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Research article

Medical research

Nutrese powder- Nature's blend of protien, fiber & antioxidant support

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ABSTRACT

"Natural antioxidant process in Nutrese powder compensate for one another, covering up momentary deficiencies by their overlap."

The science of antioxidants can be quite complex, and this often leads to confusion among people on which types should be taking. The answer is–Nutrese Powder, A blend of natural Antioxidant & Phytonutrients to help prevent diseases. Antioxidant & phytochemicals found in Nutrese powder plays an important role in the prevention and treatment of chronic diseases caused by oxidative stress. They often possess strong antioxidant and free radical scavenging abilities, which are also the basis of other bioactivities and health benefits. Phytonutrients in Nutrese powder play a positive role by maintaining and modulating immune function to prevent specific diseases. Being natural products, they hold a great promise in clinical therapy. Phytonutrients are the plant nutrients with specific biological activities that support human health. Some of the important bioactive phytonutrients include polyphenols, terpenoids, resveratrol, flavonoids, isoflavonoids, carotenoids, limonoids, glucosinolates, phytoestrogens, phytosterols, anthocyanins, and probiotics. They play specific pharmacological effects in human health. This article reviews the current available scientific literature regarding the effect of Nutrese powder as an effective supplementation to help prevent & cure diseases.

INTRODUCTION

What Are Antioxidants?

Antioxidants are a class of molecules that are capable of inhibiting the oxidation of another molecule. Our body naturally circulates various nutrients in our body due to their antioxidant properties. It also manufactures antioxidant

enzymes in order to control free radical chain reactions.

Some antioxidants are produced by our body, but some are not. In addition, our body's natural antioxidant production can decline with age.

Antioxidants play a significant role in our health, as they can control age by fighting free radicals [1].

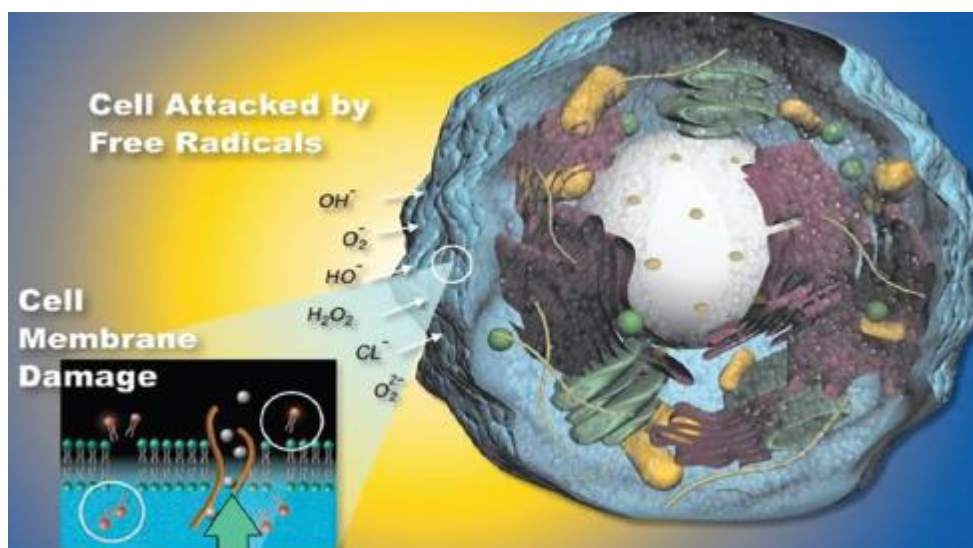


Fig. 1- Cell membrane damage by free radicals

The Health Benefits of Antioxidants: How Do They Prevent Free Radical Damage? [2]

Biogerontologist Denham Harman was the first to discover the concept of free radicals in 1954, while researching an explanation for aging. Free radicals are a type of a highly reactive metabolite that is naturally produced by our body as a result of normal metabolism and energy production. They are our natural biological response to environmental toxins like cigarette smoke, sunlight, chemicals, cosmic and manmade radiation, and are even a key feature of pharmaceutical drugs.

Free radical molecules are missing one or more electrons, and this missing electron is responsible for biological oxidation. The incomplete molecules aggressively attack other molecules in order to replace their missing parts. These reactions are called "oxidation" reactions. Oxidation is called

"biological rusting," an effect caused by too much oxygen in our tissues.

