

Evolution

Evolution is a natural raw wholefood, combining a selection of some of nature's most perfect foods. Nutrition is the key to good health and this wholefood blend of Rare West Australian native bee pollen, certified organic Barley grass, certified organic Maca and Aloe Vera, is abounding with vitamins, minerals, enzymes and amino acids in their naturally occurring state.

Evolution does not contain any fillers, all the ingredients bring their own special benefit to the product. **Evolution** helps provide the daily nutrition you need to develop a strong foundation for your good health.

The concentration of nutrients in food depends on the soil content. Alcohol, smoking, the cooking of vegetables, meats, and processed food can rob the body of nutrients which can be obtained from a whole food supplement.

Studies have shown that regular consumption of natural fruits and vegetables is strongly associated with a reduced risk of developing chronic diseases such as cancer and cardiovascular disease. Clinical trials with individual antioxidants do not appear to provide the consistent protective effects anticipated. Rather the additive and synergistic effects of the complex mixture of phytochemicals present in these whole foods are responsible for the potent antioxidant and anticancer activities. This explains why no single nutrient can replace the combination of natural phytochemicals to achieve health benefits. The evidence suggests that bioactive compounds are best acquired through whole-food consumption and not from isolate dietary supplements.

West Australian Native Bee Pollen:

Western Australia has a high density of unique plant species that produce high quality pollens. This pollen is harvested free of chemicals from pristine forests and conservation reserves in natural indigenous bush, away from any farming activity to ensure it is in its purest form possible. Bee pollen has been described as nature's most complete food and has been widely used for centuries.

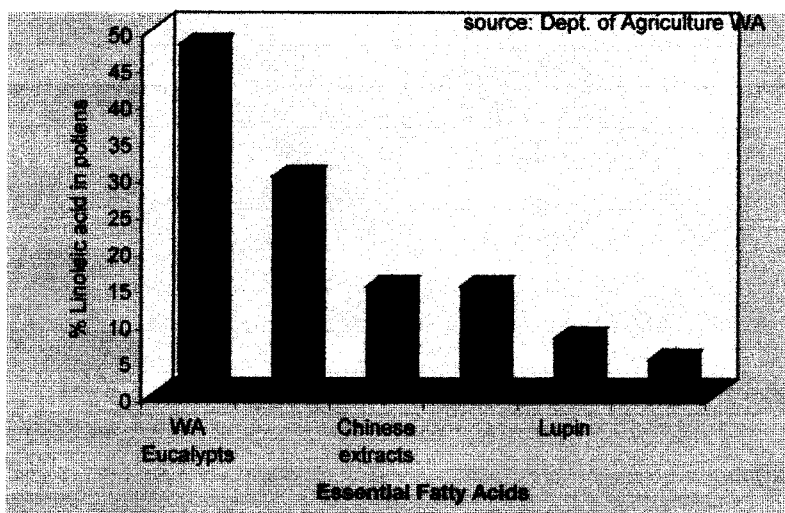
There are 2 types of pollen. Anemophile pollen is wind carried and is responsible for plant fertilisation. The other is entomophile pollen, which attaches to insects, such as bees when they forage for nectar. Bee pollen is essentially entomophile pollen, which is more solid and substantial than the wind driven kind.

New health properties have been identified and should excite health conscious consumers

Western Australian Pollen is a nutrient-dense natural source of high protein and low fat that contains essential fatty acids and a complete range of

minerals and vitamins. Gathered from the stamen of flowers, the pollen is rich in vitamins A, D, E and all the B-complex, enzymes and co enzymes, carbohydrates and fatty acids.

Eucalyptus pollens are dominated by an "essential" fatty acid for human health known as linoleic acid. This needs to be consumed as it cannot be manufactured in the body. As a polyunsaturated fatty acid, linoleic acid helps lower the ratio of low-density lipoproteins (LDL's) to high-density lipoproteins (HDL's). The LDL's known as the bad lipoproteins, carry fats such as cholesterol from our liver to our cells whilst HDL's carry cholesterol to our liver to be excreted as bile into the intestine. Eucalypt pollens have one of the highest percentages of linoleic acid in the world, making it unique and beneficial.



