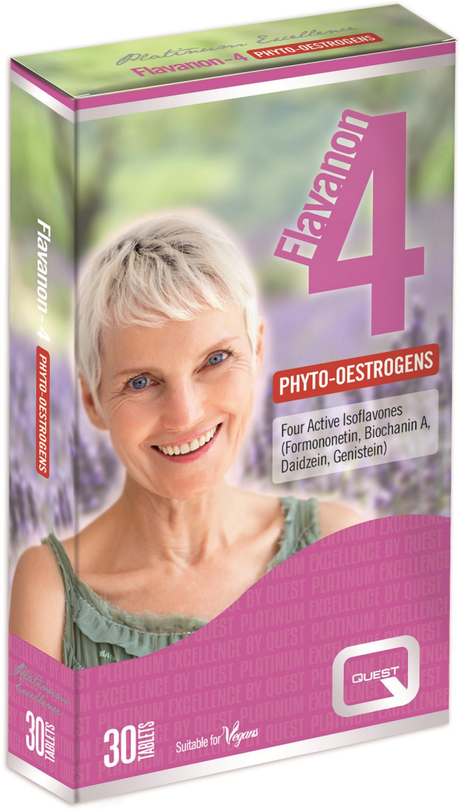
Link up Vitamins, Minerals and Supplements

WEBINAR 5



Flavanon 4

QUEST NUTRAPHARMA

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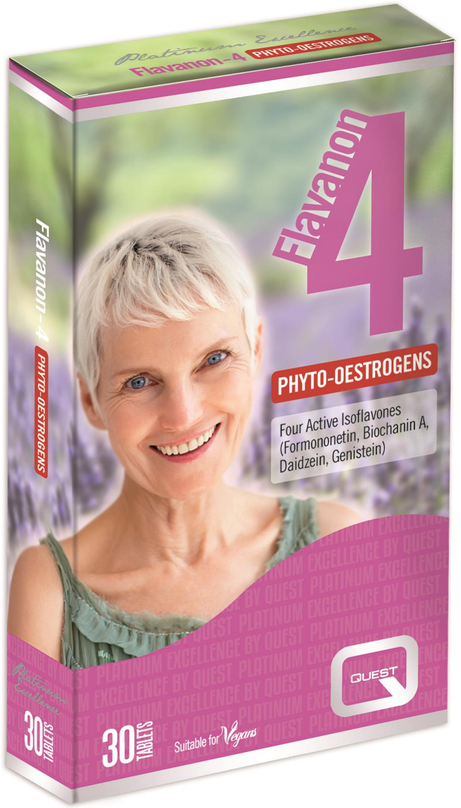


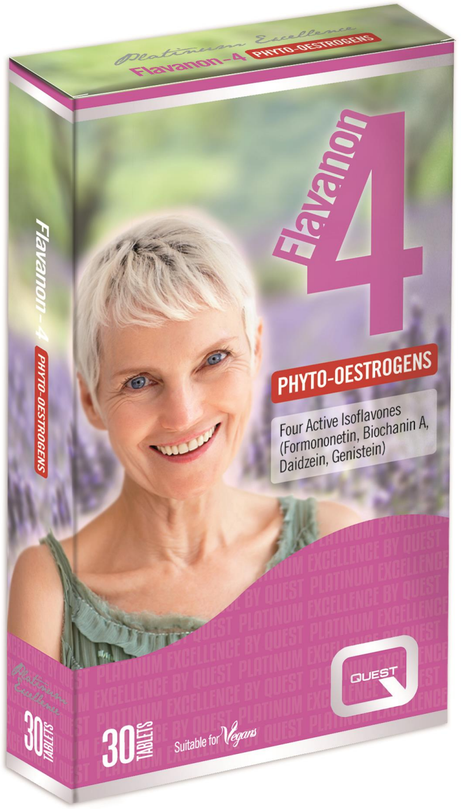
Flavanon 4

Each tablet contains:

500 mg Red Clover blossoms providing 40mg of combined isoflavones:

