

ULTRADETOX



Nutrition Care Pharmaceuticals Pty. Ltd.

Nutrient Rich Herbal Formula

UltraDetox is a powerful broad-spectrum formula that contains a diverse range of plant extracts, and high potency herbs. It is rich in anti-oxidants, active bio-flavonoids, amino acids, enzymes and complex nutritional factors from green leaf powders.

UltraDetox is formulated to protect cells from oxidative stress, whilst supporting the body's eliminative organs and detoxification pathways, helping to gently cleanse tissue and eliminate toxic metabolic by products.

Product Highlights

UltraDetox is a balanced nutritional formula that provides broad-spectrum nutritional support, premium adaptogenic herbs and natural food factors for optimal health and vitality.

Dosage

Two 5mL metric spoonfuls (equivalent to 8g powder) mixed with water or fruit juice to be taken once daily, or as directed by a health care professional.

The active ingredients in the Nutrition Care formulations, when professionally prescribed may assist patients suffering from specific conditions. This statement does not imply or make a claim for a cure for disorders treated with any Nutrition Care Products and their use should be based on published and relevant scientific and clinical data.

Pregnancy and lactation

No adverse effects expected.

Ingredients

One 5mL metric spoonful (equivalent to 4g) of powder contains:

Polygonum cuspidatum root extract	
Equiv. Polygonum cuspidatum root	4 gram
Equiv. Resveratrol	8mg
Ulmus Rubra Bark rhizome inner (Powder)	250 mg
Pectin	250mg

Fucus vesiculosus Whole Plant ext (Bladderwrack)	
Equiv. Fucus vesiculosus Whole Plant	75mg
Beta carotene 10%	
Equiv. Beta carotene	250mcg
Lecithin	1g
Astragalus membranaceus root ext. 10:1	
Equiv. Astragalus membranaceus root	120mg
Avena sativa seed ext dry conc. 10:1 (Oats)	
Equiv. Avena sativa seed	100mg
Cynara scolymus herb ext. 4:1 (Globe Artichoke)	
Equiv. Cynara scolymus herb	250mg
d-Alpha Tocopherol acid Succinate (1200 IU/g)	
Equiv. Vitamin E	49.6 IU
Zingiber officinale rhizome 4 :1 (Ginger)	
Equiv. Zingiber officinale rhizome	2.5mg
Echinacea angustifolia root & rhizome ext 4:1	
Equiv. Echinacea root & Rhizome	30mg
Eleutherococcus senticosus root ext. 5:1 (Siberian Ginseng)	
Equiv. Eleutherococcus senticosus root	30mg
Sassafras albidum Bark powder	120mg
Glycyrrhiza glabra root ext. 4:1 (Liquorice) Powder	
Equiv. Glycyrrhiza glabra root	50mg
Vaccinium myrtillus fruit ext. 100:1	
STD 2.5% Anthrocydes (Bilberry)	
Equiv. Vaccinium myrtillus fruit	1g
Camellia Sinensis Leaf ext. 12:1 (Green Tea)	
Equiv. Camellia Sinensis Leaf	120mg
Ginkgo biloba leaf ext. 50:1	
Equiv. Ginkgo biloba leaf	508mg
Silybum marianum (St. Mary's Thistle) fruit ext. STD 12% Silybum	
Equiv. Silybum marianum fruit	2.1g
Vitis Vinifera Seed Ext.120:1. (Grape Seed)	
Equiv. Vitis Vinifera Seed	1.2g
Spirulina Powder	500mg
Triticum vulgare (Wheat Grass) Powder	250mg
Hordeum vulgare (Barley Leaf) Powder	250mg
Medicago sativa (Alfalfa) Herb Powder	175mg
Beta vulgaris (Beetroot) leaf powder	100mg
Spinacea oleracea (Spinach) Powder	75mg
Chlorella Powder	175mg

Literature Review

Spirulina

Spirulina contains all eight essential and ten non-essential amino acids. It also has a broad spectrum of vitamins, minerals and trace elements. Spirulina contains as much as 60% pure proteins. Most



importantly, its proteins are glycoproteins. As a result, the nutritional contents of spirulina are highly assimilable and readily available. Spirulina is a rich source of glyconutrients.

