

## NATURAL ANTI-FUNGALS

### **Olive Leaf Extract**

This is a fantastic product and an essential part of a natural Candida cure. Containing strong anti-microbial properties its active ingredient is Oleuropein. Oleuropein has been found to not only inhibit the growth of viruses, bacteria, fungi and parasites but also to lower blood pressure. Olive Leaf also contains anti-inflammatory properties and is a powerful antioxidant. Interestingly the Bible refers to the olive tree and particularly olive leaf as being a form of medicine. The director of anti-aging research at the National Institute of Health, Richard Cutler, M.D. is quoted as saying: "The amount of antioxidants from olive leaf and other sources you maintain in your body is directly proportional to how long you will live."

### **Coconut Oil**

The active ingredients in Coconut Oil are Caprylic Acid, Capric Acid and Lauric Acid. These medium-chain saturated fatty acids are potent anti microbial agents. They kill fungi such as Candida yeast by causing their cell walls to disintegrate. The medium-chain fatty acids contained in coconut oil actually boost the body's metabolism, which helps with weight loss and will provide you with a greater amount of energy. Coconut oil also has anti-tumor properties and helps support your immune system. It is an excellent product you can eat by the spoon full and it is perfect for cooking. Coconut oil doesn't break down at high temperatures like olive oil does and it has a long shelf life.

### **Pau d'arco**

This is a great anti fungal that can be taken in either tea form or in capsules. It is the bark of the pau d'arco tree that contains anti fungal properties. Despite very high humidity levels in the rainforest where the pau d'arco tree grows there is no mold or mildew on its bark.

Two of the active ingredients in pau d'arco bark are lapachol and beta-lapachone. Lapachol contains properties such as anti-inflammatory, antiseptic, anti-tumorous, anti-viral, bactericidal, fungicidal, and virucidal, among others. Beta-lapachone has demonstrated in laboratory studies to be anti-microbial, anti-fungal, anti-viral, anti-tumorous, anti-leukemic, anti-cancerous and anti-inflammatory.

### **Grape Seed Extract**

This is an exceptional antioxidant and possesses anti bacterial, anti viral, and anti-inflammatory properties. Grape Seed Extract is actually a more potent antioxidant than both vitamin C and E. The active constituent of Grape Seed Extract is oligomeric proanthocyanidins (OCPs), which may also assist in the maintenance and improvement of peripheral circulation and general wellbeing.

### **Garlic**

Great in cooking Garlic is a potent anti fungal that will help you cure your Candida problem. One of the phyto enzymes in garlic is allicin. While there are many garlic supplements on the market allicin is best used synergistically with other enzymes contained in garlic. Thus it is best certainly cost effective to simply have a clove of garlic squeezed into your fresh carrot juice.

## **Carrot Juice**

Don't buy commercially produced and processed carrot juice. Make sure you juice your own and drink immediately. Back in 1988 a study published in *The Journal of Microbiology* described carrot as a handy fungus fighter. By juicing carrots you give your blood stream immediately available nutrition while giving your digestive system a break from constantly having to deal with whole foods.

Grapefruit (*Citrus paradisi*) seed extract

*Melaleuca alternifolia* (Tea Tree) Oil has been used medicinally in Australia for its antimicrobial and anti-inflammatory properties. It is mostly used in the manufacturing of antiseptic agents, cosmetics, and germicides. Tea tree oil is a clear liquid used topically with mobile consistency and a distinct odor, and has been shown to effectively treat dandruff and oral candidiasis in clinical trials. It is also successful in treating mucous membrane infections such as *Trichomonas vaginalis*.

Oregano. The extract from this herb is considered more potent and less harmful than nystatin to eradicate fungi. It is also considered to be more powerful and less-toxic in eradicating staph infections.

- Echinacea is an immune-stimulating and antiseptic herb. Scientific research indicates the herb's antibiotic, cortisone-like activity, and aids in the promotion of wound healing, production of systemic interferon and stimulation of T-cell lymphocytes

## **Saturated Fatty Acids**

Undecylenic and caprylic acids are common medium chain saturated fatty acids used to treat yeast infections. Both are found naturally in the human body in small amounts. Common commercial sources of caprylic acid are palm and coconut oils, whereas undecylenic acid is extracted from castor bean oil. Caprylic acid products are far more common than those of undecylenic acid but don't assume this means it is better, undecylenic acid has far more research data available on it and was the treatment of choice for fungal skin infections for a long time before newer drugs arrived<sup>1,2</sup>. Both have been shown to be comparable to a number of common anti-fungal drugs. In fact undecylenic acid was the main agent used to treat fungal infections prior to the development of newer drugs and is still prescribed today for some infections. A typical dosage for caprylic acid would be up to 3600mg per day in divided doses with meals. Undecylenic acid is commonly taken in dosages of up to 1000mg per day, again in divided doses