- Formononetin
- Biochanin A
- Daidzein
- Genistein

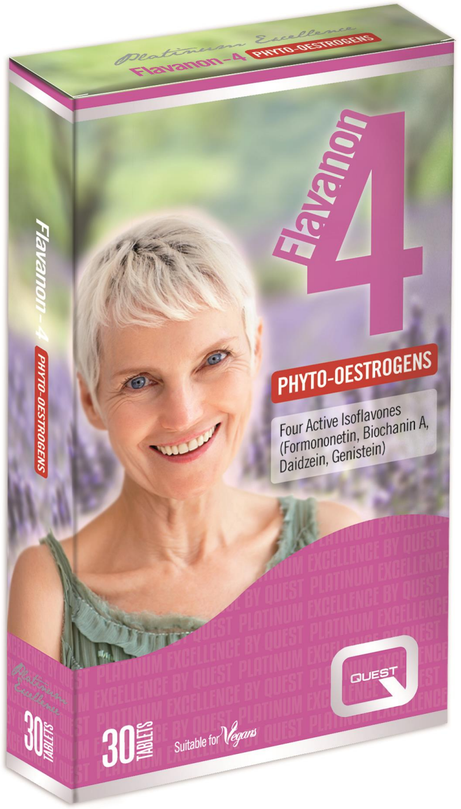
Dose – one to two tablets daily with food



Red Clover

What is it?

- Red clover is a legume
- Similar to soya, it contains phytoestrogens
- Plant-based compounds capable of binding to oestrogen receptors and of producing oestrogenic effects



QUEST NUTRAPHARMA

Red Clover

- Phyto oestrogen use been proposed as an alternative to hormone replacement therapy (HRT) where undesirable side effects occur such as increased risk of stroke, blood clots and heart disease

Red Clover contains several isoflavones including:

- Formononetine
- Biochanon A
- Daidzein
- Genistein

Red Clover

Uses and benefits: Menopause

- Recommended for women of menopausal age who experience symptoms caused by declining levels of oestrogen in the body

- Trials found hot flushes decreased by up to 44% with the use of 80mg of red clover derived isoflavones

  Maturitas. 2002 Jul 25;42(3):187-93. Isoflavones from red clover significantly reduce menopausal hot flush systems compared with placebo.

Red Clover

Uses and benefits: Bone Density

- Various clinical trials support the use of 40mg-80mg of isoflavones daily for the prevention of oestrogen related bone loss

Am J Clin Nutr. 2004 Feb;79(2):362-33. The effect of phytoestrogen isoflavones on bone density in women: a double-blind, randomized, placebo controlled trial. Atkinson C, Compston JE, Day NE, Dowsett M, Bingham SA.

Red Clover

Uses and benefits: Heart Health

- Red clover isoflavones have demonstrated positive vascular effects in clinical studies. Both total serum cholesterol and low-density lipoprotein (LDL) cholesterol levels, as well as triglyceride levels, were decreased significantly in the group receiving phytoestrogens.

J Obstet Gynaecol Res. 2009 Dec;35(6):1091-5. doi: 10.1111/ j.14 47 -0756.20 09.001059 x.
Influence of red clover-derived isoflavones on serum lipid profile in postmenopausal women.
Terzic MM, Dottie J, Maricic 5, Mihailovic T, Tosic-Race B.

Red Clover

Uses and benefits: Breast Cancer Prevention

- Research suggests women with high breast density (as seen on a mammogram) are four to five times more likely to get breast cancer than women with low breast density

Yaghjyan L, Co/ditz GA, Collins LC, et al. Mammographic breast density and subsequent risk of breast cancer in postmenopausal women according to tumor characteristics. J Natl Cancer Inst. 103(15):1179-89, 2011

- Conventional hormone replacement therapies increase mammographic breast density, red clover derived isoflavones did not increase mammographic breast density in a study conducted on 200 women

Breast Cancer Res. 2004;6(3):R170-9. Epub 2004 Feb24. Red-clover-derived isoflavones and mammographic breast density: a double-blind, randomized, placebo-controlled trial [ISRCTN42940165]. Atkinson C, Warren RM, Sala E, Dowsett M, Dunning AM, Healey CS, Runswick 5, Day NE, Bingham SA.

