CYTOPLAN

NATURE MEETS SCIENCE

Nutritional Support

in Osteopathic and Chiropractic Treatment

for professional use

26 YEARS AND COUNTING EST. 1990

Science Based Supplements for Health Professionals

CYTOPLAN

NATURE MEETS SCIENCE

Cytoplan celebrates 25 years in the field of food-based supplementation and from the moment of conception to the present day we have promoted the philosophy that nutrients are best delivered to the body "in the same form as food".

The philosophy and message of Cytoplan was founded on the simple logic that our bodies are designed to eat food and utilise its components for the maintenance of life. The ultimate goal of Cytoplan is to 'improve the health of the nation' by supplying supplements in a bio-effective form for optimal absorption and utilisation.

SINCE 1990

KEY TO SYMBOLS

Vv = Suitable for Vegans

V = Suitable for Vegetarians

60 = Amount in container

FS = Food State

W = Wholefood

T = Tablets

C = Capsules

P = Powder

L = Liquids

Nutritional Support in Osteopathic and Chiropractic Treatment

Musculoskeletal conditions are now the largest cause of disability globally and in the UK are the leading cause of work absence, with millions of people living with pain[1,2].

The body has significant powers of self healing and regeneration. Biological tissues are dynamic and two opposing processes - the breakdown and removal of worn out cells and cell components (known as clastic activity) and the building and regeneration of cells (known as blastic activity) - are constantly going on at the same time. If blastic and clastic processes are in balance good health is sustained, but if the rate of breakdown exceeds the rate of repair there will be a net loss of healthy tissue and eventually the emergence of a diagnosable condition – for example osteoporosis or osteoarthritis. Clastic / blastic processes are also relevant for the development of other conditions; for example, in Alzheimer's it is the balance between synaptoclastic versus synaptoblastic activities (a synapse is a junction between nerve cells that communicates signals using neurotransmitters).

Inflammation and poor nutritional status can both contribute to the rate of breakdown exceeding the rate of repair. You will probably have noticed that injuries to bone, tendons and tissue can be slower to repair in some patients than others – this may be due to excessive inflammation or a lack of nutrients needed for the repair process.

Inflammation

Inflammation is a normal part of metabolic activity that is necessary for cell turnover, renewal, and all metabolic processes of life. So a normal healthy environment is one that is weakly inflammatory. The problem in the Western world today is that, by virtue of diet, lifestyle and other factors, most of us have a greater level of inflammation in our bodies than is healthy. Excess inflammation causes cell tissue dysfunction and destruction and is at the heart of all disease processes.

Gut Microorganisms and Inflammation

The gut can contribute to systemic inflammation. For example, certain gut bacteria produce inflammatory triggers – endotoxin or lipopolysaccharide (LPS). An unbalanced gut microflora is linked to the development of autoimmune conditions, including rheumatoid arthritis. Gut health also affects how food and nutrients are digested and absorbed.

We have trillions of friendly bacteria living in our gut. Collectively they weigh 1 – 2 kg and perform important functions including helping with digestion of food, stimulating the immune system and keeping the gut lining healthy. However, many factors today can disrupt the balance of friendly bacteria and allow undesirable bacteria to overgrow (termed dysbiosis) which produce inflammatory triggers (ie LPS). Factors that can disrupt the balance of bacteria include antibiotics and a lack of dietary fibre:

- Antibiotics kill off some of the friendly bacteria and this can allow dysbiotic bacteria to overgrow and cause problems. Antibiotics may alter the composition of the adult microbiotia transiently or possibly even permanently[3].

- Lack of fibre in the diet. Fibre is 'prebiotic', that is, it provides food for the good gut bacteria and encourages their growth. In the UK the average fibre intake is low at around 12 g per day. The government's recommendation is 30 g per day[4]. Traditional diets include a much higher intake than this.

Digestive disorders are one of the most common complaints in people visiting their GP. Bloating, heartburn, diarrhoea, constipation (ie less than once per day) and abdominal pain are some of the symptoms.

Research has demonstrated the benefits for multi species of probiotics in reducing inflammation and permeability of the gut which can lead to inflammation[5,6,7].
Other factors that can also affect gut health and contribute to inflammation include stress, alcohol, intense exercise, sugary foods and food sensitivities or intolerances.

Nutritional status

The constant renewal and repair of cells and tissues requires an adequate supply of nutrients.

- Nutrients are needed for basic cellular biochemistry that may underpin and sustain more specific support. For example B vitamins are needed for cellular energy production – which is needed for all metabolic processes including repair.

- Nutrients support the body to produce materials needed for structure and function or supply these directly. For example for the body to manufacture collagen, it needs an adequate supply of protein, vitamin C and other cofactors.

Nutritional deficiencies can manifest in lack of bone density and strength; also in the slow repair of tissues, including muscles and tendons. It is possible that patients who experience slow healing are nutritionally depleted, which restricts the ability of the body to repair damage.

Some nutrients may also be relevant in helping to improve or relieve symptoms such as pain associated with many musculoskeletal conditions.

The Nutrition Gap

For many years now at Cytoplan we have presented the rationale that there is a nutrition gap in most people's diet. The nutrition gap describes the difference between the levels of nutrients the average person, eating a reasonable Western diet, is obtaining from food, and the levels of nutrients identified by research as being needed for optimal health in the population. Nutrient shortfalls are caused by a number of different factors including dietary intake and this deficit impacts adversely on both immediate and long-term health. The nutritional status of our bodies is dependent on a number of factors, including:

- Food choices
- Food growing, processing and preparation methods
- The nutrient content of the food we eat – this has decreased dramatically in the last 80 years with the development of intensive farming
- The ability of our bodies to assimilate these nutrients
- Lifestyle factors, such as smoking, stress, alcohol intake and medications which increase the needs of certain nutrients
- Our level of activity (energy expenditure)

If you are eating a typical Western diet, all of the above are relevant to the nutrition gap in your life. However, even if you are adhering to what we would consider an optimal dietary regime, there are still two factors that can create nutrient shortfalls. These are a) the level of nutrients in the fresh foods you are eating and b) your level of activity – we were designed to lead active lives and consume 3000 to 4000 calories per day of nutrient dense food; today we consume around 2000 calories which means a lower level of intake of vitamins and minerals.

In recent years, pioneering work by biochemist Bruce Ames[8] has opened up a whole new understanding of how the body uses nutrients. It is now apparent the first call on nutrients by our body will be for immediate and acute needs – for example the 'fright and flight' response and energy needs – however this is at the expense of repair and regeneration processes.

Nutrients to Support Musculoskeletal Health and Recovery

There are over 50 nutritional elements considered essential for life – vitamins, minerals, amino acids and fatty acids. The table below lists some of these and explains their function in relation to musculoskeletal health:

Nutrient	Examples of functions in relation to musculoskeletal health
Vitamin A	Vitamin A is required for epithelial and bone tissue development and cellular differentiation. Carotenoids, including beta-carotene the precursor to vitamin A, have a positive impact on bone health. However, too much preformed vitamin A (ie retinol) has been linked to bone loss and increase in the risk of hip fracture. Scientists believe that excessive amounts of vitamin A trigger an increase in osteoclasts, the cells that break down bone[9,10].
B vitamins	There are numerous mechanisms by which the B vitamins are involved in bone metabolism. For example, B6 is a cofactor of lysyl oxidase, an enzyme involved in collagen cross-linking formation; and low folate, B12 and B6 leading to high homocysteine is an important risk factor for hip fracture in older persons; homocysteine stimulates resorption activity of osteoclasts[12].
Vitamin C	Ascorbic acid is an essential cofactor for the synthesis of collagen, proteoglycans, and other organic components of the intracellular matrix of tissues such as bones, skin, capillary walls, and other connective tissues[13]. Vitamin C also scavenges free radicals detrimental to bone health. Smokers or those exposed to passive smoke in particular will have increased vitamin C needs.
Vitamin D	Vitamin D is anti-inflammatory and low levels are associated with increased inflammation; it is needed for calcium absorption; and regulates gene transcription. The prevalence of vitamin D deficiency is increased among patients with connective tissue disease[14]. Research is also showing that vitamin D can prevent falls in the elderly; in a trial carried out over a 3-month period using both vitamin D and calcium, the risk of falling was reduced by 49% compared with calcium alone. The researchers concluded that "this may be as a result of the observed improvement in musculoskeletal function"[15].

Nutrient	Examples of functions in relation to musculoskeletal health
Vitamin E	Antioxidant, anti-inflammatory agent and modulator of genes favourable to bone formation[16].
Vitamin K	A coenzyme associated with the formation of osteocalcin, a major non-collagenous protein incorporated in bone matrix during bone formation. There are 2 forms of naturally occurring Vitamin K – K1 and K2. Vitamin K1 is found naturally in plants, especially green vegetables. K1 goes directly to the liver and helps maintain healthy blood clotting. Vitamin K2 is made by gut bacteria and goes to bones, blood vessel walls and tissues other than the liver. The Framingham Heart Study data showed a decreased incidence of hip fractures with those recording a higher intake of vitamin K[17]. Research has shown that low levels of vitamin K may affect cartilage and an increased prevalence of osteoarthritis in the hand and knee[18].
Calcium	"It is well known that calcium is the most important factor in bone strength'." Regrettably, this is a simplistic and inaccurate statement. Adding more calcium when the dietary intake is at required levels is unlikely to increase bone mass; studies have shown that increasing calcium results in increased levels of urinary calcium, which can be detrimental[19]. Calcium intake in young children builds up a healthy reserve of calcium; however, calcium is not the only factor in bone growth and strength. No one single substance, food, vitamin or mineral can produce strong, healthy bones. Nutrients are required in combination to develop the complex matrix of bone.
Magnesium	Magnesium is a major element which aids in bone growth. It is necessary for the proper functioning of muscles and also regulates the metabolism of calcium. Where calcium works with skeletal muscle contraction, magnesium acts in opposition, therefore promoting muscle relaxation, which is useful for those who experience tissue cramping.
Zinc	Zinc is an essential co-factor for DNA synthesis, cell division, and protein synthesis, all necessary processes for tissue regeneration and repair.

Nutrient	Examples of functions in relation to musculoskeletal health
Iron/manganese/ copper/boron/ molybdenum/ selenium	These trace minerals act as co-factors for enzymes involved in bone metabolism and/or collagen synthesis; and/or cofactors for endogenous antioxidants.
Essential fatty acids	These have stabilising and anti-inflammatory properties, increasing calcium absorption and reducing calcium and bone loss. A trial looked at the use of fish oil as an anti-inflammatory agent and an alternative to non-steroidal anti-inflammatory drugs (NSAIDS) for discogenic pain and concluded: *"Our results mirror other controlled studies that compared ibuprofen and omega-3 EFAs demonstrating equivalent effect in reducing arthritic pain. Omega-3 EFA fish oil supplements appear to be a safer alternative to NSAIDs for treatment of non-surgical neck or back pain in this selective group"*[20].
Amino acids	Regeneration and repair can increase overall protein needs. Researchers have investigated the effects of specific amino acids on the healing process and determined that arginine and glutamine appear to be necessary for proper wound healing. Glutamine is released from skeletal muscle following injury or surgery, which can cause a relative deficiency of glutamine in skeletal muscle and the gut[13].