Pollen is a good source of iron, zinc, manganese and copper and is rich in rutin, which strengthens capillaries. Vitamin B₁₂ and E are found in relative abundance.

The Amino Acids present in this pollen are superior to those of animal origin, with pollen containing five to seven times more amino acids than beef and cheese of equal weight. Bee pollen is a low calorie food, high in lethicin, about 15% by volume, Lethicin helps to normalise fat metabolism.

In spite of all the sophisticated high technology available bee pollen cannot be duplicated in the laboratory. This native bush pollen in its pure state is a powerful natural food source.

Barley Grass, Certified Organic by BFA IFOAM Accredited

The Organic Barley Grass powder is a wholesome green food made from the powdered dehydrated leaves of organically grown young barley plants (*Hordeum vulgare*). Our Barley grass powder is an excellent provider of green vegetable nutrition. It is a rich source of dietary fibre for good colon health and regularity and a natural source of minerals, vitamins and antioxidants.

The bright green colour reflects the abundance of chlorophyll, a source of magnesium.

Contrary to popular opinion, our Barley Grass does not contain gluten. This means it is safe for those who have gluten allergies.

Timing is critical for nutritional value. Not all barley is harvested at its nutritional peak. Since 1935 scientists have known that the highest concentrations of nutrients are present for just a few critical days. By the time the young sprout reaches its nutritional peak it is between 6 and 8 inches tall. It then forms a joint that goes on to form the stalk of the grain.

At harvest, only the top 10 centimetres of the grass are harvested because this section has the richest content of nutrients. Harvest occurs just prior to jointing. Once jointing occurs, the nutritional level in the leaves begins to drop as the shoot's nutrients are used in the growth and development of the head of the grain. After low temperature warm air-drying, the grass is powdered in a special air mill at room temperature.

Main features - Significant source of Chlorophylls, mixed Carotenoids, Antioxidants, Folic Acid, Protein and Omega-3.

Alkaline Foods - It is important to keep the fluids in our bodies on the alkaline side to reduce the risk of bone loss. Barley grass is an alkaline food.

Antioxidants - Barley grass contains significant levels of antioxidants. We have known of the presence of the antioxidant superoxide dismutase, but the presence of Vitamin E Succinate an analogue of alpha-tocopherol, and an even more powerful antioxidant," 2"-O-glycosyl isovitexin, which is an isoflavonoid have been reported. Although isoflavonoids are potential therapeutic "anti-estrogens", they have significant antioxidant value as well.

Benefits - Barley grass powder is a concentrated source of vegetable greens, essential to life. Chlorophyll, for natural cleansing of the blood and support to the immune system, and Beta Carotene, the precursor of Vitamin A, are present in highly significant quantities.

Maca, *Lepidium Meyenii*, Certified Organic

Maca is a root vegetable cultivated high in the Andean Mountains. Its use as a superfood dates back 10,000 years.

Maca is a whole food. It is adaptogenic meaning that it will work on the body according to needs, age and gender of the person taking it - allowing males and females of all ages to benefit from taking it regularly.

Maca was originally identified in the 1800's by a German botanist who named it "*Lepidium meyenii*, Walpers" (after himself) - still the ONLY name officially recognized by the Peruvian government. From the 1960's, a research worker investigating Maca's constituents attempted to rename Maca after herself, hence "*Lepidium peruvianum*, Chacon".

There is only one species that is grown commercially for harvest, which is "*Lepidium meyenii*, Walpers" and should not be confused with other species.

The best Maca is grown in the Junin Plateau where it has been grown for thousands of years using traditional farming methods. The key factors resulting in good quality Maca are altitude (4,100m above sea level), soil type & microclimate.

Maca Root contains significant amounts of amino acids, complex carbohydrates, Vitamins B1, B2, C, E and minerals including calcium, phosphorous, zinc, magnesium and iron.

How Do I Know Which Maca Brand Is The Best Quality?

A superior quality Maca brand as used in ***Evolution*** is certified organic and not genetically modified and this is your only guarantee. A high protein count is a great indicator of optimal growing conditions and careful processing. Maca is a carbohydrate root vegetable, so a light colour and sweet taste means that the amino acids, vitamins, minerals, essential fatty acids and other nutrients have been better preserved.