Red Clover

Uses and benefits: Mood and Cognition

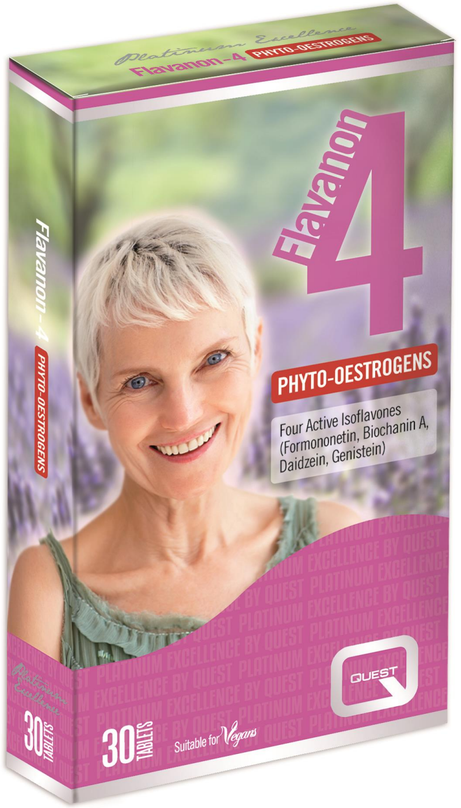
- Studies show and correlation between isoflavones and improved cognitive performance and mood in postmenopausal women

Fertil Steril. 2006 Apr;85(4):972-8. Psychological assessment of the effects of treatment with phytoestrogens on postmenopausal women: a randomized, double-blind, crossover, placebo-controlled study.
Casini ML, Marelli G, Papaleo E, Ferrari A, D'Ambrosia F, Unfer V.

Flavanon 4

May be chosen by:

- Women of menopausal age
- Wanting to manage symptoms associated with this life stage
- For protection of bone density
- For heart health protection
- For mood and cognition
- As an alternative to convention treatments



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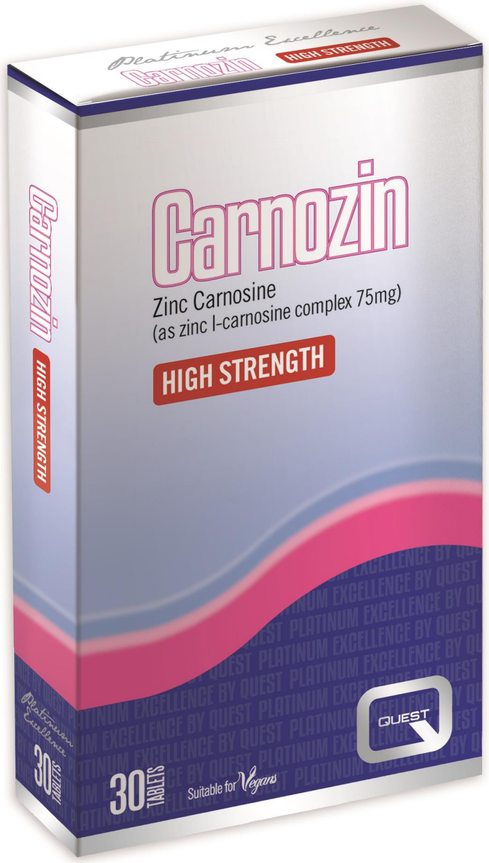
Platinum Excellence
Carnozin
HIGH STRENGTH
Carnozin
Zinc Carnosine
(as zinc l-carnosine complex 75mg)
HIGH STRENGTH
QUEST
30 TABLETS
Suitable for Vegans

Carnozin

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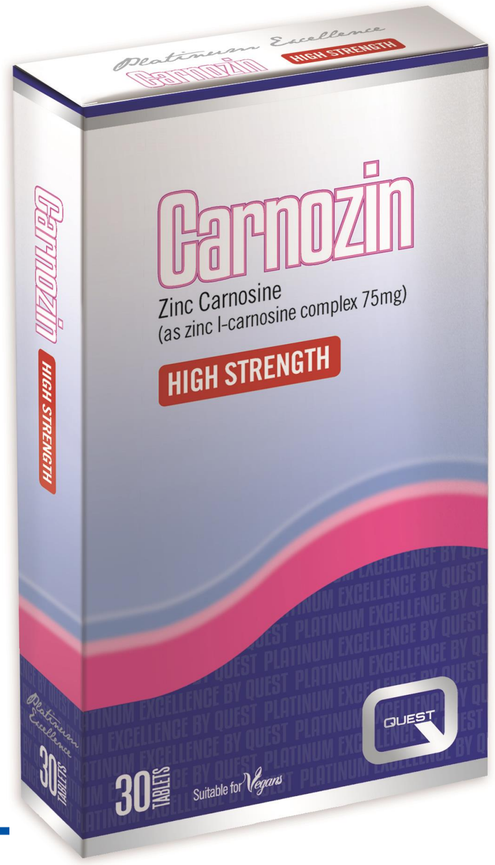