Other nutrients for repair

Glucosamine

Probably the most well-known supplement for regeneration is glucosamine: an amino sugar vitally important for repair to ligaments, bones and joints.

Many of your patients will be taking glucosamine sulphate supplements. This will be doing some good, but some will be experiencing digestive discomfort with it in this form, particularly those who already have a diet high in sulphur-containing compounds.

Glucosamine hydrochloride, however, is a purer form with less digestive problems reported and a preferred choice for long term supplementation.

Glucosamine speeds regeneration, and so long as the rate of repair keeps up with the rate of tissue loss, bones and tissues will stay healthy.

There are no edible sources of glucosamine - bound forms do occur in meat cartilage - but this is the gristle, which we tend not to eat.

Various trials have been carried out using glucosamine hydrochloride. A trial in 2003 looked at the use of glucosamine hydrochloride in knee pain: the trial concluded that, *"glucosamine supplementation can provide some degree of pain relief and improved function in persons who experience regular knee pain, which may be caused by prior cartilage injury and/or osteoarthritis. The trends in the results also suggest that, at a dosage of 2000 mg per day, the majority of improvements are present after eight weeks"*[21].

Antioxidants

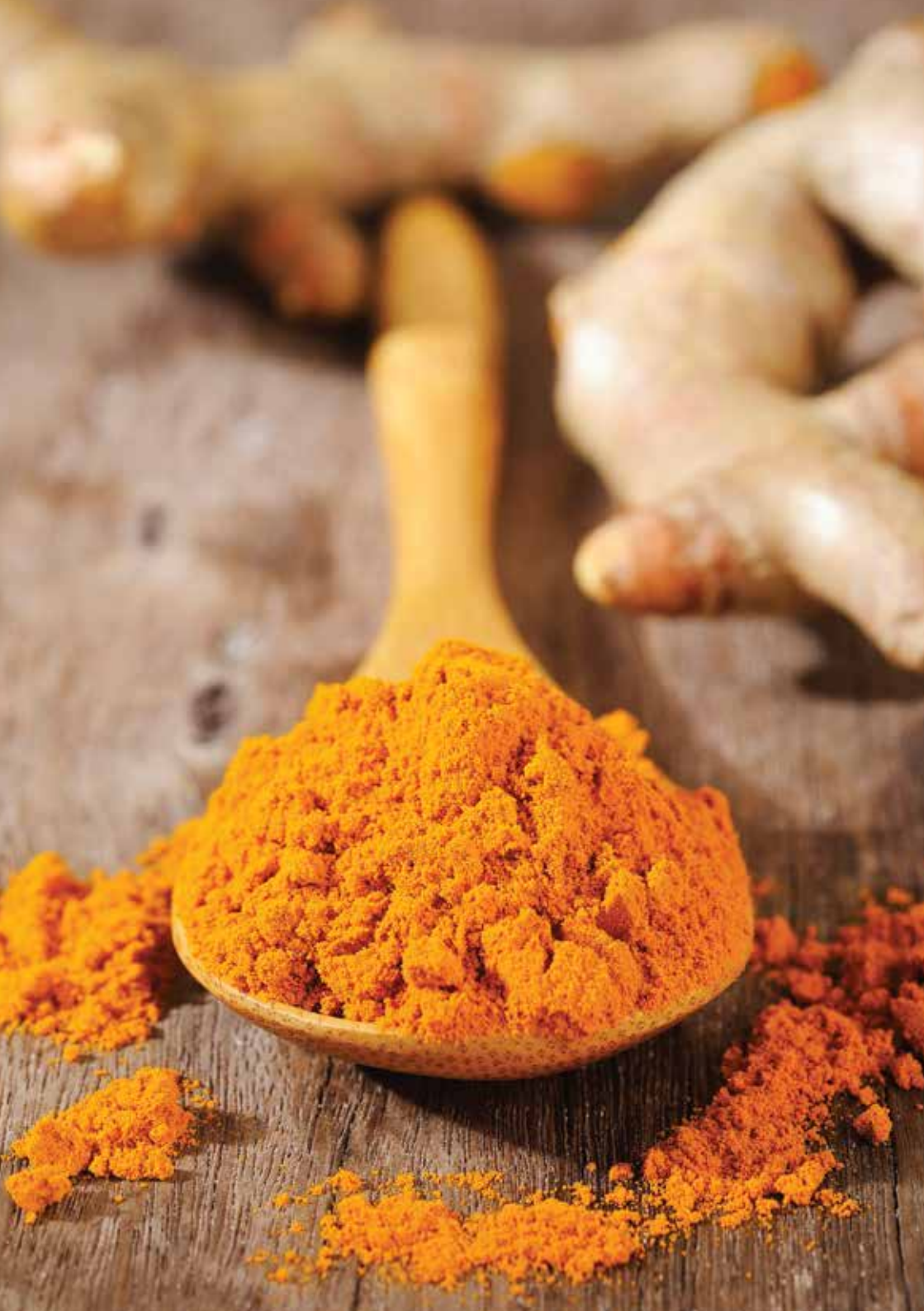
Antioxidants prevent damage by scavenging free radicals, which are produced as by-products of metabolic processes in the body. **Free radicals have a number of negative effects in the body, including a direct reaction on the polysaccharide found in connective tissue and synovial fluid, resulting in damage and subsequent inflammation**[22,23,24].

Environmental pollution, smoking, excess alcohol, diet and exercise can all trigger the production of free radicals. Whilst moderate exercise stimulates the production of the body's antioxidant enzymes, high intensity exercise can lead to oxidative stress and athletes may benefit from additional antioxidant intake. An additional concern is for joggers and cyclists exercising in the smoky or polluted environment of our busy road networks, as this potentially increases their exposure to free radicals.

Vitamins C and E are possibly the most well-known antioxidants. However, they are reliant on enzymes to facilitate the free-radical scavenging process, which in turn require sufficient mineral resources in particular: copper, manganese, selenium and zinc.

Flavonoids & carotenoids: Fruit and vegetables contain other antioxidant groups, known collectively as flavonoids and carotenoids. These compounds have the ability to protect DNA, stabilise cell membranes, inhibit inflammatory processes, inhibit the breakdown of bone and cartilage and strengthen capillaries. There are many thousands of flavonoids and carotenoids, and each has tissue specificity - which is why it is advisable to eat a broad selection of different fruits and vegetables. Most people do not eat sufficient fruit and vegetables for health and protection. The average consumption is 3 portions per day. The government recommends 5-a-day but current thinking suggests 7 to 10 per day would be better - particularly for those who exercise hard or who are predisposed to degenerative problems.

The mix of the fruit and vegetables is also important, because brightly coloured fruits and dark green and purple vegetables yield the highest concentration of protective compounds. Fruit is also high in sugar so is best consumed in small amounts only ie 2 to 3 portions per day with the majority of the 7 – 10 portions being made up of vegetables. This vegetable intake is achievable by eating a half plate of vegetables at both lunch and supper (for this purpose vegetables do not include potatoes).



Anti-inflammatory Nutrients

Nutrients with anti-inflammatory properties may also be used to help improve or relieve symptoms such as pain associated with many musculoskeletal conditions.

Curcumin

It is now widely documented that curcumin has the ability to inhibit inflammation through multiple molecular targets and mechanisms of action, including by preventing the initiation of inflammation via the Nuclear Factor Kappa-B pathway (NF-kB).

"Curcumin has been demonstrated to have therapeutic potential for various chronic inflammatory diseases especially due to its anti-inflammatory and anti-oxidative properties against a vast array of molecular targets"[25].

Rheumatoid arthritis

A clinical trial compared the effects of curcumin with a well known anti-rheumatic drug, phenylbutazone. The 18 patients in the trial received a daily dose of either curcumin or phenylbutazone for 2 weeks. Curcumin was well tolerated, had no side effects, and exerted an anti-rheumatic activity comparable to that of phenylbutazone[26]. In another study of 45 patients, curcumin (500 mg) and diclofenac sodium (50 mg) were administered alone or together to 3 groups of patients with RA. The curcumin group showed the highest percentage of improvement in Disease Activity Score (DAS) and American College of Rheumatology (ACR) criteria for reduction in tenderness and swelling of joints and these scores were significantly better than the patients in the diclofenac sodium group[27].

Osteoarthritis

In a clinical trial with 22 patients, curcumin significantly reduced cartilage matrix degradation markers, reduced CRP, and there was an improvement in the 'global assessment of disease activity' in the patients[28]. In a larger trial of 367 patients, curcumin was as effective as ibuprofen in relieving pain and stiffness and improving function after 4 weeks of treatment[29].

Bromelain

Contains an enzyme complex extracted from pineapple. In particular, a protease enzyme which breaks down certain proteins. Bromelain has been found to be helpful in healing injuries, particularly sprains and strains, bruising, muscle injuries, exerting an anti-inflammatory action.

Bromelain works by blocking some pro-inflammatory metabolites that accelerate and worsen the inflammatory process. It is used for sports injury, trauma, arthritis and other kinds of swelling[30].

Celadrin

Celadrin is an esterified fatty acid that is available in supplement form. For those with on-going inflammatory reactions there have been many anecdotal reports on the benefits of Celadrin. Research indicates that Celadrin[32]:

- Inhibits inflammation in endothelial cells, reduces the production of the immune factor IL-6 (cytokine) and controls the tumour necrosis factor alpha responsible for inflammation