Spirulina is useful to anyone who is ill or on a restricted diet, due to diabetes, hypertension, heart disease or allergies. Spirulina can also act as a powerful detoxifying agent. Spirulina can increase energy, vitality and mental alertness. In children it appears to have a calming effect on hyperactive children. [53]

Wheat Leaf Powder, Barley leaf powder, Spinach powder, Beetroot leaf powder, Alfalfa herb powder

These green leaf powders are rich in natural vitamin C and B complex, beta-carotene, potassium, magnesium and calcium. They contain large amounts of chlorophyll and the enzyme Super Oxide Dismutase (SOD). They are high in protein, but very low in gluten. Each of these green leaf powders plays a unique role in supporting health and vitality.

Chlorella

Chlorella is a cracked cell-wall freshwater, green microalgae. It is high in chlorophyll, RNA and DNA content, as well as being a rich source of iron and zinc.

Ulmus Rubra

Is a nutritive herb with demulcent and emollient properties. It is also an anti-tussive. The traditional uses have been for many gastro-intestinal disorders including inflammations and ulcerations of the stomach, oesophagus and duodenum, diarrhoea, colitis and indigestion.

Pectin

Pectin is a soluble fibre. Fibre binds water considerably increasing the bulk of the stools. Fibre also binds such things as bile salts, toxins and drugs. Dietary fibre is of benefit in many conditions. In obesity fibre makes foods more filling, it also reduces constipation for those on weight reduction programs. In gallstone patients, fibre alters bile salt composition so as to reduce stone formation.

Increased fibre significantly reduces the likelihood of developing diverticular disease, and for those with the disease, fibre reduces symptoms. In irritable bowel syndrome with constipation, some sufferers are improved by increasing their fibre intake. High fibre diets are associated with reduced cancer of the large bowel and other cancers, possibly due to reduced absorption of potential carcinogenic agents. [48]

***Glycyrrhiza glabra* (liquorice)**

The root is the plant part used and it contains glycyrrhizin, triterpenoid saponins, flavonoids, bitters and beta-sitosterol. Liquorice has an ACTH-like action on the adrenal cortex, increasing the production of gluco-and mineralocorticoids. It has similar anti-inflammatory effects to hydrocortisone.

It is useful in gastric ulceration, and inflammation. It is excellent for recovery from excessive steroid administration and the resulting adrenocortical depression. [14]

***Sassafras albidum* (sassafras)**

The root of this North American tree contains volatile oils (mainly safrole) tannins, resins and cinnamic acid derivatives. Its actions are alterative, with a warming peripheral vasodilation resulting in a specific cleansing action on the cutaneous tissues. It is useful in inflamed skin diseases. [14]

***Zingiber officinale* (ginger)**

This culinary favorite contains volatile oils. It is a strong circulatory stimulant and vasodilator. Recently interest has focused on ginger's anti-inflammatory properties and its use in arthritis. It is also a useful carminative for colic and flatulence. [14]

Lecithin

Lecithin is composed of choline, glycerol and fatty acids. Choline is essential to human nutrition. Choline helps form acetyl-choline which is essential for electrical conduction of nerve impulses in the whole nervous system. Lecithin has been used to treat cholesterol problems and may also be of help in people with gallstones. [48]



Vitamin E

Vitamin E is a fat-soluble vitamin. Its main functions are as an anti-oxidant and anti-coagulant, while also being involved in stabilising membranes and playing a role in cell respiration. There is evidence that vitamin E is important for immune function, although exactly how is not clear. It works synergistically with other anti-oxidants in this respect, particularly selenium. Vitamin E supplementation has been shown to improve cellular and humoral immunity even in healthy subjects. [38,39] A recent placebo-controlled study showed beneficial effects in a group of healthy elderly patients given alpha tocopherol orally for one month. [40]