Carnozin

- Zinc and Carnosine complex
- Innovative new highly bio-available chelated formula
- Provides 75mg of zinc carnosine per tablet
- Support for gut healing and repair
- Suitable for Vegetarians and Vegans

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Zinc Carnosine

- Zinc Carnosine is a chelated complex of l-carnosine and zinc.
- L-carnosine (beta-alanyl-L-histidine) is a dipeptide of the amino acids beta-alanine and histidine.
- Zinc carnosine works primarily on the healing of the gastric mucosal lining and dyspeptic symptoms.
- Shows benefit for gastric discomfort and inflammation, protecting and repairing the mucosal stomach lining.
- May help against ulcers and supporting the body's defences against H.pylori infection.
- Recommended for use alongside Non-Steroidal Anti-Inflammatory Drugs (NSAIDs).

Zinc Carnosine

Mechanism of action	Beneficial Effect
Anti-urease activity (an enzyme produced by H.pylori to help it survive in the gastric environment)	Inhibits H.pylori
Inhibits expression of TNF alpha and IL-8 cytokines without affecting PGE2 production	Attenuates gastric inflammation
Antioxidant activity	Protects cellular integrity
Stimulates mucus secretion	Protects gastric epithelium
L-carnosine transports zinc to wound site; zinc is an important cofactor for many proteins	Adheres to wound site

Zinc Carnosine

Modes of Action:

- It is non-systemic, it exerts a direct beneficial effect on the stomach lining and is not reliant on actual absorption or systemic blood circulation in the blood.

- Its unique chelated form means it dissociates (breaks-down) in the stomach at a slow rate exerting a longer beneficial influence in the stomach.

Biochemistry (Moscow) , Vol 65, No 7, 2000, pp817-823. Translated from Biokhimiya, Vol. 65, No. 7,2000.pp961-968

- Acts as a gastric cyto-protective agent by increasing gastric mucous secretion, enhancing protection of the mucosal stomach lining.

- Zinc carnosine helps in the repair of gastric damage, by promoting gastric epithelial would repair and increasing the production of insulin like growth factor 1 (IGF-1).

Zinc Carnosine

Modes of Action:

- It has anti-inflammatory properties inhibiting the production of pro-inflammatory interlukin-8 from gastric epithelial cells.

Can J Gastroenterol. 2002;1785-789.789

- Has antioxidant properties it is transported directly to the site affected where is adheres to gastric mucosal cells and helps protect against toxic agents.

Hiraishi H, Saai T, Oinuma T, et al. Zn carnosine protects gastric mucosal cells from noxious agents through antioxidant properties in vitro. Aliment Pharmacol Ther; 1999;13:262-269

- Helps provide protection from gastric inflammation induced by oxidative agents, such as from alcohol or certain medications.

Aliment Pharmacol Ther. 1999 Feb;13(2):261-9

- Helps to increase gastric micro-circulation and reduce the secretion of gastric acid.

Zinc Carnosine

Gastro-Protectant for NSAIDs use

- NSAIDs (Non-Steroidal Anti-Inflammatory Drugs) widely used for the treatment of acute pain (short-term and long term), fevers and inflammation.
- May lease stomach lining highly susceptible to ulceration and invasion by H. pylori.
- Clinical practice guidelines recommend co-prescription of medicinal gastro-protective agents, but these can have other unwanted side effects.
- Zinc carnosine = a gentle alternative that can be taken alongside NSAIDs to reduce the risk of gastrointestinal complications from their use.

Zinc Carnosine

Gastritis (Stomach Inflammation)

- Gastritis is the inflammation of the stomach lining caused by a number of factors, including medication, alcohol consumption, smoking and H.pylori infection.

- Zinc carnosine has been shown to be beneficial in preventing H.pylori induced gastric inflammation.

  Can J Gastroenterol. 2002 Nov;16(11):785-9.

- A clinical trial of 173 gastritis patients showed that a daily dose of 75mg and 150mg of zinc carnosine lead to an overall improvement of symptoms of gastritis.

- Within 3 weeks of results showed that patients with gastritis had an overall 61.4% improvement in the 75mg group and 83.7% improvement in the 150mg group.

  Jpn Pharmacol Ther. 1997;25(5):1403-42.

