally may be symptoms of an unrelated condition.

The list of symptoms attributed to chronic Candida are varied, Patients often report removal of wide-ranging symptoms after successful treatment for removal of Candida.

Testing for Candida gut overgrowth is available in private laboratories and is usually carried out with a stool sample. It may be advisable if you are considering this type of test to select the more comprehensive tests available, which will rule out other conditions including parasitic infection, which can produce very similar symptoms.

Thrush

The presence of oral Candida or Thrush can be treated topically. If this, the first section of the GI tract, is infected it is highly probable that Candida is also present throughout the remainder of the GI tract. Treatment should include the protocol for removal of the Candida and replenishment of healthy bacteria.

Candida of the GI tract is considered a significant predisposing factor for vaginal thrush too.

Causative factors for vaginal Thrush include those for GI Candida infections. Infection during pregnancy is common, and Thrush is considered more prevalent in those wearing synthetic undergarments and tights. Recurrent infections may be linked to sexual partners, and treatment should be considered for both partners.

Candida treatment

An anti-Candida diet is often believed to be the best way of treating Candida. This is a little misleading, as an anti-Candida diet will reduce patients' symptoms and the numbers of the fungi, but will not eradicate the fungi. Candida fungi are capable of withstanding periods of reduced available food. In response, they will reduce in number, and become less active, but will remain within the intestines. On reintroduction of sugars and carbohydrates the fungi will resume replication; elevated levels will soon re-establish and result in a return of the patient's previous symptoms.

A lesser-known fact is the ability of the Candida fungi to switch to protein digestion as its food source when carbohydrates and sugars are completely removed. At this stage it becomes an impossible task to eradicate the overgrowth of Candida safely by dietary means alone.

Strict anti-Candida diets are also very difficult to sustain, producing many unpleasant symptoms for the patient - and the effectiveness is unproven. A good diet, and indeed a good anti Candida diet, should be nutritionally balanced, providing adequate nutritional support for health and a healthy immune system. The diet should be rich in natural fibre and complex carbohydrates, as found in fruits, vegetables, grains and beans.

Reducing the dietary intake of refined sugars, carbohydrates and animal fats is beneficial for health. Preservatives, additives, processed and highly refined foods should be avoided wherever possible. Dairy products contain high levels of lactose (milk sugar), so it is advisable to reduce intake. Those fruits high in sugar and low in fibre should be reduced or avoided; this will include fruit juices, which will often also contain increased levels of sugar. Dried fruits also provide high levels of sugar. The best fruits to consume are those fresh fruits higher in fibre, such as apples, pears, apricots and berries. (Check the glycaemic index to establish those high-sugar fruits.)

Fermented and yeast-containing foods are frequently removed from an anti-Candida diet. However, it should be remembered that yeasts such as baker's and brewer's yeasts are not the same as the Candida fungi, and Candida does not feed on other yeasts but on sugars and, potentially, proteins. Fermented and yeast-containing foods, are hence often not a problem for Candida sufferers, except in exceptional cases where the body has become so sensitised to yeast that it reacts to anything with a similar structure.

Candida Eradication

A Candida treatment plan should include wherever possible identification of the patient's underlying cause, or maintaining factor, for the Candida overgrowth. This may be out of the patient's control if related to prescription drugs, for example, and treatment will need to be tailored accordingly. Nutrient deficiencies and digestive functions are addressed in the repair section.

Candida treatment should not be undertaken during pregnancy. We would recommend sufferers consult their medical practitioner before commencing any treatments.

Remove - Replace - Repair

Remove

Ensure that adequate actions are taken to remove Candida overgrowth present.

- Dietary recommendations to assist with Candida control and elimination should follow Good Diet Guidelines (see page 8-9).
- Include those foods known to contain natural anti-fungal properties. Garlic is probably one of the best known and should be consumed fresh, raw or as a good quality supplement.[1] Onions and a number of herbs and spices used in cooking, such as bay, oregano, thyme, cloves and cinnamon have demonstrated anti-fungal properties.[2,3,4,5,6,] Natural herb and spice mouthwashes can be used for oral Thrush. Aloe Vera Juice also provides an excellent healing and preventative mouthwash.
- Elimination of the Candida overgrowth is essential. Pharmaceutical drugs and various herbal preparations are available.