Free radicals steal electrons from the proteins in our body, which badly damages our DNA and other cell structures. They can create a "snowballing effect" – as molecules steal from one another, each one becomes a new free radical, leaving a trail of biological carnage.

Free radicals tend to collect in cell membranes (lipid peroxidation), which makes the cell lipids prone to oxidative damage. When this happens, the cell membrane becomes brittle and leaky, causing the cell to eventually fall apart and die.

Free radicals can severely affect our DNA by disrupting the duplication of DNA, interfering with DNA maintenance and breaking open or altering its structure by reacting with the DNA bases. Free radicals are linked to over 60 different diseases, including:

Cancer	Parkinson's disease	Alzheimer's disease
Cataracts	Atherosclerosis	Diabetes

If our body does not get adequate protection, free radicals can become rampant, causing our cells

to perform poorly. This can lead to tissue degradation and risk of diseases.

Free Radical	Influence on Human Disease
1. Peroxyl Radical	Lipid Peroxidation-Cardiovascular Disease—Atherosclerosis
2. Peroxynitrite	Neuro-Degenerative Diseases—Alzheimer’s & Parkinson’s
3. Hydroxyl Radical	DNA Damage, Cancer
4. Singlet Oxygen	Eye Diseases-Macular Degeneration
5. Superoxide Anion	Mitochondrial Diseases (Energy-Metabolism-Muscle)

Where antioxidants come in

Antioxidants are electron donors. They can break the free radical chain reaction by sacrificing their own electrons to feed free radicals, but without turning into free radicals themselves.

Antioxidants are nature's way of providing our cells with adequate defense against attack by

reactive oxygen species (ROS). As long as we have these important micronutrients, our body will be able to resist aging caused by our everyday exposure to pollutants. If we don't have an adequate supply of antioxidants to help squelch free radicals, then we can be at risk of oxidative stress, which leads to accelerated tissue and organ damage.

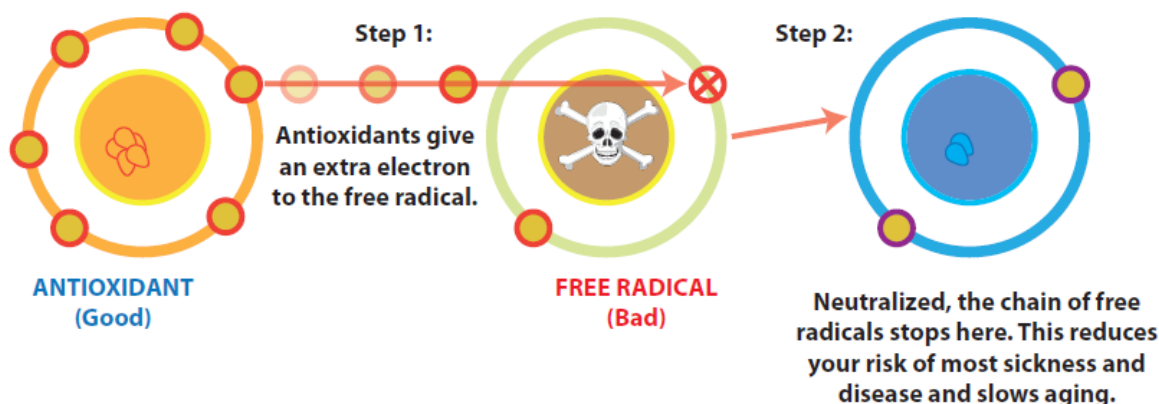


Fig.2- Role of Antioxidants in neutralizing Free radical Damage

Numerous studies have confirmed the benefits of antioxidants in Nutrease powder and the role they play in maintaining good health and reducing our risk of Diabetes, heart disease, Parkinson's, Alzheimer's, and cancer & many more.

Antioxidants also help slow down the aging process, which can have immense effects on our skin health.

Important benefits of antioxidants include

- **Repairing damaged molecules** – Some unique types of antioxidants can repair damaged molecules by donating a hydrogen atom. This

is very important when the molecule is a critical one, like our DNA.