***Avena sativa* (oats)**

Oats contain saponins, alkaloids, silica, calcium and many minerals. Oats also contain gluten. Oats are a sure and effective restorative to the nervous system. Oats are used for all states of debility, depression and even in degenerative wasting conditions, making substantial contributions to tissue health. [14]

***Fucus vesiculosus* (bladderwrack)**

Bladderwrack is a natural source of iodine plus natural carotenes, zeaxanthin, mannitol and algin. Iodine is easily absorbed and stored in the thyroid gland where it is combined into the thyroid hormones T3 and T4. The effects of thyroid hormones on the body are complex and far reaching. Their profound influences on growth and development, protein synthesis and energy metabolism have been studied extensively. [29]

***Eleutherococcus senticosus* (Siberian ginseng)**

Siberian Ginseng contains many constituents, the main group termed eleutherosides A-G. Other constituents include lignans, phenylpropanoids, coumarins, sterols and polysaccharides. [35]

Siberian Ginseng has consistently demonstrated an ability to increase the sense of well being in a variety of psychological disturbances including depression, insomnia, hypochondriasis and various neuroses. A

possible explanation is an improved balance of monamines. [36] In the same review article a trial involving Siberian Ginseng extract administered to 2100 healthy human subjects indicated: (1) increased ability of humans to withstand many adverse physical conditions (2) increased mental alertness and work output and (3) improved quality of work under stressful conditions.

Siberian Ginseng may improve immune function. 36 healthy volunteers receiving Ginseng showed after 4 weeks a dramatic increase in the absolute number of immunocompetent cells, especially T lymphocytes, but also cytotoxic and natural killer cells. No side effects were observed during a 6 month observation period. [37]

In practice, *Eleutherococcus* is used to counter stress in many physically and mentally demanding situations as well as in debility and disease states.

***Silybum marianum* (St. Mary's thistle)**

St Mary's Thistle is a stout annual or biennial and native to southwestern Europe, but is well established in Australia as a weed. The extract contains silymarin, a mixture of flavonoids consisting chiefly of silybin, silydianin and silychristine. In numerous clinical studies silymarin has been shown to have positive effects in virtually every type of liver disease, including cirrhosis, hepatitis, and chemical or alcohol-induced fatty liver. [1]

Silymarin has been shown to increase the glutathione (GSH) content of the liver by more than 35% in healthy subjects. Since glutathione is responsible for detoxifying a wide range of toxic chemicals, silymarin not only protects the liver from damage, but also increases the capacity for detoxification reactions for many substances including pesticides and heavy metals. [2]

This protective function was demonstrated in 60 patients receiving chronic psychotropic drug therapy. Data showed that when silymarin was used there was a reduction in lipoperoxidative hepatic damage that occurs during treatment with butyrophenones or phenothiazines. The authors conclude that the increased lipoperoxidation may contribute to psychotropic drug induced hepatotoxicity. [4]



In alcohol induced liver damage silymarin has been shown to be extremely effective. In a 4 week trial of 47 patients with slight acute to sub-acute liver disease, mostly induced by alcohol, there was a highly significant decrease in aminotransferases compared to controls. Normalization of histological changes in the liver also occurred in the silymarin treated group. [3] In another double blind study 87 cirrhotics received silymarin, 140 mg 3 times daily, while 83 cirrhotics received a placebo. The 4 year survival rate was 58% in the treatment group, compared to 39% in the controls. [4]

Silymarin can also be used to treat cirrhotic diabetic patients. In a trial involving 60 cirrhotic diabetics, patients received either 600 mg silymarin daily or placebo for 6 months. After 6 months, patients had mean levels of fasting glucose, daily blood glucose, daily glycosuria, glycosylated hemoglobin, daily insulin need, fasting insulinemia, blood malondialdehyde and basal and glucagon-stimulated C peptide counted. They were all significantly lowered in the treated group compared to controls and baseline. These results suggest silymarin can reduce lipoperoxidation of liver cell membranes in cirrhotic diabetic patients, decrease endogenous production of insulin and need for exogenous insulin. Silymarin probably does this by restoring the plasma membrane of liver cells and increasing the sensitivity of insulin receptors. [5]

Another positive effect is found in the immune status of patients supplemented with silymarin. Patients with alcoholic liver disease showed normalisation of T cell and CD8+ counts. Antibody dependant and natural cytotoxicity of the lymphocytes decreased. Overall the treatment improved the depressed immunoreactivity of the patients. [6] Silymarin has also been reported to be of value in the treatment of psoriasis. Its efficacy is likely to be due to its ability to improve liver function, inhibit inflammation and reduce excessive cellular proliferation.