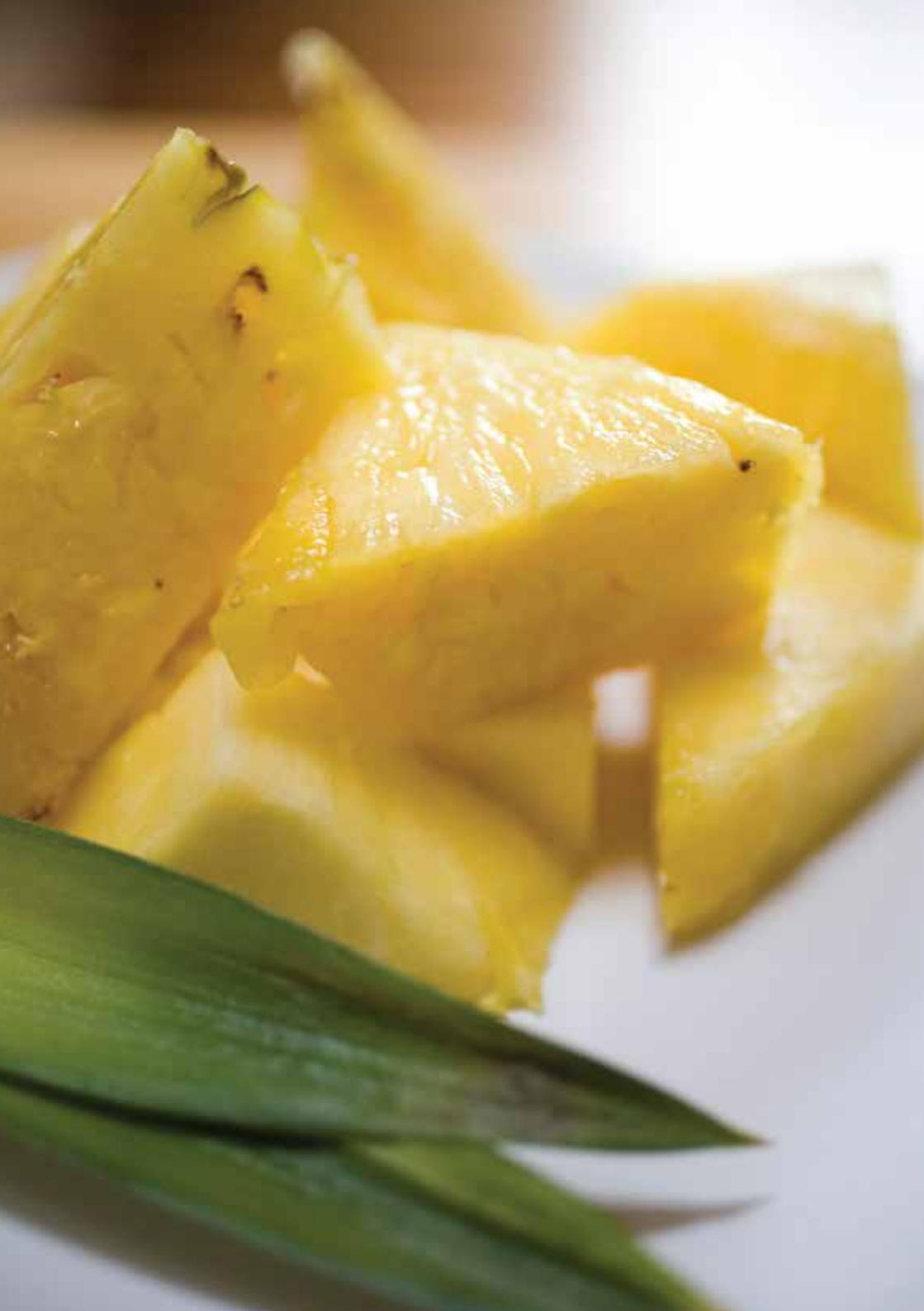
- Increases lubrication of affected joints

- Inhibits arachidonic acid, one of the main promoters of the inflammatory cascade of immune factors by inhibiting 5-lipoxygenase, another mediator of inflammation

- Provides added protection to the reduction of cartilage breakdown in joints

Isoflavones

Soy isoflavones are flavonoids, the structure of which is believed to mimic the hormone oestradiol, thus working as a hormone balancer. Much of the research with soy isoflavones has centred on the times during and post menopause. A number of studies and trials have taken place: a meta-analysis of these has confirmed the benefits of isoflavones particularly for menopausal women, with a six month period considered as relevant for the beneficial effects on bone. Supplemental levels at 90 mg per day demonstrated an increase in bone mineral density of the lumbar spine[33,34,35,36].



RELEVANT CYTOPLAN PRODUCTS

Multivitamin and mineral formulae

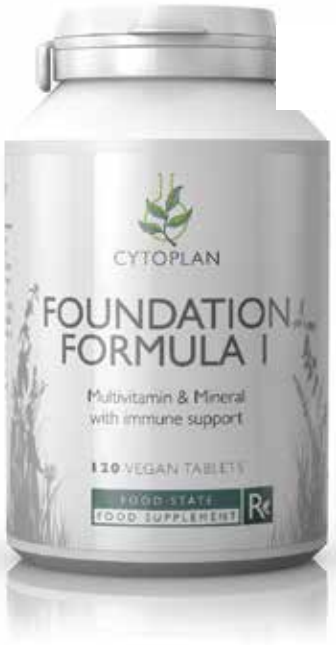
For musculoskeletal health – address the basics first with all-round nutritional support and gut health support if needed. Due to the 'nutrition gap' a multi is recommended to provide a foundation for health, including musculoskeletal health. For example, B vitamins for methylation; vitamin C for collagen synthesis; vitamin D for anti-inflammatory benefits and calcium absorption; vitamin K2 for calcium metabolism; trace minerals that act as enzyme co-factors including zinc important for protein synthesis. **This is a selection from our range of multiformulae; all are vegan and contain good levels of vitamins D and K.**

Foundation Formula 1

A Food State™ 1-2 a day multivitamin and mineral containing good levels of all nutrients. This formula is also available without iron which is therefore more suitable for postmenopausal women and men (Foundation Formula 2).

Foundation Formula 1 2 tablets provide on average:		
Active Nutrient	**Strength**	**%NRV+**
Beta carotene	3.0mg	*
Vitamin D3	20.0µg	400
Vitamin E	30.0mg	250
Vitamin C	100.0mg	125
Thiamin (B1)	7.5mg	682
Riboflavin (B2)	7.5mg	536
Niacin (B3)	16.0mg	100
Vitamin B6 (P5P)	7.5mg	536
Folic Acid as L-Methylfolate	400.0µg	200
Vitamin B12 as Methylcobalamin	60.0µg	2400
Biotin	125.0µg	250
Pantothenic acid	15.0mg	250
Vitamin K2 (MK-7)	60.0µg	80
Iron	7.0mg	50
Magnesium	50.0mg	13
Zinc	7.0mg	70
Iodine	75.0µg	50
Boron	0.5mg	*
Copper	1.0mg	100
Manganese	1.0mg	50
Selenium	150.0µg	273
GTF Chromium	80.0µg	200
Molybdenum	20.0µg	40
PABA	10.0mg	*
Beta 1-3, 1-6 Glucan	100.0mg	*
+NRV = Nutrient Reference Value		
* Indicates no NRV		

Ingredients: 1-3, 1-6 beta glucan from Saccharomyces cerevisiae, vitamin C incorporated in citrus pulp; inactive Lactobacillus bulgaricus combined with vitamin D3, para amino benzoic acid, ferrous fumerate, magnesium citrate, zinc citate, potassium iodide, sodium borate, copper sulphate, manganese chloride, and sodium molybdate; vitamin E combined in vegetable oil; niacin, pantothenic acid, thiamin, riboflavin, vitamin B6 as P5P, beta carotene combined in carrot concentrate; folic acid as L-methylfolate and vitamin K2 (MK-7) combined in alfalfa concentrate; mineral-enhanced yeast providing selenium and chromium; biotin combined in corn meal concentrate; vitamin B12 as methylcobalamin; vegetable stearic acid; tablet coating (vegetable cellulose, glycerine). Lactobacillus bulgaricus is a friendly bacterial inhabitant of the GI tract. It is an effective and totally non allergenic carrier for nutrients.



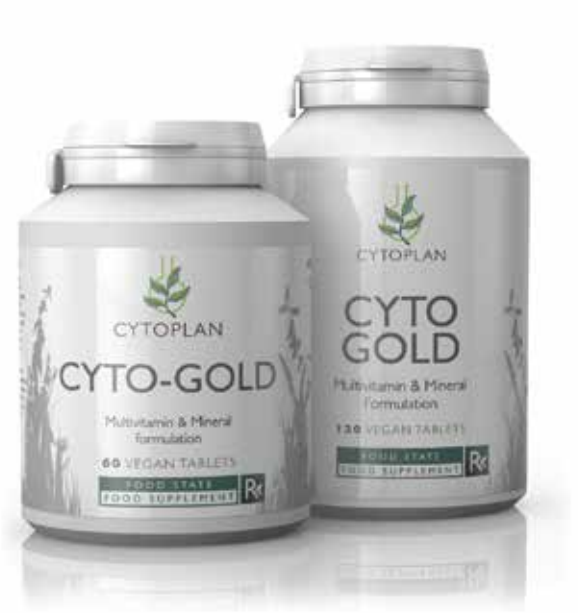
VV FS 120 T

Cyto Gold

This one-a-day Food State™ formula which also includes calcium.

Cyto Gold 1 tablet provides on average:		
Active Nutrient	**Strength**	**%NRV+**
Beta carotene	2.0mg	*
Vitamin D3	20.0µg	400
Vitamin E	5.0mg	42
Vitamin C	20.0mg	25
Thiamin (B1)	1.4mg	127
Riboflavin (B2)	1.6mg	114
Niacin (B3)	16.0mg	100
Vitamin B6 (P5P)	2.0mg	143
L-methylfolate	200.0µg	100
Vitamin B12	1.0µg	40
Biotin	152.0µg	304
Pantothenic acid	6.0mg	100
Vitamin K	60.0µg	80
Calcium	142.0mg	18
Iron	2.0mg	14
Magnesium	50.0mg	13
Zinc	5.0mg	50
Iodine	75.0µg	50
Boron	0.25mg	*
Copper	0.4mg	40
Manganese	0.3mg	15
Selenium	150.0µg	273
Chromium	80.0µg	200
Molybdenum	10.0µg	20
Inositol	2.5mg	*
PABA	5.0mg	*
Choline	2.0mg	*
+NRV = Nutrient Reference Value		
* Indicates no NRV		

Ingredients: Lithothamnium calcareum providing calcium & magnesium; magnesium citrate, inactive Lactobacillus bulgaricus combined with niacin, pantothenic acid, para-amino-benzoic acid, vitamin B6 (P5P), riboflavin, thiamin, vitamin D3, food state vitamin B12, zinc citrate, copper sulphate, manganese chloride, sodium borate, chromium III chloride, potassium iodide and sodium molybdate; vitamin C incorporated in citrus pulp; vitamin E combined in vegetable oil; choline and biotin combined in corn meal concentrate; ferrous fumerate; beta carotene combined in carrot concentrate; inositol, L-methylfolate and vitamin K combined in alfalfa concentrate; mineral-enhanced yeast providing selenium, vegetable stearic acid, tablet coating (vegetable cellulose, glycerine). Lactobacillus bulgaricus is a friendly bacterial inhabitant of the GI tract. It is an effective and totally non allergenic carrier for nutrients.



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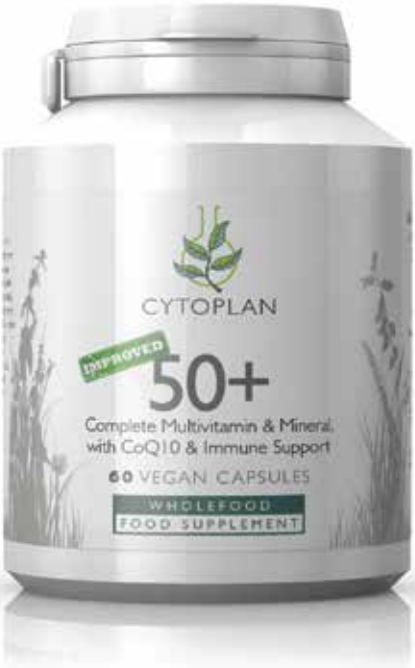
Wholefood 50+

A comprehensive wholefood multi with higher levels of B vitamins, vitamins C and D and trace minerals. Also contains the antioxidant coenzyme Q10; this antioxidant is produced in the body however levels decrease with age (and it is depleted by statin medication).