## **Berberine**

Berberine is an alkaloid found in a herb called barberry (*Berberis vulgaris*) and related plants as well as in goldenseal, oregon grape root and Chinese goldthread. This herb has long been used in chinese and ayurvedic medicine. Berberine has significant anti-fungal activity and is also effective against some kinds of bacteria. As with all previously covered anti-fungal's, berberine is reported to spare beneficial organisms such as lactobacilli species. An added benefit for some people is its anti-diarrheal action. Research has shown that berberine can effectively prevent candida species from producing an enzyme called lipase which they use to help them colonize<sup>3</sup>. Berberine has also been widely shown to have a powerful directly anti-fungal action<sup>4,5</sup> Cost of treatment with berberine is roughly equivalent to that of the fatty acids.

## **Oregano**

Most people will be familiar with oregano as the strong smelling herb commonly used as a seasoning in Italian food. This is usually Oregano marjoram rather than Oregano vulgare that we're interested in here. Oregano vulgare contains a variety of substances that make it an effective anti-fungal. In a study assessing its action against *Candida albicans*, carvacrol, a major phenolic constituent of the oil, was found to inhibit candida to a greater extent than caprylic acid. It is also highly effective against many bacteria with studies published in the most prestigious medical journals showing it is as effective as many antibiotic drugs. Usually supplied in oil form, oregano treatment will cost around \$25 per month. It is very potent so only a few drops in a glass of water are needed at a time. Higher dosages would be likely to cause irritation of the mucous membranes.

## **Colloidal Silver**

A colloid is defined as very small particles of one substance suspended (not dissolved) in another. Colloidal silver is a suspension of silver particles in water. Silver is a well known anti-microbial, it is commonly used in items such as water filters to kill any microbe that may be in the water, including bacteria, fungi, worms and protozoa. Colloidal silver is said to be effective against up to 650 pathogens including, of most interest to us here, yeast and fungi species including *Candida*. It works by denaturing the enzyme involved with supplying the organism with oxygen. Chances of resistance to this process are by all accounts, very low. It was used widely to treat infection before the development of antibiotic drugs. It is now classified as a pre-1938 drug by the FDA which means that it is available without prescription. The number of companies offering colloidal silver as an alternative to antibiotic medications is increasing daily. The renewed interest can be explained by the increase in chronic infections and the fact that many microbes are becoming resistant to the commonly used drug treatments. The dosage of colloidal silver needed to treat yeast overgrowth will vary between products because they may have slightly different concentrations.

## **Cellulase**

This is a relatively new treatment approach for intestinal yeast infections. The cell wall of common intestinal yeast such as *Candida* species have been found to be made mainly from cellulose. Cellulase is the enzyme that breaks down cellulose and hence, when significant concentrations come into contact with yeast cells the cell wall is irreparably damaged and the organism dies. It's claimed that using this mode of action, the yeast do not release a flood of toxins when they die as occurs with most other anti-fungal agents so that the sufferer does not experience the usual die-off symptoms to any significant degree. The yeast should be unable to develop resistance to cellulase products as they lack the ability to modify their cell wall. As cellulase products have only been around for a few years reports of their effectiveness in practice is limited but they offer a promising alternative to more established treatments. Prices again, are in a similar range to all the natural anti-fungal's.

## **Plant Tannins**

Tannins are natural substances found in a number of plants such as Black Walnut and a vast array of plants used in traditional eastern medicine. Tannins are what give red wines such as merlots and cabernets their sharp, biting taste. They are also found in the bark of trees that are particularly resistant to fungus such as the redwood tree. They have been demonstrated to have a powerful anti-fungal and astringent action in a multitude of clinical studies<sup>6,7,8</sup>. Tannins are one of a number of natural substances tested against pathogens found in stool samples by functional medicine labs. Tannins are available in a number of forms to treat intestinal yeast overgrowth. As previously mentioned they are the active anti-fungal ingredient in many traditional eastern herbal preparations. Black walnut has a very high tannin content and is commonly used to treat infections with *Candida* sp, parasites and worms. It is widely available from health stores and nutritional supplement suppliers. Tannins are also available in an isolated and concentrated form. Treatment with plant tannins is comparable in cost to most natural anti-fungal agents, being in the region of \$15-\$30 per month.

## **Probiotics**

It is essential that as the yeast overgrowth is being treated probiotic bacteria are consumed to take the place of the yeast

**Licorice, bilberry, Echinacea, and milk thistle** are known to produce antioxidants that are not just good for the body but also for the skin. In addition, these antifungal herbs help in boosting your immune system, making you less susceptible and stronger against infections.