***Vitis vinifera* (grape seed)**

Grape seed extract is standardised to Procyanidins, a compound with anti-oxidant properties. These compounds are closely related to the catechins of Green Tea and the flavonoids of Ginkgo.

Grape OPC's provide vascular protection because they have an affinity for collagen and elastin in the vascular wall. These proteins form the walls of the small capillaries, veins and lymph vessels. OPC's attach to collagen and elastin to protect them from being destroyed too easily. OPC's also inhibit inflammation by retarding the release of hyaluronidase, which is responsible for the release of histamine. [7]

***Vaccinium myrtillus* (bilberry)**

Bilberry fruits contain flavonoids and specifically anthocyanosides, which are extremely powerful anti-oxidants and vascular stabilizers. Anthocyanosides may reduce platelet aggregation probably due to the increased release of prostacyclin, which dilates blood vessels and inhibits platelet aggregation. [8] The same flavonoids demonstrate significant smooth muscle relaxing effects, which can be of assistance in dysmenorrhoea. Anthocyanosides exert significant preventative and curative activity in gastric ulcers without effecting gastric secretions.

***Ginkgo biloba* (gingko)**

The leaves of Ginkgo tree have been used to make therapeutic teas for the treatment of asthma and bronchitis in Chinese medicine for centuries. Ginkgo also assists in improving peripheral circulation and memory. [9]

Ginkgo extracts have been shown to increase cutaneous capillary blood flow and decrease erythrocyte aggregation in a randomised double blind trial. [10] The ginkgolides have platelet activating factor (PAF) antagonist properties and thus reduce platelet aggregation, neutrophil degranulation, microvascular permeability and bronchoconstriction. [11] Ginkgo flavones have superoxide scavenging properties, which increase the half-life of endothelium-derived relaxing factor (EDRF, or nitric oxide, NO). These properties reduce vascular spasm. [12] The anti-oxidant properties of the Ginkgo flavones are also useful in the primary prevention and treatment of most degenerative diseases, such as coronary heart



disease. [13] Ginkgo has many indications but is especially useful to improve concentration and memory and increase physical performance.

***Cynara scolymus* (globe artichoke)**

This European vegetable contains cynarin, a bitter principle, alkaloids and tannins. Its actions are chologogue, stimulating liver cell regeneration and diuretic. Globe artichoke is useful in chronic liver disease and liver impairment. It is also useful in biliary disease and gall bladder problems. Globe artichoke has traditionally been used for atherosclerosis and diabetes mellitus. [14]

***Camellia sinensis* (green tea)**

The major active substance in green tea is a group of polyphenols referred to as Catechins.

Both green tea and black tea are derived from the same plant (*Camellia sinensis*). Green tea is produced by slightly steaming the fresh cut leaf, while to produce black tea the leaves are allowed to ferment. This fermentation converts many of the polyphenols that possess outstanding therapeutic action to compounds with much less activity. The steaming of green tea inactivates the enzyme responsible for this and green tea is therefore very high in polyphenols with potent anti-oxidant and cancer prevention properties. [15]

Epidemiological studies in the Shizuoka prefecture of Japan, where green tea consumption is high, showed a significantly lower death rate from all types of cancer in general and for gastrointestinal cancers such as stomach, esophagus and liver cancer in particular. [16]

Green tea consumption has also been shown to restrict the increase of blood cholesterol. In a study of 1371 men over the age of 40, increased consumption of green tea was associated with decreased serum concentrations of total cholesterol and triglycerides, and the increased proportion of HDL cholesterol. Also, there was a decrease in the proportion of LDL and VLDL cholesterol, which reduced the atherogenic index. [17]