Improved 50+ 2 capsules provide on average:		
Active Nutrient	**Strength**	**%NRV+**
Beta carotene	3.0mg	*
Vitamin D3	40.0µg	800
Vitamin E	30.0mg	250
Vitamin C	200.0mg	250
Thiamin (B1)	20.0mg	1816
Riboflavin (B2)	20.0mg	1428
Niacin (B3)	16.0mg	100
Vitamin B6 (P5P)	10.0mg	714
Folic Acid as L-methylfolate	200.0µg	100
Vitamin B12 as methylcobalamin	100.0µg	2380
Vitamin B12 as hydroxycobalamin	100.0µg	2380
Biotin	100.0µg	200
Pantothenic acid	50.0mg	834
Vitamin K2 (MK-7)	60.0µg	80
Iron	2.0mg	14
Magnesium	30.0mg	8
Zinc	15.0mg	150
Iodine	150.0µg	100
Boron	0.5mg	*
Copper	1.0mg	100
Manganese	3.0mg	150
Selenium	150.0µg	273
Chromium	160.0µg	400
Molybdenum	90.0µg	180
PABA	10.0mg	*
Beta 1-3, 1-6 Glucan	100.0mg	*
CoQ10 (ubiquinol)	80.0mg	*
+NRV = Nutrient Reference Value		
* Indicates no NRV		

Ingredients: Capsule shell (vegetable cellulose); beta 1-3, 1-6 glucan, coenzyme Q10 (ubiquinol); hydroponically grown cruciferous vegetable (Brassica Juncea) providing: zinc, iron, manganese, copper, selenium, chromium and molybdenum; fruit & vegetable powder blend (carrot, spirulina, alfalfa, artichoke leaf, beetroot, acai berry, acerola) incorporating: vitamin C; vitamin E; pantothenic acid; niacin; beta carotene; PABA; thiamin; P5P; vitamin D3; riboflavin; vitamin K2 (MK-7); methylcobalamin; hydroxycobalamin; folic acid as L-methylfolate, biotin, magnesium citrate, boron and iodine.



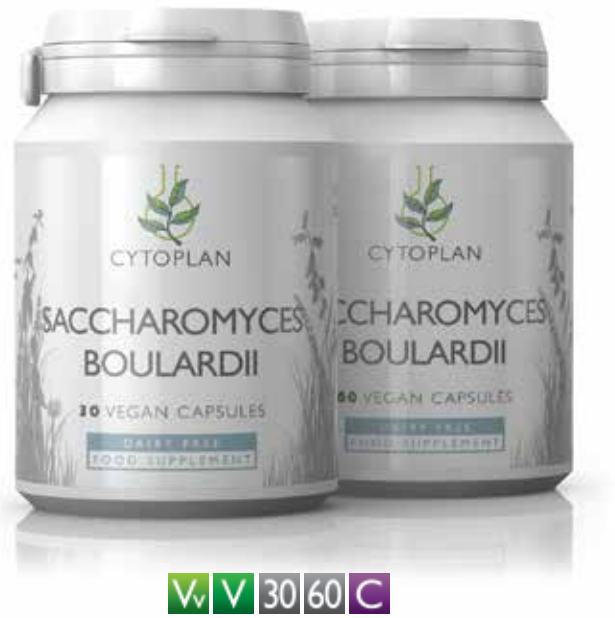
Live bacteria

Research has demonstrated the benefits for multi species of probiotics in reducing inflammation and permeability of the gut which can lead to inflammation.

Sacchromyces Boulardii

For those in whom an imbalance of bacteria or *Candida* is suspected or identified, the use of *Saccharomyces boulardii* may be recommended. This beneficial yeast has been subject to much research with positive outcomes in relation to *Candida* infections, bacterial infections and antibiotic-associated diarrhoea. *Saccharomyces boulardii* is used ideally in combination with a Live Bacteria supplement.

Saccharomyces Boulardii **1 capsule provides on average:**	
Active Ingredient	**Strength**
Saccharomyces boulardii	250mg (5 billion CFU)
Ingredients: Saccharomyces boulardii; capsule shell (vegetable cellulose).	
Suggested Intake: See "Recommended use" above.	
Suitable for: Vegetarians, vegans, and for people with Candida, yeast and lactose sensitivities.	
Contraindications: None.	
Non-Active Ingredients: Capsule shell (vegetable cellulose).	
Non GM & Free From: Wheat, starch, gluten, yeast, soy, dairy, added sugars, colourings, flavourings & preservatives.	
Storage: Keep cool, dry & out of direct sunlight. No need to refrigerate. Use within two months of opening.	

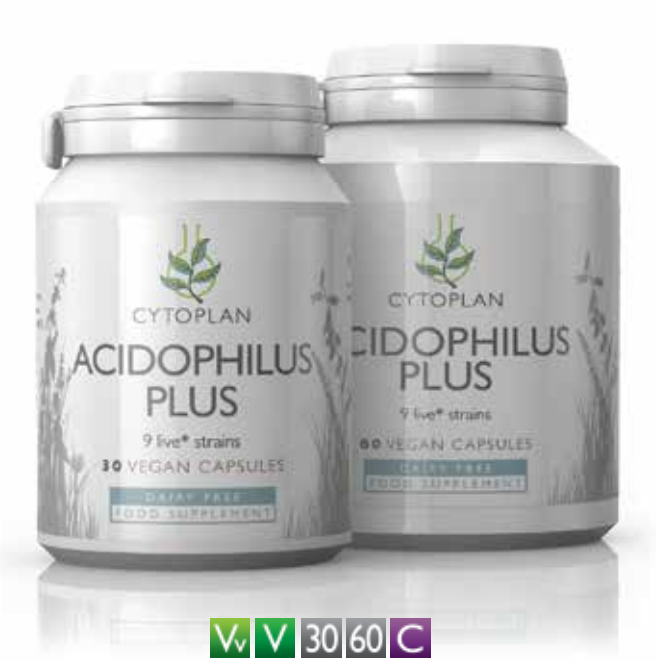


Acidophilus Plus

Contains 9 strains of live bacteria. All our Live Bacteria products are grown on molasses and thus suitable for vegans.

Alternative products: Fos-A-Dophilus, Cytobiotic Active

Acidophilus Plus **1 capsule provides on average:**
35mg of fructo-oligosaccharides and a culture of 3.5 billion live* bacteria consisting of equal quantities of:
Lactobacillus acidophilus
Lactobacillus rhamnosus
Lactococcus lactis
Bifidobacterium breve
Bifidobacterium bifidum
Bifidobacterium longum
Streptococcus thermophilus
Lactobacillus casei
Lactobacillus plantarum
Ingredients: Lactobacillus acidophilus; Lactococcus lactis; Lactobacillus rhamnosus; Lactobacillus casei; Lactobacillus plantarum; Bifidobacterium breve; Bifidobacterium bifidum; Bifidobacterium longum; Streptococcus thermophilus; Fructo-oligosaccharides (FOS); capsule shell (vegetable cellulose); potato starch, ascorbic acid. *Live viable dehydrated bacteria.
Suggested Intake: 1-2 capsules daily, or take as directed by a practitioner.
Suitable for: Vegetarians, vegans and for people with Candida, yeast and lactose sensitivities.
Contraindications: None.
Non-Active Ingredients: Capsule shell (vegetable cellulose), potato starch, ascorbic acid.
Non GM & Free From: Dairy; wheat; yeast; gluten, lactose; added sugars, colourings, flavourings & preservatives.
Storage: Keep cool, dry & out of direct sunlight. No need to refrigerate.

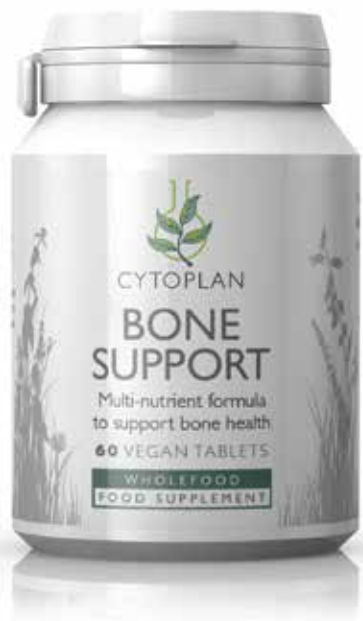


Vitamins and Minerals

Bone Support

Bone Support can be taken alongside a multivitamin/mineral formula. It contains key nutrients to support healthy bone mineral density. Calcium is not the only nutrient needed for bone health. In addition, high calcium intake has been linked to increased levels of urinary calcium which can be detrimental and deposition in soft tissues where it has been linked to atherosclerosis.

Bone Support 2 tablets provide on average:		
Active Nutrient	**Strength**	**%NRV+**
Calcium (from calcified seaweed)	150.0mg	19
Magnesium	112.5mg	30
Isoflavones	100.0mg	*
Vitamin K2 (MK-7)	60.0µg	80
Vitamin D3	30.0µg	600
Also contains amounts of 74 trace minerals from the calcified seaweed.		
+NRV = Nutrient Reference Value		
* Indicates no NRV		
Ingredients: Magnesium citrate, microcrystalline cellulose, lithothamnium calcareum, dicalcium phosphate dihydrate, soy isoflavones, vegetable stearic acid, sodium carboxymethylcellulose, vitamin K2 (MK-7) and vitamin D3.		
Suggested Intake: 1-2 tablets daily with food, or take as directed by a practitioner.		
Suitable for: Vegetarians, vegans and for people with Candida and yeast sensitivities.		
Not suitable for: People with soy sensitivities.		
Contraindications: None.		
Non-Active Ingredients: Microcrystalline cellulose, dicalcium phosphate dihydrate, vegetable stearic acid, sodium carboxymethylcellulose.		
Non GM & Free From: Wheat, starch, gluten, yeast, dairy, added sugars, colourings, flavourings & preservatives.		
Storage: Keep cool, dry & out of direct sunlight.		



Wholefood Cherry C

Wholefood Cherry C contains pure powdered acerola cherry. It is gentle and can be taken between meals even on an empty stomach. Hence it is ideal for people who eat at irregular times and sports people who need regular intakes of vitamins to replace losses after physical exertion

Alternative products: Food State™ vitamin C, Food State™ vitamin C Extra, Vitamin C 1000 mg, Vitamin C as calcium ascorbate – powder or tablets

Wholefood Cherry-C
1 capsule provides on average:

Active Nutrient	Strength	%NRV+
Whole Acerola Cherry Powder	800.0mg	*
providing Vitamin C	200.0mg	250

+NRV = Nutrient Reference Value

* Indicates no NRV

Ingredients:
Whole acerola cherry powder providing naturally-occurring bioflavonoids, capsule shell (vegetable cellulose).