- **Blocking metal radical production** – Some antioxidants have a chelating effect – they can grab toxic metals like mercury and arsenic, which can cause free radical formation, and "hug" them so strongly to prevent any chemical reaction from taking place. Water-soluble chelating agents can also escort toxic metals out of our body through urine.
- **Stimulating gene expression and endogenous antioxidant production** – Some antioxidants can stimulate our body's genes and increase our natural defenses.

- **Providing a "shield effect"** – Natural Antioxidants, such as flavonoids, can act as a virtual shield by attaching to our DNA to protect it from free radicals attacks.
- **Promoting cancer cells to "commit suicide"** – Some antioxidants can provide anti-cancer chemicals that halt cancer growth and force some cancer cells to self-destruct (apoptosis).

Different Types of Antioxidants [3]

When classified according to their solubility, antioxidants can be categorized as either soluble in lipids/fat (hydrophobic) or water (hydrophilic). Both of these are required by our body in order to protect our cells, since the interior of our cells and the fluid between them are composed of water, while the cell membranes themselves are mostly made of fat.

Since free radicals can strike either the watery cell contents or the fatty cellular membrane, we need both types of antioxidants to ensure full protection from oxidative damage.

Lipid-soluble antioxidants are the ones that protect our cell membranes from lipid peroxidation. They are mostly located in our cell membranes. Some examples of lipid-soluble antioxidants are vitamins A and E, carotenoids, and lipoic acid.

Water-soluble antioxidants are found in aqueous fluids, like our blood and the fluids within and around our cells (cytosol or cytoplasmic matrix). Some examples of water-soluble antioxidants are vitamin C, polyphenols, and glutathione.

However, solubility is not the only way to categorize antioxidants. They can also be categorized as enzymatic and non-enzymatic antioxidants.

Enzymatic antioxidants

Benefit us by *breaking down and removing free radicals*. They can flush out dangerous oxidative products by converting them into hydrogen peroxide, then into water. This is done through a multi-step process that requires a number of trace metal cofactors, such as zinc, copper, manganese, and iron.

The main enzymatic antioxidants in our body are

- **Superoxide dismutase (SOD)** can break down superoxide into hydrogen peroxide and oxygen,

with the help of copper, zinc, manganese, and iron. It is found in almost all aerobic cells and extracellular fluids.

- **Catalase (CAT)** works by converting hydrogen peroxide into water and oxygen, using iron and manganese cofactors. It finishes up the detoxification process started by SOD.
- **Glutathione peroxidase (GSHpx) and glutathione reductase** are selenium-containing enzymes that help break down hydrogen peroxide and organic peroxides into alcohols. They are most abundant in our liver.
- **Non-enzymatic antioxidants** benefit by *interrupting free radical chain reactions*. Some examples are carotenoids, vitamin C, vitamin E, plant polyphenols, and glutathione (GSH). Most antioxidants found in supplements and foods are non-enzymatic, and they provide support to enzymatic antioxidants by doing a "first sweep" and disarming the free radicals. This helps prevent our enzymatic antioxidants from being depleted.

Antioxidants can also be classified in terms of their molecular size

- **Small-molecule antioxidants** work by mopping up or "scavenging" the reactive oxygen species and carrying them away through chemical neutralization. The main players in this category are vitamins C and E, glutathione, lipoic acid, carotenoids, and CoQ10.
- **Large-protein antioxidants** tend to be the enzymatic enzymes outlined above, as well as "sacrificial proteins," that absorb ROS and stop them from attacking our essential proteins. One example of these sacrificial proteins is albumin, which "take the bullet" for crucial enzymes and DNA.

NUTREASE POWDER- Nature's blend of Antioxidants to prevent and cure diseases

Nutrese Powder, A blend of natural Antioxidant & Phytonutrients to help prevent & cure diseases. Antioxidant phytochemicals found in Nutrese powder plays an important role in the prevention and treatment of chronic diseases caused by oxidative stress.

Role of Vitamins, Minerals and Botanicals in Nutrese Powder as Antioxidant

A dietary antioxidant is a substance (commonly found in foods) that significantly decreases the harmful effects of "reactive species", such as reactive oxygen and nitrogen molecules, that disrupt normal physiological function on a cellular level in humans.

Examples include the antioxidant nutrients vitamin C, vitamin E, selenium, and the carotenoids. A multitude of other nutrients, including minerals such as copper, manganese, and zinc, flavonoids also possess antioxidant properties.

