Moringa Oleifera

Contains more than **92 nutrients** and **46 types of antioxidants**.

Moringa is said to cure about three hundred diseases and almost have all the vitamins found in fruits and vegetables. Even in a larger proportions. With all the health benefits of this miracle herb, it can easily be termed as the most nutritious herb on Earth. There are **no side-effects** which also has tried, tested, documented and proved evidence to support the same. It can be consumed by small children and adults. Today, millions world over have started using Moringa based products in porridge, pastas, bread and to reap the everlasting health benefits of the extraordinary 'Moringa' herb.

Some Facts about Moringa- (Excerpt From The Book "Miracle Tree" by Author Monica G.Marcu,Pharm.D., PH.D.)

• 92 Nutrients
• 46 Antioxidants
• 36 Anti-Inflammatories
• 18 Amino Acids, 9 Essential Amino Acids
• Nourishes The Immune System
• Promotes Healthy Circulation
• Supports Normal Glucose Levels
• Natural Anti-Aging Benefits
• Provides Anti-Inflammatory Support
• Promotes Healthy Digestion
• Promotes Heightened Mental Clarity
• Boosts Energy Without Caffeine
• Encourages Balanced Metabolism
• Promotes Softer Skin
• Provides Relief From Acne
• Supports Normal Hormone Levels
Rare for a plant source -Moringa leaves contain all the essential amino acids to build strong healthy bodies.

Examples of some few nutritional value of Moringa- (Gram-for-gram comparison of nutritional data)

- 2times -**the Protein of Yogurt**
- 3times – **the Potassium of Bananas**
- 4times – **the Calcium of Milk**
- 4times – **the Vitamin A of Carrots**
- 7times -**the Vitamin C of Oranges**

The Vitamin component of Moringa Leaves:

Moringa has Vitamin A (Beta Carotene), Vitamin B1 (Thiamine), Vitamin B2 (Riboflavin), Vitamin B3 (Niacin), Vitamin B6 Pyrodixine), Vitamin B7 (Biotin), Vitamin C (Ascorbic Acid), Vitamin D (Cholecalciferol), Vitamin E (Tocopherol) and Vitamin K.

Vitamin A (Beta Carotene), Vitamin A is a vitamin which is needed by the retina of the eye in the form of a specific metabolite, the light-absorbing molecule retinal. This molecule is absolutely necessary for both “Scotopic”scotopic and color vision. Vitamin A also functions in a very different role, as an irreversibly oxidized form retinoic acid, which is an important hormone-like growth factor for epithelial and other cells.

Vitamin B1 (Thiamine) helps fuel the body by converting blood sugar into energy. It keeps the mucous membranes healthy and is essential for nervous system, cardiovascular and muscular function.

Vitamin B2 (Riboflavin) is required for a wide variety of cellular processes. Like the other B vitamins, it plays a key role in energy metabolism, and for the metabolism of fats, ketone bodies, carbohydrates, and proteins. It is the central component of the cofactors FAD and FMN, and is therefore required by all “Flavoprotein”flavoproteins.

Vitamin B3 (Niacin), like all B complex vitamins, are necessary for healthy skin, hair, eyes, and liver. They also help the nervous system function properly. Niacin also helps the body make various sex and stress-related hormones in the adrenal glands and other parts of the body. Niacin is effective in improving circulation and reducing cholesterol levels in the blood.

Vitamin B6 (Pyridoxine) is required for the synthesis of the neurotransmitters serotonin and norepinephrine and for myelin formation. Pyridoxine deficiency in adults principally affects the peripheral nerves, skin, mucous membranes, and the blood cell system. In children, the central nervous system (CNS) is also affected. Deficiency can occur in people with uremia, alcoholism, cirrhosis, hyperthyroidism, malabsorption syndromes, congestive heart failure (CHF), and in those taking certain medications.

Vitamin B7 (Biotin) has vital metabolic functions. Without biotin as a co-factor, many enzymes do not work properly, and serious complications can occur, including varied diseases of the skin, intestinal tract, and nervous system. Biotin can help address high blood glucose levels in people with type 2 diabetes, and is helpful in maintaining healthy hair and nails, decreasing insulin resistance and improving glucose tolerance, and possibly preventing birth defects. It plays a role in energy metabolism, and has been used to treat alopecia, cancer, Crohn’s disease, hair loss, Parkinson’s disease, peripheral neuropathy, Rett syndrome, seborrheic dermatitis, and vaginal candidiasis.

Vitamin C (Ascorbic Acid)is one of the safest and most effective nutrients, experts say. It may not be the cure for the common cold (though it’s thought to help prevent more serious complications). But the benefits of vitamin C may include protection against immune system deficiencies, cardiovascular disease, prenatal health problems, eye disease, and even skin wrinkling.

Vitamin D (Cholecalciferol) is essential for promoting calcium absorption in the gut and maintaining adequate serum calcium and phosphate concentrations to enable normal mineralization of bone and prevent hypocalcemic tetany. It is also needed for bone growth and bone remodeling by osteoblasts and osteoclasts . Without sufficient vitamin D, bones can become thin, brittle, or misshapen. Vitamin D sufficiency prevents rickets in children and osteomalacia in adults. Together with calcium, vitamin D also helps protect older adults from osteoporosis. Vitamin D has other roles in human health, including modulation of neuromuscular and immune function and reduction of inflammation.

Vitamin E describes a family of 8 antioxidants, 4 tocopherols and 4 tocotrienols. alpha-tocopherol (a-tocopherol) is the only form of vitamin E that is actively maintained in the human body and is therefore, the form of vitamin E found in the largest quantities in the blood and tissue. Vitamin E, a fat-soluble vitamin, protects vitamin A and essential fatty acids from oxidation in the body cells and prevents breakdown of body tissues.