Suggested Intake:
1-2 capsules daily, or take as directed by a practitioner.

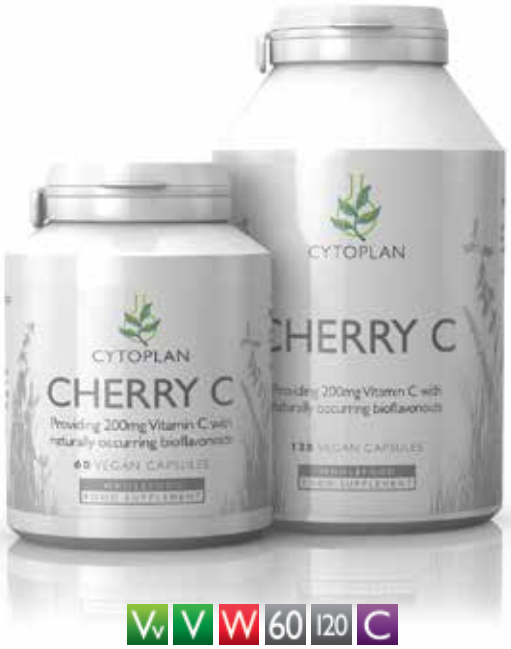
Suitable for: Vegetarians, vegans and for people with Candida and yeast sensitivities.

Contraindications: None.

Non-Active Ingredients:
Vegetable cellulose (capsule shell)

Non GM & Free From:
Wheat, starch, gluten, dairy, added sugars, colourings, flavourings & preservatives.

Storage: Keep cool, dry & out of direct sunlight.



Vitamin D3 62.5 µg & 15 µg

Vitamin D3 62.5 µg & 15 µg – higher and lower potency formulas are available. The high potency formula can be taken alongside one of our multis to boost levels for a short period of time (eg for a few months or over the winter). The lower dose formula is suitable for children or to take all year round in conjunction with a multi. As vitamin D is fat soluble, it is best taken with a fat containing meal (ie main meal). Our vitamin D is sourced from lichen and is thus suitable for vegans.

Vitamin D3 62.5 µg - Vegan
1 tablet provides on average:

Active Nutrient	Strength	%NRV+
Vitamin D3	62.5µg (2500i.u.)	1250

+NRV = Nutrient Reference Value

Ingredients:
Maltodextrin, vegan vitamin D3 preparation from lichen (starch, sucrose, silicon dioxide, d-alpha tocopherol, ascorbyl palmitate, cholecalciferol), stearic acid.

Vitamin D3 15 µg - Vegan
1 tablet provides on average:

Active Nutrient	Strength	%NRV+
Vitamin D3	15µg (600i.u.)	300

+NRV = Nutrient Reference Value

Ingredients:
Maltodextrin, vegan vitamin D3 preparation from lichen (starch, sucrose, silicon dioxide, d-alpha tocopherol, ascorbyl palmitate, cholecalciferol), stearic acid.

Suggested Intake:
1 tablet daily, or take as directed by a practitioner.

Suitable for: Vegans and Vegetarians and for people with Candida and yeast sensitivities.

Contraindications: None.

Non-Active Ingredients:
Maltodextrin, starch, sucrose, silicon dioxide, d-alpha tocopherol, ascorbyl palmitate, stearic acid.

Non GM & Free From:
Wheat, gluten, yeast; lactose; dairy, colours, flavours and preservatives.

Storage: Keep cool, dry and out of direct sunlight.

Wholefood Calcium

Wholefood Calcium is an organic multi-mineral seaweed product harvested off the coast of Ireland.

Wholefood Calcium 2 capsules provide on average:		
Active Nutrient	**Strength**	**%NRV+**
Calcium	400.0mg	50
Magnesium	37.0mg	10
Iodine	28.0µg	19
Also contains 66 other naturally-occurring sea minerals		
+NRV = Nutrient Reference Value		

Ingredients:
Calcified seaweed (lithothamnium calcareum) providing: calcium, magnesium, sulphur, sodium, phosphorus, iron, potassium, manganese, boron, iodine, zinc, copper, selenium and cobalt; capsule shell (vegetable cellulose)

Suggested Intake:
1-2 capsules daily, or take as directed by a practitioner.

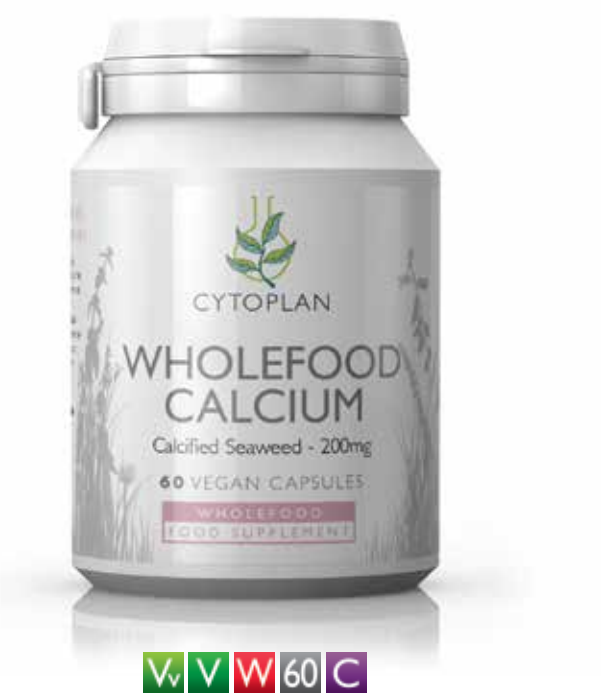
Suitable for: Vegetarians, vegans and for people with Candida and yeast sensitivities.

Contraindications: None.

Non-Active Ingredients:
Capsule shell (vegetable cellulose).

Non GM & Free From:
Wheat, starch, gluten, dairy, added sugars, colourings, flavourings & preservatives.

Storage: Keep cool, dry & out of direct sunlight.



Biofood Magnesium

Biofood Magnesium is an organic matrix form of magnesium complete with natural amino acid carriers to ensure transport to sites of need within the body. Magnesium works with calcium and is a major element required for bone growth.

Alternative product: Magnesium citrate

Biofood Magnesium 1 tablet provides on average:		
Active Nutrient	**Strength**	**%NRV+**
Magnesium	100.0mg	27
+NRV = Nutrient Reference Value		

Ingredients:
Magnesium citrate combined in inactive Lactobacillus bulgaricus microcrystalline cellulose, vegetable stearic acid, tablet coating (vegetable cellulose, glycerine). Lactobacillus bulgaricus is a friendly bacterial inhabitant of the GI tract. It is an effective and totally non allergenic carrier for nutrients.

Suggested Intake:
1-2 tablets daily, or take as directed by a practitioner.

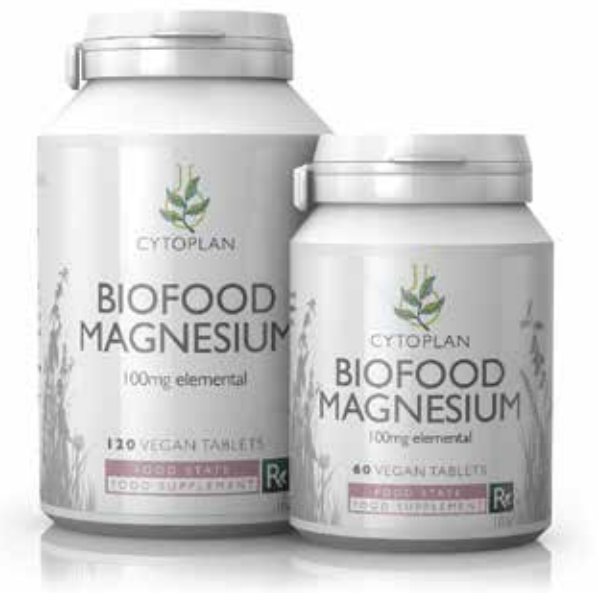
Suitable for: Vegetarians, vegans and for people with Candida and yeast sensitivities.

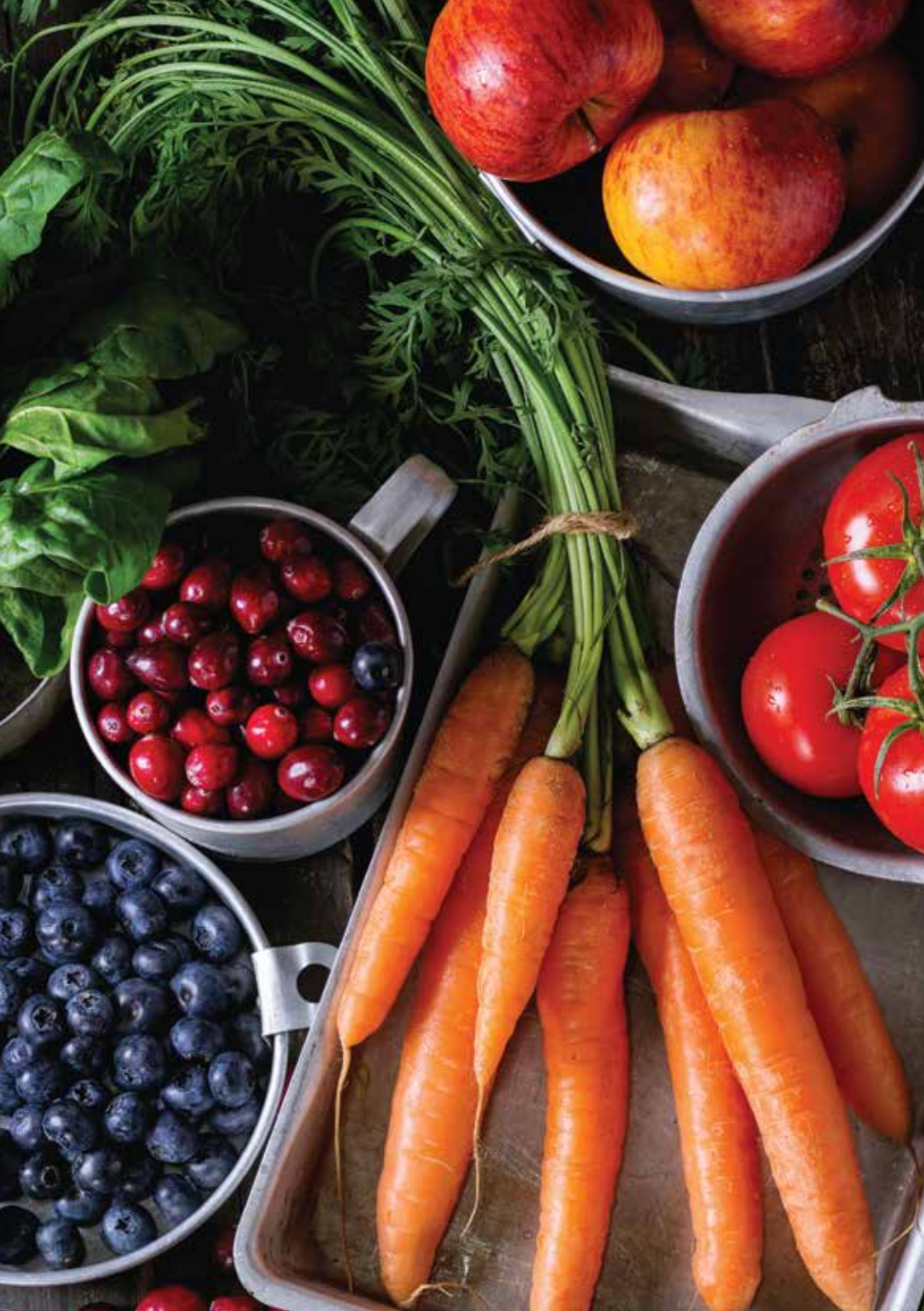
Contraindications: None.