The primary function of vitamin C (ascorbic acid) is the production of collagen, which forms the basis for connective tissue in bones, teeth, and cartilage. It also plays an important role in wound healing, immunity, and the nervous system, and acts as a water-soluble antioxidant. Because vitamin C is water soluble, its antioxidant functions take place in aqueous body compartments. It also helps protect low-density lipoprotein cholesterol (LDL-C) against free radical damage. As an antioxidant, it helps protect against cancer, cardiovascular disease, and certain effects of aging.

Vitamin E is the name given to a group of eight fat-soluble compounds. Unlike other vitamins, which are involved in metabolic reactions, it appears that the primary role of vitamin E is to act as an antioxidant. Vitamin E is incorporated into the lipid portion of cell membranes and other molecules, protecting these structures from oxidative damage and preventing the propagation of lipid peroxidation. Vitamin E appears to have protective effects against cancer, heart disease, and complications of diabetes. As an antioxidant, vitamin E plays a protective role in many organs and systems. Vitamin E is necessary for maintaining a healthy immune system, and it protects the thymus and circulating white blood cells from oxidative damage. Also, it may work synergistically with vitamin C in enhancing immune function. Recent research evidence indicates that the combined use of high doses of vitamin C and vitamin E helps prevent Alzheimer's disease. In the eyes, vitamin E is needed for the development of the retina and protects against cataracts and macular degeneration.

Vitamin E deficiency is rare, and occurs mostly in people with chronic liver disease and fat

malabsorption syndromes, such as celiac disease and cystic fibrosis. It can lead to nerve damage, lethargy, apathy, inability to concentrate, staggering gait, low thyroid hormone levels, decreased immune response, and anemia. Marginal vitamin E deficiency may be much more common and has been linked to an increased risk of cardiovascular disease and cancer.

The only specific effect of carotenoids in humans is to act as a source of vitamin A in the diet, but they also have important antioxidant actions. The latter are based on the carotenoids' ability to quench singlet oxygen and trap peroxy radicals, thereby preventing lipid peroxidation.

As a result, carotenoids protect against the development of cancer, cardiovascular disease, and ocular disorders. Carotenoids also affect cell growth regulation and gene expression. Diets low in carotenoids may lead to increased risk of cancer and heart disease.

Copper is necessary for the growth, development, and maintenance of bone, connective tissue, brain, heart, and many other body organs. It is involved in the formation of red blood cells, the absorption and utilization of iron, and the synthesis and release of life-sustaining proteins and enzymes. Copper stimulates the immune system to fight infections, repair injured tissues, and promote healing. Copper also helps to neutralize "free-radicals" which can cause severe damage to cells.

New research shows calcium needs phosphorus to maximize its bone-strengthening benefits, and taking a lot of calcium supplements without enough phosphorus could be a waste of money. Phosphorus deficiency results in bone loss just as calcium deficiency does, so if you are taking calcium supplements, you should also check and see if you are getting enough phosphorus.

Potassium is an essential mineral and electrolyte. Research shows that increasing potassium intake can lower your blood pressure. Individuals with existing hypertension, as well as those just looking to keep their blood pressure in check, can benefit from potassium.

In recent years, laboratory experiments, clinical trials and epidemiological data have established the role of selenium in the prevention of a number of degenerative conditions including cancer, inflammatory diseases, cardiovascular disease, neurological diseases, aging, and infections. Most

of these effects are related to the function of selenium in the antioxidant enzyme systems.

Sodium works with chloride and bicarbonate to maintain the body's balance of positive and negative ions in our body fluids and tissues. Without this balance of ions, our bodies electrical systems would not communicate. Sodium holds water in body tissues. Zinc is an essential mineral that is found in every cell in our body. It stimulates the activity of about 100 enzymes, substances that promote biochemical reactions in your body. Among its many functions, zinc maintains a healthy immune system, is needed for wound healing, helps maintain your sense of taste and smell, and is needed for DNA synthesis

Phytonutrients, also called phytochemicals, are chemicals produced by plants. Plants use phytonutrients to stay healthy. For example, some phytonutrients protect plants from insect attacks, while others protect against radiation from UV rays.