Zinc Carnosine

Gastric Ulcers and H.pylori infection

- 80-90% of gastric ulcers are caused by H.pylori infection.
- About 10-15% of individuals infected by H.pylori will eventually develop gastric ulcers. Gastric ulcers can also be caused by the use of NSAIDs, stress and excessive alcohol consumption.
- Conventional treatment for gastric ulcers and H.pylori infection is antibiotics to eradicate the bacteria combined with medication to suppress gastric acid production in the stomach.
- H.pylori is frequently difficult to eradicate, even with a long-term use of these medications and often develops a resistance to antibiotics.

Zinc Carnosine

Gastric Ulcers and H.pylori infection

- Zinc carnosine provides an additional solution for gastric ulcers and H.pylori infection treatment.

- One study using a 7 day triple-therapy regime of 150mg zinc carnosine, lansoprazole, amoxycillin and clarithromycin, concluded that the addition of zinc carnosine significantly improved on this conventional eradication treatment regime.

Aliment Pharmacol Ther. 1999 Apr;13(4):483-7

Zinc Carnosine

Gastric Ulcers and H.pylori infection

- The protective and healing properties of zinc carnosine make it highly useful in the prevention of gastric ulcers and also to speed up the healing of gastric ulcerations.

- Endoscopic evaluation has observed a 66.7% fully healed rate and 83.3% nearly healed rate after only 8 weeks of supplementation with 75mg of zinc carnosine daily.

13. Jpn Pharmacol Ther 1992;20:245-54

Zinc Carnosine

Cautions

- Zinc carnosine may enhance the effect of certain medications such as proton pump inhibitors, H2 blockers, antacids and antibiotics.
- A healthcare professional should be consulted before using Carnozin whilst taking any other medication.
- Not recommended for use during pregnancy or when breast feeding.
- Contains 17mg of zinc per tablet which should be taken into consideration if using other zinc containing supplements. Long term intake of amounts greater than 25mg of zinc may lead to anaemia.

Gastric Medications cause and effects

Non Steroidal Anti Inflammatory Drugs (NSAIDs)

- Medications to reduce pain, fever an inflammation
- Common OTC NSAIDs include aspirin and ibuprofen
- Stronger doses available on prescription
- Users are five times more lively to develop peptic ulcers

Gastric Medications cause and effects

NSAID induced Peptic Ulcer risk increases with:

- Dose, frequency and duration
- Use of multiple NSAIDs
- Age- more likely in those 60 plus
- Gender– more common in women
- Prior history of peptic ulcers
- Smoking and alcohol use
- Other medications- e.g. corticosteroids

Gastric Medications cause and effects

How do NSAIDs cause peptic ulcers?

- They work by inhibiting COX 1 and COX 2 enzymes that produce prostaglandin that promote pain, inflammation and fever.
- COX 1 produces a further prostaglandin that protects the stomach lining from acid and helps control bleeding.
- Inhibition of COX 1 increases risk of ulcers and bleeding.

Proton Pump Inhibitors

- PPIs work by halting the mechanism that causes glands in the lining of the stomach to produce acid.
- Used to relieve symptoms of acid reflux or gastro oesophageal reflux disease (GERD) or (GORD)
- Also to treat peptic ulcers or damage to the lower oesophagus caused by acid reflux.
- Common PPI’s include- Omeprazole and Lansoprazole.

Proton Pump Inhibitors

- NICE guidance states that long term acid suppressing therapy should not be used
- Prescribed for NSAID induced ulcers to promote healing
- Also used for GORD but should only be used until symptoms have been controlled
- Maintenance dose may be prescribed for long term management of conditions
- Non ulcer related dyspepsia (NUD) should not be treated with PPIs

Proton Pump Inhibitors

- In USA more than 50% prescriptions for PPIs may be inappropriate
- Increased risk of fractures for women taking PPIs
- Potential increased risk of infection and re-infection with c-difficile
- Patients are commonly taking a higher dose than necessary

Histamine H2 receptor antagonists

- Also known as H2 blockers or H2 RAs
- Commonly prescribed H2 Ras are cimetidine, nizatidine and ranitidine
- Work by blocking enterochromaffin-like (ECL) cells in the stomach lining from releasing histamine
- Histamine stimulates the acid producing cells to release acid
- Less stomach acid is produced as a result of H2 blocker use
- Largely superseded by PPIs which are more effective in reducing acid, used for milder symptomatic relief

Proton Pump Inhibitors

Cost of commonly prescribed meds to NHS in 1998

Medications	NHS Costs England	NHS Costs Wales
PPIs	£291 m	£23 m
H2 RAs	£139 m	£11 m
Others dyspepsia drugs	£52 m	£5 m

Source: NICE Guidance on use of PPIs in the treatment of Dyspepsia July 2000

Link up Vitamins, Minerals and Supplements

WEBINAR 5

Bright Start Drops

Vitamin D3 + DHA
Drops for Infants

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Brightstart Drops

- Combines essential nutrients in one convenient easy to take liquid formula
- Provides DHA, Vitamins D3, A and E
- Suitable for infants and children aged between one month and five years old
- Natural orange flavour
- Sugar free
- Suitable for vegetarians

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Approved Health Claims

For Children:
DHA intake contributes to the normal visual development of infants up to 12 months of age. The beneficial effect is obtained with a total daily intake of 100mg of DHA.