Non-Active Ingredients: Microcrystalline cellulose, vegetable stearic acid, tablet coating (vegetable cellulose, glycerine).

Non GM & Free From:
Yeast, wheat; starch, gluten, dairy, added sugars, colourings, flavourings & preservatives.

Storage: Keep cool, dry & out of direct sunlight.





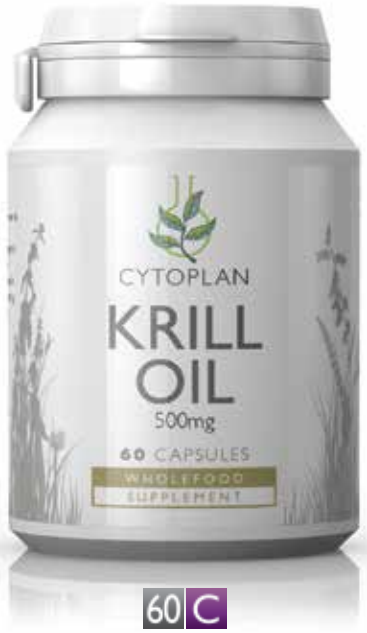
Fatty Acids

Krill Oil

Krill Oil contains the omega 3 fatty acids EPA and DHA. The omega fatty acids in Krill are presented attached to phospholipids which help absorption of the omega 3 fatty acids in Krill oil; they are thus better absorbed compared to fish oil. Krill also provides the added benefit of being naturally rich in astaxanthin a powerful antioxidant.where it has been linked to atherosclerosis.

Alternative products: High potency fish oil capsules, Lem-03 liquid, Organic flaxseed oil

Krill Oil 2 capsules provides on average:		
Active Nutrient	**Strength**	**%NRV+**
Krill Oil	1000.0mg	*
Which provides		
Vitamin A	100.0iu	2%
Phospholipids	420.0mg	*
EPA	150.0mg	*
DHA	90.0mg	*
Astaxanthin	1.5mg	*
+NRV = Nutrient Reference Value		
* Indicates no NRV		
Ingredients: Krill oil, capsule shell, (fish gelatine, glycerine, water & lemon oil coating).		
Suggested Intake: 1-2 capsules daily, or take as directed by a practitioner.		
Suitable for: People with Candida and yeast sensitivities.		
Contraindications: If there is any deficiency of the liver, or if you are on antithrombotic drugs (e.g. Warfarin or Heparin), please consult a doctor first and take no more than 1 capsule per day. This product is derived from shellfish and therefore should not be taken by people with sensitivities to shellfish or fish.		
Non-Active Ingredients: Capsule shell (fish gelatine, glycerine, water, lemon oil coating).		
Non GM & Free From: Wheat, starch, gluten, yeast, soy, dairy, added sugars, colourings, flavourings & preservatives.		
Storage: Keep cool, dry & out of direct sunlight.		

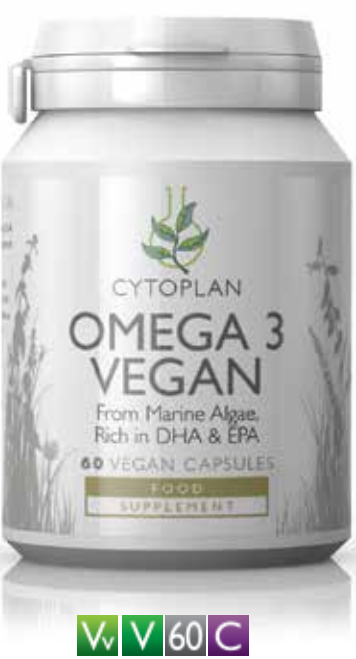


Omega-3 Vegan

Omega-3 Vegan provides DHA and EPA from a marine algal source. It is therefore suitable for vegetarians and vegans who may find it difficult to obtain sufficient omega-3 fatty acids from their diet.

Alternative product: Organic flaxseed oil

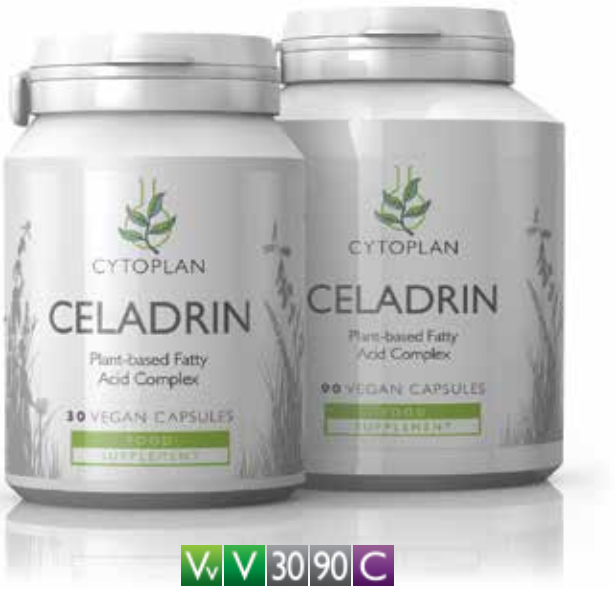
Omega 3 Vegan **2 capsules provides on average:**	
Active Nutrient	**Strength**
Vegan Omega 3	500.0mg
Which provides	
EPA	166.0mg
DHA	334.0mg
Ingredients: Schizochytrium sp. from marine algae providing DHA & EPA, soft gel capsule (modified cornstarch, glycerol) tocopherol (antioxidant), sunflower oil, ascorbyl palmitate.	
Suggested Intake: 1-2 capsules daily, or take as directed by a practitioner.	
Suitable for: Vegetarians, vegans, and for people with Candida and yeast sensitivities.	
Contraindications: If there is any deficiency of the liver, or if you are on antithrombotic drugs (e.g. Warfarin or Heparin), please consult a doctor first and take no more than 1 capsule per day.	
Non-Active Ingredients: Soft gel capsule (modified cornstarch, glycerol) tocopherol (antioxidant), sunflower oil, ascorbyl palmitate.	
Non GM & Free From: Wheat, gluten, yeast, soy, dairy, added sugars, colourings, flavourings & preservatives.	
Storage: Keep cool, dry & out of direct sunlight.	



Celadrin

Celadrin is a plant based nutritional supplement helpful for joint pain, mobility, flexibility and inflammation, particularly for small joints such as hands and feet. Celadrin is a patented combination of fatty acids which beneficially enhances the integrity of cell membranes in the body, thus subduing the inflammatory process and reducing pain.

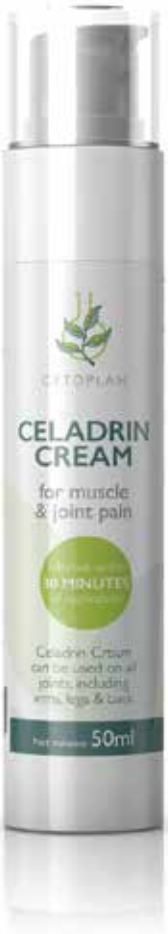
Celadrin 1 capsule provides on average:	
Active Ingredient	**Strength**
Celadrin Providing 52% Esterified Fatty Acids	400mg
Ingredients: Celadrin oil base (esterified fatty acids of plants oils, from palm, palm kernel, olive, nutmeg, coconut and unsaturated vegetable oils), capsule shell (vegetable cellulose).	
Suggested Intake: 2 capsules daily for acute needs, reducing to 1 capsule daily as needed for maintenance, or take as directed by a practitioner.	
Suitable for: Vegetarians, vegans and for people with Candida and yeast sensitivities.	
Contraindications: None.	
Non-Active Ingredients: Capsule shell (vegetable cellulose).	
Non GM & Free From: Wheat, starch, yeast, gluten, soy, dairy, added sugars, colourings, flavourings & preservatives.	
Storage: Keep cool, dry & out of direct sunlight.	



Celadrin Cream

Celadrin Cream can be applied to affected areas and is effective within 30 minutes of application. An innovative combination of modern and traditional ingredients for muscle and joint pain. Celadrin cream can be used alongside Celadrin capsules for best effect.

Celadrin Cream
Ingredients: Aqua, Cetyl tallowate, propylene glycol, Cetearyl alcohol, Isoproyl myristate, glycerin, Dimethicone, stearic acid, tocopherol, Boswellia serrata resin extract, Butyrospermum parkii butter, Olea europaea fruit oil, Simmondsia chinensis seed oil, eucalyptol, Mentha arvensis leaf oil, menthol, Capsaicin, carbomer, sodium lauryl sulfate, sodium sulfate cetearyl, BHT, Triethanolamine, citric acid , Methylparaben, disodium EDTA, d-limonene*, linadool*. *ingredients essential oils.
Suggested Usage: Celadrin Cream can be used on all joints, including arms, legs & back. Apply Celadrin Cream to the affected area, gently massaging in a circular motion.
Suitable for: People with Candida and yeast sensitivities.
Contraindications: Avoid contact with eyes. If contact is made with eyes, flush with copious amounts of water.
Non-Active Ingredients: Aqua, cetyl tallowate, propylene glycol, cetearyl alcohol, isoproyl myristate, glycerin, dimethicone, stearic acid, tocopherol, carbomer, sodium lauryl sulfate, sodium sulfate cetearyl, BHT, Triethanolamine, citric acid, Methylparaben , disodium EDTA, d-limonene*, linadool*.
Non GM & Free From: Wheat, yeast; soy, starch, gluten, dairy & added colourings.
Storage: Keep cool, dry, out of direct sunlight and out of reach of children. Once opened use within 3 months.