Phytonutrients can also provide significant benefits for humans who eat plant foods. Phytonutrient-rich foods include colorful fruits and vegetables, legumes, nuts, tea, whole grains and many spices. They affect human health but are not

considered nutrients that are essential for life, like carbohydrates, protein, fats, vitamins and minerals.

Among the benefits of phytonutrients are antioxidant and anti-inflammatory activities. Phytonutrients may also enhance immunity and intercellular communication, repair DNA damage from exposure to toxins, detoxify carcinogens and alter estrogen metabolism. The U.S. Department of Agriculture (USDA) notes that consuming a phytonutrient-rich diet seems to be an “effective strategy” for reducing cancer and heart disease risks.

Phytonutrient groups include

- Carotenoids
- Curcuminoids
- Flavonoids
- Glucosinolates
- Hydroxycinnamic acids
- Lignans
- Lipids
- Stilbenes
- Sulfides
- Tocopherol

COMPOSITION OF NUTREASE POWDER

Serving Size : 30g (1 Scoop)		Serving per container : 20
Supplement Facts	Per 100g Approx	Per 30g Approx
Energy	349.86 Kcal	104.96 Kcal
Protein	38.723g	11.61g
Total Carbohydrate	53.05g	15.91g
Dietary Fiber	22.17g	6.648g
Sugar	6.093g	1.82g
Total Fat	3.00g	0.902g
Saturated Fats	2.62g	0.78g
Mono Unsaturated Fats	0.133g	0.040g
Poly Unsaturated Fats	0.116g	0.034g
VITAMINS		
Vitamin A	2000IU	600IU
Vitamin C	40mg	12mg
Vitamin E	10mg	3mg
Thiamine	0.075mg	0.03mg
Riboflavin	0.05mg	0.015mg
Niacin	0.21mg	0.063mg
Pantothenic Acid	0.24mg	0.072mg
Pyridoxine	0.1mg	0.03mg
Folic Acid	0.002mg	0.0006mg
MINERALS		
Calcium	100mg	30mg
Iron	5mg	1.5mg
Phosphorus	200mg	60mg
Selenium	100mcg	30mcg
Copper	5mg	1.5mg
Chromium	100mcg	30mcg
Potassium	50mg	15mg
Sodium	50mg	15mg
Choline	15mg	4.5mg
Manganese	2mg	0.6mg
Zinc	5mg	1.5mg
Magnesium	100mg	30mg

INGREDIENTS :

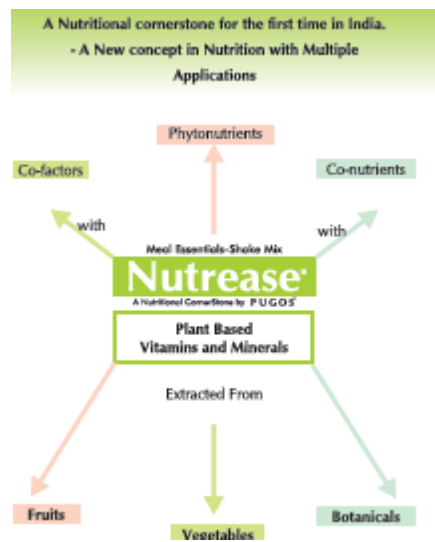
Inulin, Soya Protein Isolate, Pea Protein Isolate, Whey Powder, Cyclodextrin, Partially Hydrolyzed Guar gum, Guava Leaf Extract, Moringa Extract, Sesbania Extract, Annatto Extract, Green Tea Extract, Holy Basil Extract, Amla Extract, Lemon Peel Extract, Citrus Bioflavonoids, Flax Seed Powder, Brassica, Lactobacillus Gasseri, Papaya Fruit Latex, Pine Apple Extract, Steviol Glycosides (Rebaudioside A), Ginger Powder, Curcuminoids, Banana Leaf Extract, β -Carotene, Di Calcium Phosphate, Choline, Copper Sulphate, Manganese Sulphate, Fructose, Riboflavin, Skimmed Milk Powder, Xanthum gum, Apple Fiber, Sodium Carboxymethyl Cellulose, Mango Powder and Mango Flavor.