Vitamin K is necessary for normal clotting of blood in humans. Specifically, vitamin K is required for the liver to make factors that are necessary for blood to properly clot (coagulate), including factor II (prothrombin), factor VII (proconvertin), factor IX (thromboplastin component), and factor X (Stuart factor). Other clotting factors that depend on vitamin K are protein C, protein S, and protein Z. Deficiency of vitamin K or disturbances of liver function (for example, severe liver failure) may lead to deficiencies of clotting factors and excess bleeding.

Amino Acids: The foundation of our body.

Our bodies need twenty different amino acids or proteins that are the building blocks for a healthy body. Nonessential amino acids are those that the body can synthesize for itself, provided there is enough nitrogen, carbon, hydrogen, and oxygen available. Essential amino acids are those supplied by the diet. They must be consumed as the human body either cannot make them at all or cannot make them in sufficient quantity to meet its needs. ?Of the 20 amino acids required by our bodies, eleven of them are nonessential and nine are essential.

Functions of Amino Acids: Proteins act as enzymes , hormones , and antibodies . They maintain fluid balance and acid and base balance. They also transport substances such as oxygen, vitamins and minerals to target cells throughout the body. Structural proteins, such as collagen and keratin, are responsible for the formation of bones, teeth, hair, and the outer layer of skin and they help maintain the structure of blood vessels and other tissues.
Enzymes are proteins that facilitate chemical reactions without being changed in the process. Hormones (chemical messengers) are proteins that travel to one or more specific target tissues or organs, and many have important regulatory functions. Insulin , for example, plays a key role in regulating the amount of glucose in the blood. The body manufactures antibodies (giant protein molecules), which combat invading antigens. Antigens are usually foreign substances such as bacteria and viruses that have entered the body and could potentially be harmful. Immunoproteins, also called immunoglobulins or antibodies, defend the body from possible attack by these invaders by binding to the antigens and inactivating them.

If these critical components for a healthy body are not provided as part of a healthy diet, the body will look for other sources for them. This can include breakdown of our organs, leading to chronic problems such as liver and kidney problems, diabetes and heart disease among others.

MORINGA AS FOOD Moringa is considered a complete food as it contains all of the essential Amino Acids required for a healthy body. The dried leaf is a nutritional powerhouse and contains all of the following Amino Acids.

ISOLEUCINE builds proteins and enzymes and it provides ingredients used to create other essential biochemical components in the body, some of which promote energy and stimulate the brain to maintain a state of alertness.

LEUCINE works with isoleucine to build proteins and enzymes which enhance the body's energy and alertness.

LYSINE ensures your body absorbs the right amount of calcium. It also helps form collagen used in bone cartilage and connective tissues. In addition, lysine aids in the production of antibodies, hormones, and enzymes. Recent studies have shown lysine improves the balance of nutrients that reduce viral growth.

METHIONINE primarily supplies sulfur to your body. It is known to prevent hair, skin, and nail problems while lowering cholesterol levels as it increases the liver's production of lecithin. Methionine reduces liver fat and protects the kidneys, which reduces bladder irritation.

PHENYLALAINE produces the chemical needed to transmit signals between nerve cells and the brain. It can help with concentration and alertness, reduce hunger pains and improve memory and mood.

THREONINE is an important part of collagen, elastin, and enamel proteins. It assists metabolism and helps prevent fat build-up in the liver while boosting the body's digestive and intestinal tracts.

TRYPTOPHAN supports the immune system, alleviates insomnia, reduces anxiety, depression, and the symptoms of migraine headaches. It also is beneficial in decreasing the risk of artery and heart spasms as it works with lysine to reduce cholesterol levels.

VALINE is important in promoting a sharp mind, coordinated muscles, and a calm mood.

Non-essential amino acids in Moringa

ALANINE is important for energy in muscle tissue, brain, and central nervous system. It strengthens the immune system by producing antibodies. Alanine also helps in the healthy metabolism of sugars and organic acids in the body.
ARGININE causes the release of the growth hormones considered crucial for optimal muscle growth and tissue repair. It also improves immune responses to bacteria, viruses, and tumor cells while promoting the healing of the body's wounds.

ASPARTIC ACID helps rid the body of ammonia created by cellular waste. When the ammonia enters the circulatory system it can act as a highly toxic substance which can damage the central nervous system. Recent studies have also shown that aspartic acid may decrease fatigue and increase endurance.

CYSTINE functions as an antioxidant and is a powerful aid to the body in protecting against radiation and pollution. It can help slow the aging process, deactivate free radicals, and neutralize toxins. It also aids in protein synthesis and presents cellular change. It is necessary for the formation of new skin cells, which aids in the recovery from burns and surgical operations.

GLUTAMIC ACID is food for the brain. It improves mental capacities, helps speed the healing of ulcers, reduces fatigue, and curbs sugar cravings.

GLYCINE promotes the release of oxygen required in the cell-making process. It is also important in the manufacturing of hormones responsible for a strong immune system.

HISTIDINE is used in the treatment of rheumatoid arthritis, allergies, ulcers, and anemia. A lack of histidine may lead to poor hearing.

SERINE is important in storing glucose in the liver and muscles. Its antibodies help strengthen the body's immune system. Plus, it synthesizes fatty acid sheaths around nerve fibers.

PROLINE is extremely important for the proper function of your joints and tendons. It also helps maintain and strengthen heart muscles.

TYROSINE transmits nerve impulses to your brain. It helps overcome depression; improves memory; increases mental alertness; plus promotes the healthy functioning of the thyroid, adrenal, and pituitary glands.