Aloe Vera (*Aloe barbadensis*) Certified Organic

Aloe Vera is another ingredient that adds remarkable healing properties to ***Evolution***. Historical documents reveal that the Roman, Greek, Arab, Indian and Chinese cultures used Aloe Vera extensively as a medicinal plant. Aloe Vera is a great source of more than 200 active ingredients, including vitamins, minerals and amino acids.

Aloe Vera is not a cactus plant as many think or consider, but rather a member of the Lilly family. The official name *Aloe barbadensis* is from the botanist Dr Miller who characterised the plant in Barbados, although the plant is native to Northern Africa. Components are obtained from the leaf, the sap and a mucilaginous gel derived from the inner cells of the leaf. The inner Aloe

gel is made up of polysaccharides and a vast array of bioactive chemical substances, which play a major role in the healing process.

The Aloe Vera in Evolution is bifurcated Aloe Vera gel and combines all the ingredients of the leaf including the outer Aloe rind, as recent research indicates this contains numerous bioactive ingredients including the glycoproteins, polysaccharides and important enzymes such as superoxide dismutase, glutathione peroxidase and catalase. The powerful protective antioxidant activity of superoxide dismutase and catalase works in conjunction with vitamins C, E and glutathione.

The substances identified in Aloe Vera are divided into 2 groups based on their molecular weight.

The high molecular weight substances include the mucilaginous polysaccharides such as the neutral B (1-4) mannans, acidic galacturonic mannans and galacto-mannans. The other substances are glycoproteins and a variety of enzymes

The main feature of this Aloe Vera, is that the long molecular polysaccharide mannan, is not hydrolysed during manufacturing into smaller components, losing its original chemical structure and biological activity. The manufacturing process allows the original Aloe Vera polysaccharide mannan to be present in the final product unaltered and unmodified. One unique characteristic of this Aloe Vera polysaccharide is that human gastric enzymes cannot hydrolyse its linkages.

The low molecular weight substances include; Saponins, Flavonoids, Fatty acids and their esters, Tannins, Sulphur derivatives, Glucosamine, glutamine, terpenoids and biological growth factors.

Although each one of the above contents has an individual biological ability, an aspect that makes Aloe Vera unique is that all these substances act synergistically as a group. Chemically, two major classes of substances form Aloe Vera; hydrophilic substances that are water soluble and hydrophobic or non water soluble. Since human metabolism and cell composition are composed both types of systems, Aloe Vera can act as a natural biological vehicle, capable of stimulating and normalising the main physiological biological functions of the human body.

Therefore, in bifurcated Aloe Vera gel the benefits include the inner Aloe gel and the other active substances present in the outer Aloe rind resulting in a superior product.

Main Features

Vitamins	A, C, E, B, B12, Choline, Folic Acid
Amino Acids	Aloe contains 7 of the 8 essential amino acids. Provides 20 of 22 amino acids required by humans.
Minerals	Aloe provides 9 essential minerals such as Calcium, Copper.

	Chromium, Magnesium, Iron, Potassium, Zinc, Sodium, and Manganese.
Phytonutrients	Natural plant growth hormones, sterols and salicylates.
Enzymes	Provides 8 important enzymes
Sugars	Monosaccharides and Polysaccharides (long chain sugar molecules that are essential to the quality and efficacy of Aloe Vera.

Benefits

Several detailed scientific studies have revealed that the diverse biochemical components present in Aloe Vera participate in the following biological processes.

A number of the substances present in Aloe Vera decrease the effects of inflammatory mediators reducing pain and inflammation.

Aloe Vera through the action of its B (1-4) mannan can stimulate the immune function. This substance is a long chain polydispersed beta (1-4) polymannose with interspersed O acetyl groups with a mannose monomer ratio of approximately 1:1. The acetyl groups make this polysaccharide distinct from other similar mannans in the animal and plant kingdom. How this functions in the immune system is unclear and the Aloe polysaccharide may activate macrophages, the initiating cell in inflammation.

One of the most well known properties of Aloe Vera is the ability to promote wound healing

The antioxidant activity and radical scavenging effect of Aloe Vera is related to a large number of substances and not to a particular group.

Two low molecular components may prevent ultraviolet B immune suppression in the skin, acting as a defence mechanism and assisting with repair.