MECHANISM OF ACTION OF NUTREASE POWDER

Nutrase contains standardized plant-based vitamins and minerals which include a diverse mixture of substances including dozens of closely related vitamins and phytonutrients to help potentiate insulin action and thus influence carbohydrate, lipid and protein metabolism. Targeted botanicals and antioxidants like curcuminoids, sulforaphane glucosinolate from Broccoli Extract and Ginger Extract to help regulate metabolism, stimulate digestion and to provide long-lasting cell protection from free radical damage. Probiotics and prebiotics like Lactobacillus gasseri and Inulin to help balance intestinal flora, reduce waist circumference and

reduce adipocyte size through inhibition of leptin levels. Good fats like omega 3,6& 9 from Flaxseed and Medium Chain Triglycerides (MCT), help to maintain healthy levels of blood sugar and triglycerides, enhance metabolism to burn more calories. Optimum fibers like alpha cyclodextrins, partially hydrolyzed guar gum, and oat fiber to help promote intestinal regularity, to increase the satiety and improve glycemic effect of meal. Plant enzymes like bromelain and papain for better digestion and absorption of proteins. Premium blend of protein concentrate and pea protein isolate to meet the daily protein requirements and to maintain lean muscle mass. Added with natural sweetener to maintain healthy blood sugar levels.

PHARMACOLOGICAL ACTION OF EACH INGREDIENTS OF NUTREASE POWDER



COMPARISON CHART

NUTRITIONAL INFORMATION	NUTREASE	OTHER MARKET BRANDS
DIET PROTEIN / ECO PROTEIN / PEA PROTEIN	✓	✗
PLANT BASED OMEGA 3 & 6	✓	✗
LOW SUGAR	✓	✗
DIGESTION SUPPORT	✓	✗
HEALTHY INGESTIVE	✓	✗
PARTIALLY HYDROLYZED GUAR GUM	✓	✗
ARTIFICIAL SWEETENER	✗	✓
INULIN PROBIOTICS	✓	✗
PREYEN SUGARS INGESTIVE	✓	✗
GOOD FATS	✓	✗
OMEGA 3,6 & 9 FATTY ACIDS	✓	✗
PHYSIOLOGICAL LAZERS	✓	✗

**Nutrese contains plant based broad spectrum
Vitamins & Minerals which includes a diverse mixture of
substances including dozens of closely related
Vitamins and Phytonutrients**

BANANA LEAF EXTRACT:

- ▶ Banana leaves are standardized for **Sodium** and **Potassium**.
- ▶ Promotes healthy digestion & contains large amounts of polyphenols (natural antioxidants) such as epigallocatechin gallate, or EGCG, a potent antioxidant and skin rejuvenator.
- ▶ Helps to promote fat oxidation and lowering body weight.



MORINGA EXTRACT:

- ▶ Natural energy booster, standardized for **Chromium**.
- ▶ Contains massive amounts of antioxidants like vitamin C, beta-carotene, quercetin, and chlorogenic acids. It is also rich in Protein, Vitamin A, Vitamin B6, and Minerals.
- ▶ Essential nutrient that potentiates insulin action, and thus influences carbohydrate, lipid, and protein metabolism.

MUSTARD SEED EXTRACT

- ▶ Mustard seed extract standardized for **Selenium**, along with the co-factors and co-nutrients.
- ▶ Helps to support thyroid hormone production, function as part of many enzymes, has antioxidant effects, can help in lowering blood pressure, moderate blood sugar levels, maintain healthy skin, and maintains immune system.



CURRY LEAF EXTRACT

- ▶ Curry leaf extract is standardized for **Iron** and is also a good source of antioxidant.
- ▶ Has shown to have medical properties such as anti-diabetic, antioxidant, antimicrobial, anti-inflammatory and hepatoprotective.
- ▶ Helps to reduce bad LDL cholesterol levels and maintains hemoglobin levels.
- ▶ It also contains various nutrients like vitamin A, C, B, E, Calcium, Phosphorus, Magnesium and copper.

GUAVA LEAF EXTRACT:

- ▶ Guava leaves extract is standardized for **Zinc** & it contains flavonoids, polyphenols, ursolic acid, essential oils and tannins.
- ▶ Helps to maintain growth, the immune system, cell growth and division.
- ▶ Helps in breakdown of carbohydrates.