Catechins in green tea have been demonstrated in vitro to be strong antioxidants, possibly up to 20 times stronger than Vitamin E. [18]

Experience has shown that drinking green tea can kill bacteria and strong green tea is often recommended as a good treatment for diarrhoea. Catechin is a powerful sterilizing agent for many types of bacteria that cause food poisoning. It has been found that 1. *Staphylococcus aureus* 2. *Vibrio parahaemolyticus*, 3. *Clostridium perfringens*, 4. *Bacillus cereus*, 5. *Plesiomonas shigelloides*, 6. *Aeromonas sobria* and 7. *Clostridium botulinum* cannot grow in the 0.01%-0.05% of catechin in the green tea normally drunk by Japanese people. [19, 20, 21, 22] High concentrations of catechin had no negative effect on *Bifidus bacillus*, which is a bacterium necessary for proper functioning of the intestinal tract.

After fractionation of green tea extracts it was revealed that the tea catechins are the active principles for inhibition of platelet aggregation. Epigallocatechin gallate (EGCG) suppressed collagen-induced platelet aggregation completely at the concentration of 0.2mg/mL. This is comparable to the effect of aspirin. Thrombin and platelet aggregating factor (PAF) induced aggregation was also inhibited by EGCG. [23]

***Astragalus membranaceus* (astragalus)**

Astragalus is a principal herb of Chinese medicine. It is used as a tonic for building vitality and energy. It also functions as an immune modulating agent and has mild antibiotic properties.

The active constituents include many triterpenoid saponins especially *Astragalosides* I to VIII, Polysaccharides (particularly *Astragalan B*), the Isoflavone 2', 4' - dihydroxy - 5, 6 dimethoxy isoflavone and Betaine, Choline and Beta-sitosterol.

The immune stimulating effects of *Astragalus* have attracted much attention, but most of the work has involved in-vitro tests or animal studies.

In-vitro *Astragalus* polysaccharides potentiate the antitumour activity of interleukin - 2 [24], improve lymphocyte responses [25], enhance natural killer cell activity [26] and potentiate the activity of monocytes [27].

In animal studies, oral doses of *Astragalus* extracts fed to mice for 2 weeks increased phagocytic activity. [28]



In human trials, oral doses of dried extract increased levels of antibodies such as IgE and IgM. A clinical study involving one thousand people showed protection by Astragalus against the common cold. The herb appeared to stimulate the cellular mechanisms for interferon production when the virus was present. White cells were also better able to produce interferon. [28, 29]

The antiviral action of Astragalus is most likely due to increased immunity and possibly enhanced interferon production.

In vitro studies have shown Astragalus has a stimulating effect on cell metabolism and cell growth. Cell longevity also increased. [28]

Astragalus is especially beneficial in clinical practice for common viral infections.

***Echinacea angustifolia* (echinacea)**

Echinacea is a North American herb used by the native American Indians against more illnesses than any other plant. Its primary clinical applications have been in cases of infection or when immune system enhancement is desired. Numerous studies have shown that Echinacea has profound immunostimulatory effects resulting in enhanced T-cell mitogenesis, macrophage phagocytosis, anti-body binding and natural killer cell activity, as well as increased levels of circulating neutrophils. Echinacea is regarded as an extremely safe herb with no reported toxicity. [15,31]

Echinacea contains polysaccharides, flavonoids, caffeic acid derivatives, essential oils, polyacetylenes and alkylamides. These various components have all demonstrated immune-enhancing effects. The oral administration of Echinacea to healthy males for 5 consecutive days resulted in a 120% increase in granulocytic phagocytosis. [31]

Polysaccharide extracts produced from Echinacea purpurea have in-vitro activated macrophages to cytotoxicity against micro-organisms. Furthermore, it induced macrophages to produce tumor necrosis factor, interleukin-1, and interferon - beta 2. [32]