Aloe Vera juice has a favourable effect on gastrointestinal physiology in humans. The frequent ingestion of Aloe Vera may benefit many diverse human metabolic functions and strengthen the immune system.

Typical analysis of *Evolution*

Proximates		Mono-unsaturated	
Energy	1480 kJ/100g	C14:1 Myristoleic	0.2%
Moisture	13.8 g/100g	C16:1 Palmitoleic	0.2%
Fat	3.8 g/100g	C17:1 Heptadecenoic	<0.1%
Saturated fat	1.4 g/100g	C18:1 Oleic	4.9%
Protein (N x 6.25)	0.8 g/100g	C20:1 Eicosenic	<0.1%
Ash	3.8 g/100g	C22:1 Docosenoic	<0.1%
Carbohydrates Total	78 g/100g	C24:1 Nervinic	0.3%
Fructose	39 g/100g	Total mono-unsaturated	5.6%
Glucose	8.4 g/100g		
Sucrose	0.8 /100g	Poly-unsaturated	
Maltose	<0.2 g/100g	C18:2w6 Linoleic	38.3%
Lactose	<0.2 g/100g	C18:3w6 gamma-Linolenic	<0.1%
		C18:3w3 alpha-Linolenic	16.5%
Saturated		C20:2w6 Eicosadienoic	0.3%
C4:0 Butyric	<0.1%	C20:2w5 Eicosatrienoic	<0.1%
C6:0 Caproic	0.2%	C20:4w6 Arachidonic	<0.1%
C8:0 Caprylic	<0.1%	C20:5w3 Eicosapentaenoic	0.9%
C10:0 Capric	<0.1%	C22:2w6 Docosadienoic	0.2%
C12:0 Lauric	0.4%	Omega 3 Fatty Acids	17.8%
C14:0 Myristic	0.7%	Omega 6 Fatty Acids	39.1%
C15:0 Pentadecanoic	0.1%	C22:4w6 Docosatetraenoic	0.3%
C16:0 Palmitic	30.0%	C22:5w3Docosapentaenoic	0.1%
C17:0 Margaric	0.4%	C22:6w3Docosahexaenoic	0.3%
C18:0 Stearic	2.3%	Total Poly-unsaturated	56.9%
C20:0Arachidic	0.9%		
C22:0 Behenic	1.4%	Total Mono Trans Fatty Acid	<0.1%
C24:0 Lignocarinic	0.7%		
Total saturated	37.1%	Total Poly Trans Fatty Acid	0.5%
		P:M:S ratio	1.5:0.2 :1

Typical analysis of *Evolution*

<u>Vitamins</u> Provitamin A B1 Thiamine B2 Riboflavine B3 Niacin B6 Group Pantothenic acid Biotin B12 Folic acid Choline Inositol Vitamin C Vitamin D Vitamin E Vitamin K Chlorophylls Carotenes <u>ORMEs</u> monatomic gold 663ppm monatomic rhodium 3210ppm monatomic iridium 2290ppm	<u>Minerals</u> Boron Calcium Chlorine Chromium Cobalt Copper Iodine Iron Lithium Magnesium Manganese Molybdenum Phosphorous Potassium Rutin Selenium Silicon Sodium Sulphur Titanium Zinc	<u>Amino Acid Analysis mg/g</u> <u>after hydrolysis</u> Alanine 8.4 Arginine 9.8 Asparagine + Aspartic acid 14.3 Glutamic acid + Glutamine 18.4 Glycine 6.1 Histidine 3.3 Isoleucine 6.3 Leucine 11.0 Lysine 9.5 Methionine 1.9 Phenylalanine 6.5 Proline 18.4 Sarcosine 0.07 Sarina 4.6 Threonine 6.0 Tryptophan 0.49 Tyrosine 3.4 Valine 6.2
<u>Others</u> Alpha-amino-butyric-acid Auxins Brassins Crocetin Flavonoids Hexodecanal Kinins Lecithin Mannans	<u>Nucleic acids</u> Nuclein Pentosans Phenolic acids Terpenes Vernine Xanthophylls Zeaxanthin	<u>Fats</u> Linoleic Oleic Omega 3 Omega 6 Palmitic Saponins Sterols