AMLA EXTRACT

- ▶ Amla extract standardized for **Vitamin C**, contains polyphenols and bioflavonoids.
- ▶ It is also rich in anti-oxidants, fibre and minerals like calcium and phosphorus.
- ▶ Helps in speed metabolism, especially that of proteins.

ANNATTO EXTRACT:

- ▶ Annatto extract standardized for **Vitamin E**.
- ▶ Helps to limit the liver's ability to produce LDL (Low Density Lipoprotein) cholesterol.
- ▶ Helps to improve digestion.



BLEND OF GUAVA, SESBANIA, HOLY BASIL, LEMON PEEL EXTRACT AND CITRUS BIOFLAVONOIDS:

- ▶ This extract standardized for all **Natural B-Complex Vitamins** (except B-12), along with its co-nutrients and co-factors that help to support the activity and stability of the B-Complex vitamins.
- ▶ Guavas are rich in nutrients including vitamins, carotenoids, polyphenols and antioxidant pigments & lemon peels are rich in vitamins, including folic acid and folates, and phytonutrients.
- ▶ Tulsi is a sacred plant for Hindus, and a very well documented medicinal plant in Ayurveda. Modern science has confirmed that it has many healthy nutrients like ursolic acid & rosmarinic acid that provide a wide range of health benefits.

SOLUBLE AND INSOLUBLE FIBERS

HEALTH BENEFITS OF FIBER

- ▶ Normalizes bowel movements & maintain bowel health.
- ▶ Helps control blood sugar levels & lowers cholesterol levels.
- ▶ Aids in achieving healthy weight.



This product uses four types of specialty fibers from:

- ▶ SUNFIBER FROM TAIIO (Partial hydrolyzed guar gum)
- ▶ INULIN FROM FIBRULINE, BELGIUM (Inulin- Chichory extract)
- ▶ GAMMA CYCLODEXTRIN FROM WACKER, US
- ▶ APPLE FIBER FROM VITACELL

SUNFIBER FROM TAIIO (Partial hydrolyzed guar gum)

- ▶ Helps aid satiety (feeling of fullness) and improves glycemic effect of a meal.
- ▶ Easily digestible, prevents gas and bloating which is often experienced with a high fiber supplement
- ▶ Helps to improve mineral absorption.
- ▶ Helps to promote intestinal regularity & maintain digestive health.

INULIN FROM FIBRULINE, BELGIUM (Inulin- Chichory extract)

- ▶ Helps to provide the energy source for the beneficial bacteria living in the gut.
- ▶ Helps to relieve from constipation.
- ▶ Helps to increase calcium absorption and possibly magnesium absorption.
- ▶ A natural prebiotic

CYCLODEXTRIN FROM WACKER, US

- ▶ Water soluble, non-digestible fiber.
- ▶ Cyclodextrin helps to coat fat molecules in the food making them incapable to absorb.

APPLE FIBER FROM VITACELL, INDIA

- ▶ Helps to remove toxic substances from the digestive tract.
- ▶ Helps to remove unhealthy fats before they are stored in the body.
- ▶ Helps to reduce your risk for heart problems & enhance bowel function.



TARGETED BOTANICALS

BROCCOLI EXTRACT

- ▶ Sulforaphane glucosinolate extracted from Broccoli is a potent anti-oxidant.
- ▶ It is rich in calcium, iron & vitamin A, C & E.
- ▶ Provides long-lasting cell protection from free radical damage.
- ▶ Helps to exert a fat burning effect by triggering the breakdown of fat cells.
- ▶ Helps to prevent colon cancer, reduce blood pressure and heart disease.
- ▶ Helps to improve digestion.



CURCUMINOIDS FROM MOTHER TURMERIC EXTRACT

- ▶ Potent anti-oxidant, anti-inflammatory & cancer preventive molecule.
- ▶ Helps to assist the liver's detoxification activity.
- ▶ Controls appetite & increases the production of an adiponectin hormone.
- ▶ Increases the body's natural defense against allergens by increasing antibody response.
- ▶ Helps to lower bad cholesterol and improves digestion.



GINGER EXTRACT

- ▶ An anti-inflammatory
- ▶ Improve blood sugar levels & leptin levels
- ▶ Helps to regulate metabolism, stimulate digestion and reduces cortisol production.
- ▶ Helps to regulate cholesterol and increase energy level.