Saccharomyces boulardii

We consider the research available for Saccharomyces boulardii, a unique probiotic yeast, to be a significant step forward for Candida eradication. Saccharomyces boulardii is a viable probiotic yeast which provides the intestines with support against a broad array of pathogens that include bacteria, yeast and protozoans. In vivo and vitro research indicates Saccharomyces boulardii decreases inflammation, intestinal colonisation and adhesion of yeast, including that of Candida. [7- 15]

Saccharomyces boulardii does not colonise the intestinal tract and is used as needed to support intestinal health. Its mechanisms of actions are as follows;

- binds to certain pathogenic bacteria and occupies intestinal receptors, thus preventing bacteria (and Candida) from adhering to the mucous membrane;
- inhibits bacterial toxins; and
- stimulates the intestinal immune system.

Replace

- It is essential to replenish the bowel flora with broad spectrum probiotic strains to maintain a healthy digestive system and deter repeated overgrowth of the Candida. Combined pro and pre biotic products are beneficial.
- Vaginal Thrush can also be treated topically with Lactobacillus yogurt or pessary.

Repair

Consideration should be given to the possible individual causative factors. Some patients may benefit from continued pro and prebiotic support if prescribed medication is linked to repeated infection. Stress as a factor should be supported by lifestyle guidance and nutrients to help support adrenal function. For those with lowered immune function, additional immune support may be beneficial.

And also ...

- Ensure patient's diet follows Good Diet Guidelines to provide a healthy, well-balanced diet, rich in fruit, vegetables and wholegrains, and low in processed and convenience foods. See pages 8-9.
- Supplements to ensure patient is nutritionally replete in all essential micro-nutrients and immune system is fully supported. Due to the wide range of vitamins and minerals required for a healthy, functioning immune system, we would suggest that a well-balanced multi vitamin and mineral supplement is preferable to individual nutrients.
- Decrease inflammatory tendency of patient and gut, nutrients provided in our multi formulae contain anti-oxidants to assist in reducing inflammation. Additional anti-inflammatory benefits are found in omega 3. Fish oil provides a readily bioavailable form of omega 3. Select those that are guaranteed pure and free of contaminants. Vegetarians and vegans will need to take a seed oil such as flax.
- Check patients digestive symptoms. If reduced hydrochloric acid levels are suspected, carry out tests. Low levels can be treated with Betaine products: ideal are those containing Betaine and digestive enzymes which will assist in the breakdown of food and re-establishing hydrochloric levels and the correct pH.
- For those with a lowered immune system, consider immune modulating or priming products such as Echinacea, Aloe Vera Whole Leaf, and 1-3,1-6 Beta Glucans (Immunovite).

Good diet guidelines should produce a healthy alkaline diet, whilst a return to a refined high sugar diet will produce an acidic environment, predisposing to further infection. A simple saliva test is available to ascertain the pH of the body.

Good Diet Guidelines

Keep it simple!
A good diet should be healthy and nutritionally balanced, providing adequate nutritional support for health and a healthy immune system. The diet should provide all the essential macro and micro-nutrients required to promote and maintain good health.

The diet should be rich in natural fibre and complex carbohydrates, as found in fruits, vegetables, grains and beans. Processed and highly-refined foods should be avoided.

Increase:

- the intake of whole grains. Try to vary grains consumed. Brown rice, rye, oats, barley, buckwheat and quinoa can replace much of a wheat intake.
- the intake of fruits and vegetables, using the 'Five-a-Day' message as a minimum, aiming for 8-10 portions per day.
- the consumption of raw seeds and nuts providing essential fatty acids, (pumpkin, sesame, flax, sunflower etc, pecan, walnut, pistachio, hazelnut, cashew, brazil, almond etc). One serving per day. These snacks should replace confectionery, highly-refined sugar snacks, biscuits or crisps.
- the intake of pulses and beans (lentils, chickpeas, haricot beans, black beans etc.) to 3-4 servings per week.
- the intake of oily fish (wild salmon, sardines, herring, pilchards, trout etc.) to 2-3 servings per week.