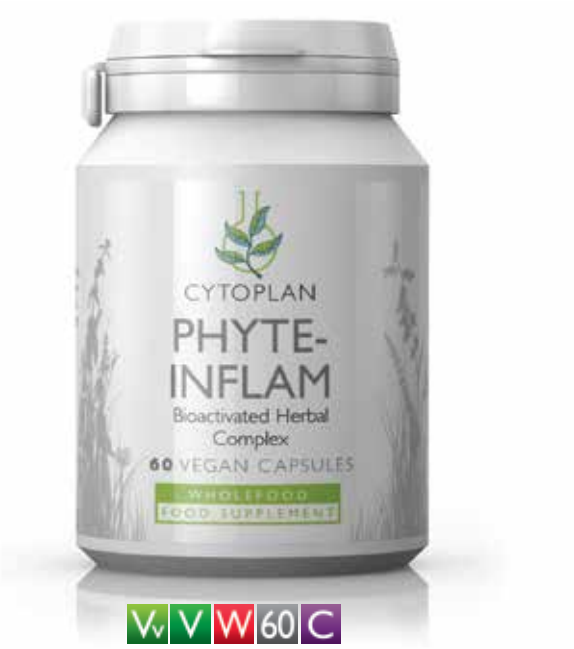


Other products

Phyte-Inflam

Phyte-Inflam is a combination of curcumin, ginger and piperine which collectively bestow a wide range of anti-inflammatory properties. It is used for pain and inflammation. Contraindications: If taking prescribed medications check for potential interactions.

Phyte-Inflam 1 capsule provides on average:		
Active Nutrient	**Strength**	**%NRV+**
Curcumin (95% curcuminoids)	250.0mg	*
Ginger root (5% gingerols)	150.0mg	*
Piperine	2.5mg	*
+NRV = Nutrient Reference Value		
* Indicates no NRV		
Ingredients: Curcumin, ginger root, capsule shell (vegetable cellulose), piperine.		
Suggested Intake: 1-2 capsules daily with food, or take as directed by a practitioner.		
Suitable for: Vegetarians, vegans and for people with Candida and yeast sensitivities.		
Contraindications: Pregnant and lactating women and people on medication should consult a qualified health professional before using this product.		
Non-Active Ingredients: Capsule shell (Vegetable cellulose).		
Non GM & Free From: Wheat, starch, gluten, yeast, soy, dairy,added sugars, colours, flavours & preservatives.		
Storage: Keep cool, dry & out of direct sunlight.		



Bromelain

Bromelain is a natural plant enzyme derived from pineapple which has proteolytic activity (ie breaks down proteins). It is used as an anti-inflammatory when taken between meals.

Bromelain 1 tablet provides on average:		
Active Nutrient	**Strength**	**%NRV+**
Bromelain	100.0mg	*
+NRV = Nutrient Reference Value		
* Indicates no NRV		

Ingredients:
Bromelain, dicalcium phosphate, microcrystalline cellulose, vegetable stearic acid, silicon dioxide.

Suggested Intake: 1 tablet before a meal, up to 3 times a day, or take as directed by a practitioner.

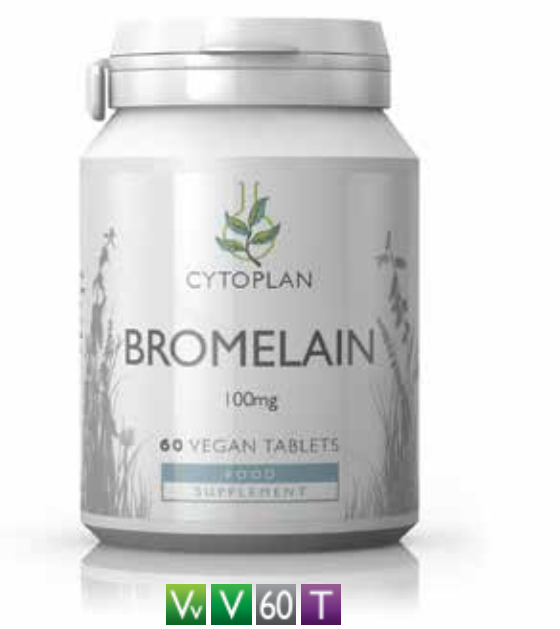
Suitable for: Vegetarians, vegans and for people with Candida and yeast sensitivities.

Contraindications:
Not recommended for pregnant or lactating women. Do not take if peptic ulcer, hiatus hernia or any GI tract inflammation is present or suspected.

Non-Active Ingredients:
Dicalcium phosphate, microcrystalline cellulose, vegetable stearic acid, silicon dioxide.

Non GM & Free From:
Wheat, yeast, starch, gluten, soy, dairy, added sugars, colourings, flavourings & preservatives.

Storage: Keep cool, dry & out of direct sunlight.



Phytoshield

Phytoshield is a very potent and powerful phyto-antioxidant nutrient formula containing high levels of flavonoids and carotenoids. Each capsule has an ORAC (Oxygen Radical Absorbance Capacity) score of 5,000 units. This shows exceptionally high antioxidant activity, when you consider that 5 portions of fruit and vegetables yield only 1,500 ORAC units. Most people ingest on average 140mg flavonoids per day, against a recommended level of 650mg for optimum health; likewise, with carotenoids the average intake is 5mg daily, against recommendations of 20mg.

Phytoshield
1 capsule provides on average:

Active Nutrient	Strength	%NRV+
Beta Carotene	2.0mg	*
Quercetin	75.0mg	*
Broccoli Powder (0.5% Sulforaphane)	60.0mg	*
Green Tea Extract (95%Polyphenols)	50.0mg	*
Grape Seed Extract (95% OPCs)	50.0mg	*
Ginger Extract 5% Gingerols	50.0mg	*
Blueberry Extract 4:1	40.0mg	*
Bilberry Extract (25% anthocyanosides)	40.0mg	*
Curcumin Extract (95% Curcuminoids)	40.0mg	*
Lycopene	5.0mg	*
Lutein	5.0mg	*
(Providing Zeaxanthin)	200.0µg	*

+NRV = Nutrient Reference Value

* Indicates no NRV

Ingredients: Capsule shell (vegetable cellulose), quercetin, broccoli powder, green tea extract, grape seed extract, ginger extract, blueberry extract, bilberry extract, curcumin extract, lycopene, lutein (providing zeaxanthin), carrot concentrate providing beta carotene.

Suggested Intake:
1 capsule daily, or take as directed by a practitioner.

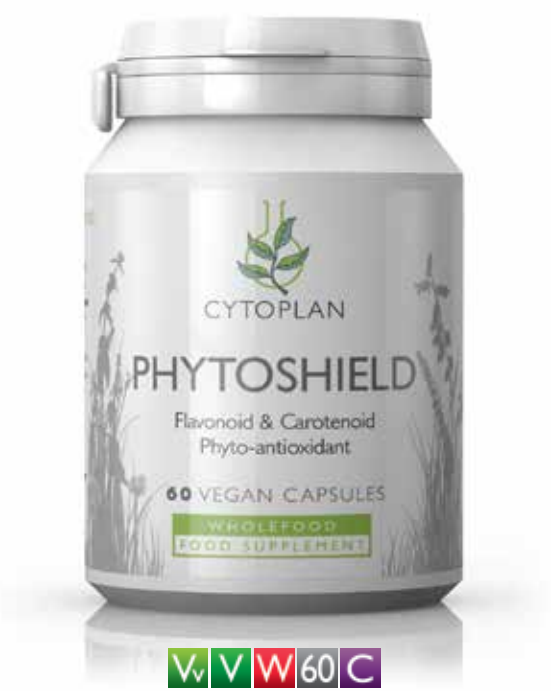
Suitable for: Vegetarians, vegans and for people with Candida and yeast sensitivities.

Contraindications: None.

Non-Active Ingredients:
Capsule shell (vegetable cellulose).

Non GM & Free From:
Wheat, starch, gluten, yeast, dairy, added sugars, colourings, flavourings & preservatives.

Storage: Keep cool, dry & out of direct sunlight.



MSM

MSM (methylsulphonylmethane) is an organic form of sulphur. High levels of sulphur are found in the muscles, skin and bones as well as concentrated amounts in the hair and nails. Sulphur is a component of keratin, collagen and elastin providing flexibility, tone and strength to muscles, bones, joints (as well as skin, hair and nails).

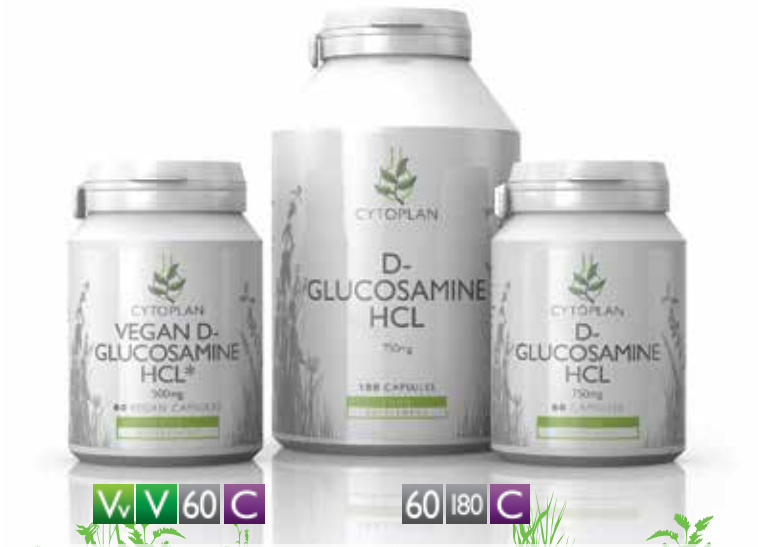
MSM 1 tablet provides on average:		
Active Nutrient	**Strength**	**%NRV⁺**
MSM (Methyl-sulphonylmethane)	1000.0mg	*
+NRV = Nutrient Reference Value		
* Indicates no NRV		
Ingredients: Methylsulphonylmethane, microcrystalline cellulose, silicon dioxide.		
Suggested Intake: 1-3 tablets daily, or take as directed by a practitioner.		
Suitable for: Vegetarians, vegans and for people with Candida and yeast sensitivities.		
Contraindications: Not suitable for use during pregnancy or breast-feeding.		
Non-Active Ingredients: Microcrystalline cellulose, silicon dioxide.		
Non GM & Free From: Wheat, gluten, yeast, soy, dairy, added colourings; sweeteners & preservatives.		
Storage: Keep cool, dry & out of direct sunlight.		

Glucosamine Hydrochloride

We have both vegan and non vegan products. Our non vegan glucosamine is derived from the shells of shellfish. Our vegan glucosamine is derived from the fungus *Aspergillus niger*.

VEGAN Glucosamine Hydrochloride 1 capsule provides on average:		
Active Nutrient	**Strength**	**%NRV⁺**
Glucosamine Hydrochloride	500.0mg	*
+NRV = Nutrient Reference Value		
* Indicates no NRV		
Ingredients: Vegan-source glucosamine hydrochloride (from the fungus Aspergillus niger), capsule shell, (vegetable cellulose), microcrystalline cellulose.		
Suggested Intake: 1-3 capsules daily with food, or take as directed by a practitioner.		
Suitable for: Vegetarians and Vegans and for people with Candida and yeast sensitivities.		
Not suitable for: Pregnant or lactating women.		
Contraindications: None.		
Non-Active Ingredients: Capsule shell (vegetable cellulose), microcrystalline cellulose.		
Non GM & Free From: Wheat, starch, gluten, yeast, dairy, added sugars, colourings, flavourings & preservatives.		
Storage: Keep cool, dry & out of direct sunlight.		