Echinacea has developed a reputation for assisting with symptoms and occurrence of influenza and common colds. 180 patients with influenza were given either Echinacea purpurea at 900 mg or a

placebo. Patients receiving the Echinacea showed significant reduction in flu symptoms. [33] 108 patients with colds received an extract of Echinacea or placebo for 8 weeks. Patients receiving Echinacea had less severe symptoms and illnesses resolved quicker. Patients showing evidence of a weakened immune system (CD4/CD8 - ratio < 1.5) benefited the most from Echinacea. [34]

Beta-carotene

Beta-carotene is pro-vitamin A, found as a yellow/orange pigment in fruits and vegetables. Beta-carotene is split in the intestines by enzymes to form retinol, retinal and retinoic acid. These three forms of vitamin A are called “retinoids”. There is no RDI for beta-carotene, although health organisations in the USA recommend an adult intake of at least 5-6 mg daily.

The percentage of beta-carotene that is converted to retinol ranges from 25-50%, and is governed by a homeostatic mechanism so that conversion will be slowed or halted when the body stores of retinol are adequate. This control ensures that there will never be too much retinol formed to cause toxicity, even with massive doses of beta-carotene. [41] Beta-carotene has an important disease-preventing role that is independent of, and additional to, its function as pro-vitamin A. Beta-carotene plays an important role in the prevention of cardiovascular disease. Beta-carotene is a powerful anti-oxidant and acts in conjunction with vitamins C and E. Random supplementation of beta-carotene at 50 mg daily or placebo to a group of 160/333 male physicians with a history of angina or revascularization found after several years of follow up, the group receiving beta-carotene had a significant 54% reduction in major coronary events and 54% reduction in major vascular events. [42]

Plasma concentrations of beta-carotene may be inversely correlated with the risk of angina pectoris [43]. Recent studies have shown beta-carotene to be effective in reducing atherosclerosis. [44]

There is strong evidence for the powerful inhibition of a range of cancers by vitamin A, C and beta-carotene. Lung cancer, in particular, appears to be prevented by a diet rich in beta-carotene. In a study of heavy smokers the authors concluded that beta-carotene may reduce lung cancer risk in humans, by



preventing DNA damage in the early stages of carcinogenesis. [45]

Beta-carotene in modest doses stimulates the immune response. [40] In a study of men and women supplemented with beta-carotene there was a significant and substantial increase in lymphoid cells with surface markers for T-helper and Natural Killer cells and cells with interleukin 2 and transferrin receptors. [46]

In a study involving the supplementation of beta-carotene to HIV positive patients, the authors concluded that beta-carotene had an immune stimulatory effect and warranted study as an adjunctive treatment. [47]

Polygonum cuspidatum

Polygonum cuspidatum (Ko-jo-kon or Japanese Knotweed) is a large, herbaceous perennial plant, native to eastern Asia in Japan, China and Korea. The dried root is well-known in traditional Chinese medicine (called Huzhang) and is officially listed in the Chinese Pharmacopoeia. It is also used in the folk medicine of Korea and Japan for a wide range of conditions: it has been used as an analgesic, antipyretic, diuretic, expectorant, and antitussive agent and also used for the treatment of chronic bronchitis, infectious hepatitis, diarrhea, cancer, hypertension, atherosclerosis, hyperlipidemia, leucorrhoea, dysmenorrhoea, trauma with blood stasis, burns, and allergic inflammatory diseases. [54]

Polygonum cuspidatum is rich source of bioavailable trans-resveratrol. [55]

Summary

UltraDetox contains a diverse range of plant and herbal ingredients. It is rich in anti-oxidants, active bio-flavonoids, amino acids, enzymes and complex nutritional factors from green leaf powders. It uses high quality standardised herbal ingredients and will support optimum good health. The taste is clean and refreshing you'll know your doing something good for your health. UltraDetox is a new concept in nutrition, designed to meet advanced nutritional needs.

CAUTION

For those individuals who are new to a high fibre, nutrient rich product like UltraDetox it may cause loosening of bowel motions. In these cases start with a reduced dose of ½ - 1 teaspoon and build up over 1 week.

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