Reduce:

- the consumption of red meat (beef, lamb, pork) to 1-2 servings per week. Substitute with fish, chicken, turkey or vegetarian alternatives.
- the intake of saturated fats from meat and dairy.
- the consumption of refined foods (white bread, pasta, rice flour, cakes, biscuits, pizza, sugar and confectionery).
- the intake of processed foods.
- the intake of tea and coffee. A useful way is to alternate glasses of water with cups of tea or coffee. Increase water intake up to 8 glasses per day (maximum 2 litres).
- the intake of alcohol
- the intake of sugary and carbonated drinks

Avoid:

- all trans and hydrogenated fats.
- saturated fats in processed meats and all processed foods.
- adding salt to food. Check packaging of food for added salt/ sodium levels.
- adding sugar to food and drinks where possible.
- carbonated drinks containing Phosphoric Acid, (potentially detrimental to bone integrity).

Consider:

- reducing the intake of dairy produce (milk, cheese, yoghurt). Soya-based equivalents can be used for variety.

Ensure:

- to include in the diet sufficient high-quality protein from chicken, turkey, fish, pulses, legumes & lentils.
- to include fibre to aid a healthy digestive system. Avoid bran, as this can deplete the mineral levels. Good sources of fibre include whole grains, fruit, vegetables, beans, pulses, lentils and oats.

The Micronutrient Gap

Over the past 10,000 years (from Palaeolithic times), and in particular over the past 50 years (the computer age), there have been significant changes to the daily intakes of these nutrients. Our calorie intakes have gone down due to mechanisation, from 3000-4000 calories per day to 1800-2000 calories per day, and the micronutrient density or content has gone down due to modern agriculture and food processing.

We can change the macronutrient component of our diet easily by moving to a more wholefood diet, but this will not always replace sufficient essential micronutrients. To achieve adequate micronutrients from our diet would require increased quantities of food, in excess of daily calorie requirements.

It may be beneficial to health to consider bridging the known micronutrient gap with a suitable Food State or Wholefood multivitamin and mineral supplement.

The Cytoplan Practitioner Range

Assisting in eradication

1268/1269	Candi Clear contains the unique Probiotic yeast Saccharomyces boulardii, a non-pathogenic yeast that has been safely used worldwide as a probiotic for more than half a century. S. boulardii provides the intestines with unparalleled support against a broad array of pathogens that include bacteria, yeast and protozoans.
1200	Cytocleanse: a very popular product which assists with cleansing for the GI tract.
4156	Organic Garlic contains whole powdered organic garlic.
2114	Aloe Vera Juice: a mild-tasting Inner Leaf Gel developed for oral health. Can be used daily as a preventative mouth-wash or to assist in eradication and healing of oral Thrush.

Replenishing friendly bacteria

3220/3221	Cyto-Biotic Active: a powdered formulation containing an optimal 9 strains of probiotic bacteria, suitable for all ages.
4134	Fos-a-dophilus: this product is ideal for short and long term use,particularly in those predisposed to digestive upsets. The selected probiotic strains make this a suitable maintenance product for those over the age of 40.
4140/4141	Probiotic Plus: this product contains those probiotic strains which we feel are most beneficial for children and adults up to their early 40s.

Repair

Multi Vitamins and Minerals

We have a wide range of multi vitamin and mineral formulae available, including those listed. We will be happy to suggest the most suitable product for you.

4060/4061	Biovital/Biovital Plus
4116/4117	Family Formula
4107/4108	Foundation Formulae
4105/4106	Little People
3310/3311	Wholefood Multi
4007	Antioxidant plus Co-enzyme Q10

Essential fatty acids (providing Omega 3)

1160	Lem-O-3
1155/1161	High Potency Fish Oil capsules
1216/1218	Organic Flaxseed Oil
4219	Flaxseed Oil capsules

Digestive assistance

For those with lowered levels of hydrochloric acid and poor digestive function.

4133	Cyto-Zyme: a multiple digestive plant sourced enzyme complex to assist in the breakdown of food. Also contains Betaine to assist with reduced levels of hydrochloric acid. Not to be used for those with colitis, gastritis or ulcerative conditions of the stomach or colon. This product is not recommended during pregnancy or breastfeeding.
1150	Betaine & Pepsin: provides Betaine for reduced hydrochloric acid levels and Pepsin, which assists in the digestion of proteins. Not to be used for those with colitis, gastritis or ulcerative conditions of the stomach or colon. This product is not recommended during pregnancy or breastfeeding.

Immune support

2115	Aloe XL Whole Leaf Double Concentrate: this whole leaf Aloe is used primarily for its immune regulatory properties.
3210/3211	Immunovite Beta 1-3, 1-6 Glucan: a powerful, immune-priming supplement, this unique compound primes the innate immune system to help the body defend itself against viral and bacterial invaders.

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