Glucosamine Hydrochloride 1 capsule provides on average:		
Active Nutrient	**Strength**	**%NRV⁺**
Glucosamine Hydrochloride	750.0mg	*
+NRV = Nutrient Reference Value		
*** Indicates no NRV**		
Ingredients: Glucosamine hydrochloride, capsule shell, (vegetable cellulose), microcrystalline cellulose.		
Suggested Intake: 1-2 capsules daily with food, or take as directed by a practitioner.		
Suitable for: People with Candida and yeast sensitivities.		
Not suitable for: Vegetarians, vegans, pregnant or lactating women & people with allergies to shellfish.		
Contraindications: None.		
Non-Active Ingredients: Vegetable cellulose, microcrystalline cellulose.		
Non GM & Free From: Wheat, starch, gluten, yeast, dairy, added sugars, colourings, flavourings & preservatives.		
Storage: Keep cool, dry & out of direct sunlight.		



Phyto-Flavone

A source of 100% natural isoflavones. Research has shown a benefit in relation to maintaining bone density in post-menopausal women.

Phyto-Flavone 1 capsule provides on average:		
Active Nutrient	**Strength**	**%NRV+**
Soy Germ	500.0mg	*
yielding Soy Isoflavones	50.0mg	*
providing Daidzein	27.5mg	*
& Glycitein	16.7mg	*
& Genistein	5.8mg	*
+NRV = Nutrient Reference Value		
* Indicates no NRV		

Ingredients: Soy **germ powder** (providing: daidzein, glycitein and genistein), capsule shell (vegetable cellulose), microcrystalline cellulose, silicon dioxide.

Suggested Intake: 1-3 capsules daily, or take as directed by a practitioner.

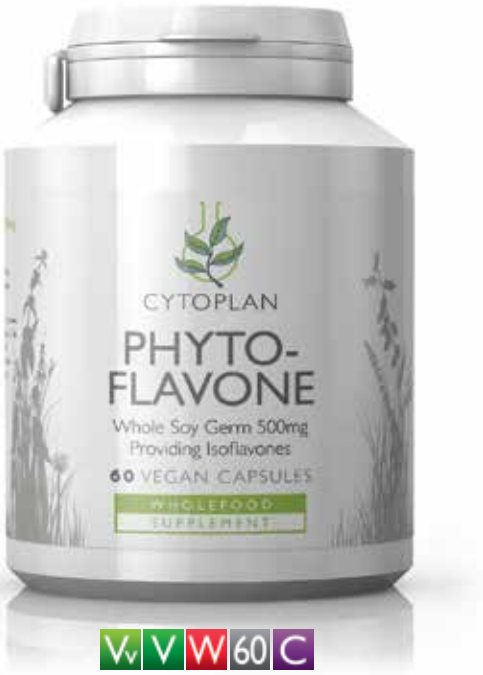
Suitable for: Vegetarians, vegans and for people with Candida and yeast sensitivities.

Contraindications: Not suitable for those with an allergy to soy.

Non-Active Ingredients: Capsule shell (vegetable cellulose), microcrystalline cellulose.

Non GM & Free From:
Wheat, starch, gluten, yeast, dairy, added sugars, colourings, flavourings & preservatives.

Storage: Keep cool, dry & out of direct sunlight.



Methyl Factors

A formula designed to provide methyl donor nutrients to help those with elevated homocysteine and other conditions that occur as a result of impaired methylation.

Methyl Factors 1 tablet provides on average:		
Active Nutrient	**Strength**	**%NRV+**
Trimethylglycine (TMG - Betaine)	500.0mg	*
Riboflavin	3.0mg	214
Vitamin B6 (as Pyridoxal 5 Phosphate)	15.0mg	1071
Folic Acid (as L-Methylfolate)	800.0µg	400
Vitamin B12 (as Methylcobalamin)	1000.0µg	40000
Zinc	5.0mg	50
+NRV = Nutrient Reference Value		
* Indicates no NRV		

Ingredients: Trimethylglycine (TMG, also known as Betaine), microcrystalline cellulose, dicalcium phosphate, vitamin B12 as methylcobalamin, vitamin B6 as pyridoxal 5 phosphate, vegetable stearic acid, zinc citrate, tablet coating (vegetable cellulose), silicon dioxide, riboflavin, folic acid as L-methylfolate.

Suggested Intake: 1 tablet daily with food, or take as directed by a practitioner.

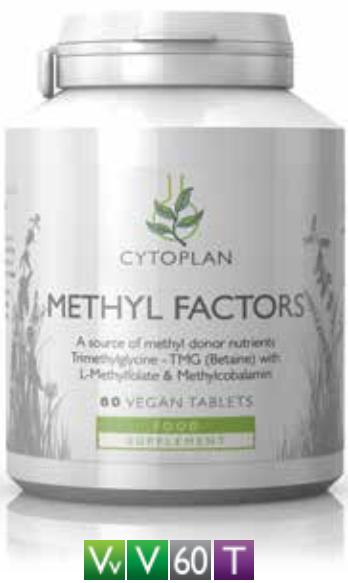
Suitable for: Vegetarians, vegans and for people with Candida and yeast sensitivities.

Contraindications: None.

Non-Active Ingredients: Microcrystalline cellulose, dicalcium phosphate, vegetable stearic acid, tablet coating (vegetable cellulose), silicon dioxide.

Non GM & Free From:
Wheat, gluten, yeast, soy, dairy, added sugar, colourings, flavourings, preservatives.

Storage: Keep cool, dry & out of direct sunlight.

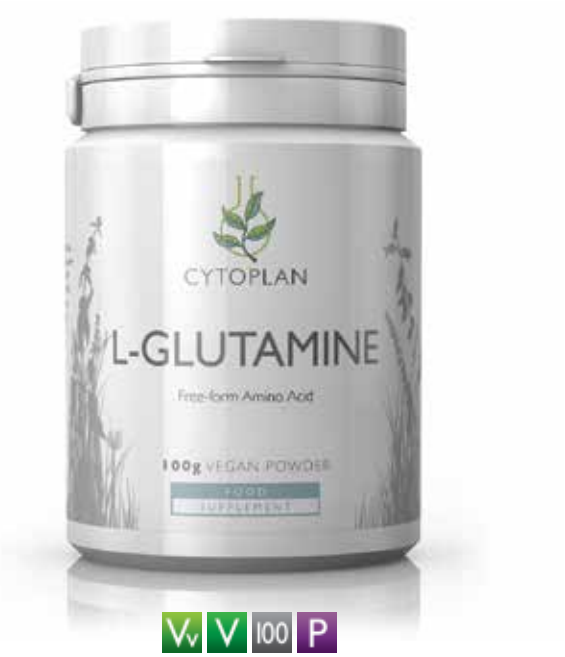


The formulation will be changing in autumn 2016 to 400 mg TMG and will include riboflavin-5-phosphate

Amino Acids – L-Glutamine and L-Argine plus

Amino Acids – L-Glutamine and L-Argine plus is often used to aid recovery after exercise; it is the most abundant free amino acid in muscle cells. Requirements can increase after surgery and trauma. L-arginine has been shown to improve circulation and increase vasodilation. It is used to improve lean muscle mass and support wound healing.

L-Glutamine **1 heaped teaspoonful (5g) provides on average:**	
Active Nutrient	**5g**
Pure crystalline free-form L-Glutamine,	
Ingredients: Pure crystalline free-form L-Glutamine.	
Suggested Intake: 1 to 5 grams daily taken in divided doses, ideally half an hour away from food or at bedtime. This slightly sweet powder can be stirred into water or juice or sprinkled on food. If being used to support exercise recovery it should be taken within 2 hours of completion of exercise and the dose for this use can be raised to 10g, or take as directed by a practitioner. A quarter-level teaspoon typically provides 1g L-Glutamine. A heaped teaspoonful provides 5g.	
Suitable for: Vegetarians, vegans and for people with Candida and yeast sensitivities.	
Contraindications: This product is not suitable for children, or pregnant or lactating women. People with cancer should consult their doctor before taking L-Glutamine.	
Non-Active Ingredients: None	
Non GM & Free From: Wheat, starch, yeast, gluten, soy, dairy, added sugars, colourings, flavourings & preservatives.	
Storage: Keep cool, dry & out of direct sunlight.	



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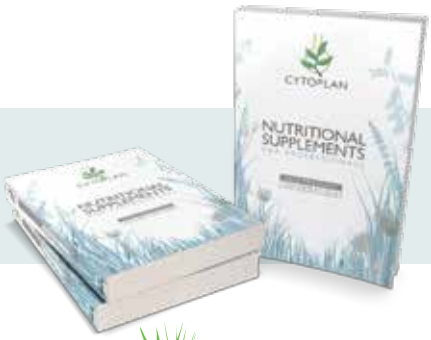

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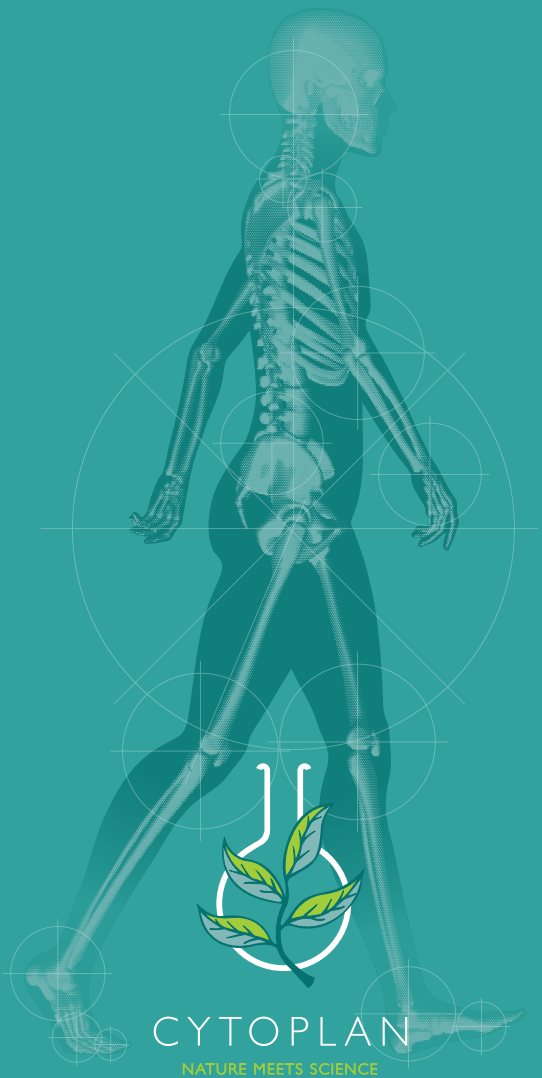

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