Vitamin D is needed for normal growth and development of bone in children.

For the general population:

- DHA contributes to normal brain function and maintenance of normal vision. This beneficial effect many be obtained with a minimum daily intake of 250mg of DHA.

- Vitamin D contributes to the maintenance of normal teeth.

Vitamin D

- Needed for the utilization of calcium in the body to help maintain bones and teeth.
- Vitamin D is naturally created by the body through exposure to sunlight and may be recommended as a supplement for individuals with limited exposure to sunlight.
- Often referred to as the sunshine vitamin, it has long been associated with bone health.
- Recent research has confirmed that it also has more far reaching role throughout the body including contributing to immune function, mood, heart health and prevention of cancers.

Vitamin D and Children

- Vitamin D is an essential vitamin for children contributing to the growth and development of bones.
- The UK Department of Health recommends that all infants and young children aged 6 months to 5 years should take a vitamin D supplement.
- Vitamin D also helps to maintain teeth and contribute to the normal function of the immune system and muscles.

Vitamin D Intake

- The National Diet and Nutrition Survey demonstrates that up to a quarter of people in the UK have low levels of vitamin D in their blood, which means they are at risk of the clinical consequences of vitamin D deficiency.

Data from years 1 & 2 of the National Diet and Nutrition Survey (NDNS) rolling programme. Low status is defined by the Department of Health as a plasma concentration of 25-hydroxyvitamin D (25(OH) D, the main circulating form of the vitamin) of below 25nmol/l(equal to 10 ng/ml)

- The prevalence of vitamin D deficiency has increase and rickets has re-emerged in the UK and other developed countries as a public health problem.

- Infants, toddlers and adolescents in at risk are ethnic minorities (e.g. Asian, African, Caribbean and Middle Eastern) are particularly likely to be vitamin D deficient or to have rickets.

- Also at risk are breast fed babies and toddlers without receiving vitamin supplements or those whose mothers did not have vitamin D supplements during pregnancy.

Drug Ther Bull. 2006 Feb; 44(2):12-6

Docosahexaenoic acid (DHA)

- Docosahexaenoic acid (DHA), an essential omega-3 fatty acid, is a primary structural component of many human tissues and structures including the brain, cerebral cortex, skin and retina.

- A key nutrient in brain structure and function, DHA makes up around 30% of the structural lipids of grey matter.

- It is especially required during foetal and child development for growth and functional development of the brain, eyes and central nervous system.

- In a child's first year of life the size and weight of the brain can increase by as much as 300% so adequate supplies of DHA are especially important during this period.

Docosahexaenoic acid (DHA)

- (DHA) is an essential omega-3 fatty acid so must be obtained via the diet or supplementation
- Direct sources of DHA include fish oil and algae oil
- The body can convert it from precursor fatty acids in the diet such as alpha linolenic acid from vegetable oil like flaxseed but the conversion rate is very low
- Brightstart drops contain DHA directly from Algae oil

DHA Intake

- Prenatal and early postnatal DHA status is important for the later visual function and neurological and cognitive development of a child.
- DHA status may have a possible role in some behavioral and mood disorders affecting both children and adults.
- DHA is a major structural fat in the retina of the eye and it plays an important role in both infant visual development and visual function throughout life.
- DHA is also a key component of the heart muscle tissue, it’s never too early to start looking after your heart, DHA is important for heart health throughout life.

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Brightstart Drops

Each 1ml contains:

Vitamin D3	400iu
DHA	40mg
Vitamin E	5mg
Vitamin A	125µg

Suggested daily dose- 0.5ml twice a day or 1ml once a day.

Not suitable for infants consuming 500ml or more of formula milk a day and infants under one month of age unless under medical supervision.

Do not take any other products containing vitamin D and vitamin A together with BrightStart D3+ DHA drops.

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