PRO-BIOTIC SUPPORT

(LACTOBACILLUS GASSERI)

- ▶ Lactobacillus gasseri helps to inhibit increase in body weight and white adipose tissue weight & help in reducing waist circumference. (Seun-Pil jung. Et al., K.J. F.M. 2013; 34: 80-89)
- ▶ Lactobacillus gasseri helps to reduce adipocyte size through inhibition of energy input and the level of leptin. (Essam M. Hamad. Et al., B.J. Nutrition (2009), 101, 716-724)
- ▶ Lactobacillus gasseri helps to reduce the serum and hepatic cholesterol and increase excretion of faecal fatty acids and total neutral faecal sterols. (Essam M. Hamad. Et al., B.J. Nutrition (2009), 101, 716-724)

GOOD FATS

FLAXSEED POWDER WITH OMEGA 3, 6, 9 FATTY ACIDS

- ▶ Helps to maintain healthy levels of blood sugar and triglycerides.
- ▶ Helps to promote healthy insulin response & reduces cholesterol.
- ▶ Supports colon detoxification, fat loss, increase metabolism and fat burning potential.

MEDIUM CHAIN TRIGLYCERIDES (MCT)

- ▶ Helps to enhance metabolism to burn more calories.
- ▶ Good source of energy and preserves muscle glycogen.
Helps to suppress appetite.



PLANT ENZYMES FOR BETTER ABSORPTION PAPAIN FROM PAPAYA FRUIT LATEX AND BROMELIN FROM PINEAPPLE EXTRACT

- ▶ Protein digestion enzymes.
- ▶ Helps to break large protein molecules into smaller and easing their absorption.
- ▶ To help to reduce Irritable Bowel Syndrome (IBS)



The enzymes help to breakdown any toxin molecules that have a neutral pH. Hence, the stomach is able to break down proteins that are normally absorbed and transferred to fat, which is known as enzyme digestion. This stops the digestive system from malfunctioning.



One and only supplement with standardized plant based Vitamins & Minerals

Synthetic Vitamins & Minerals



Single / Isolated Vitamers

“Natural” Vitamins & Minerals



Single / Isolated Vitamers

Plant - Based Vitamins & Minerals



Broad-spectrum mix of vitamers

Figure 1. Most “natural” vitamin supplements are chemically stripped down to a single vitamer, which are more closely related to synthetic vitamins than true plant-based vitamins.

Synthetic Vitamins & Minerals

- ▶ Are made up of industrial chemicals like petroleum derivatives (hydro carbons).
- ▶ Chemical structure varies compared to Natural and plant based vitamins & minerals.
- ▶ Doesn't contain broad spectrum of closely related vitamins, minerals and phytonutrients co-factors and conutrients.
- ▶ Has failed to protect against diseases.
- ▶ Less Bioavailable.
- ▶ They are less absorbed and have more risks of Side effects.

Plant-Based Vitamins & Minerals

- ▶ Extracted from fruits vegetables, herbs, fungi and other natural sources.
- ▶ Chemical structure and chemical diversity of vitamins and phytonutrients are naturally retained.
- ▶ contains broad spectrum of closely related Vitamins, Minerals, Phytonutrients, Co-factors, and Co-nutrients.
- ▶ Has shown effective protection role against diseases.
- ▶ Bioavailability is purely high.
- ▶ Highly absorbed and have very less side effects.

Synthetic / isolated vitamins



VS.

Broad-spectrum plant-based vitamins



SUPPLEMENT FACTS

- **Presentation:** POWDER

- **Usage:** As a food supplement. It is a combination of Natural vitamins and minerals Natural Antioxidant Phyto-Nutrients to

improve health and vitality. Provides Natural Antioxidant support.

- **Contra-indications:** Product is contra-indicated in persons with Known hypersensitivity to any component of the product hypersensitivity to any component of the product.
- **Recommended usage:** Once or twice a day along with portion controlled nutritious meals and exercise.
- One Serving (30g- 1 Scoop) provides 104 Calories, 11.61g of proteins, 6.64g of Fiber and 1.82g of Sugar per day.
“Do not exceed the recommended daily dose”.
- **Directions for Use:** Take one level scoop (30g) with skimmed milk or water to make a cup of 200ml. Gently shake well in shaker or stir well until the powder is evenly dispersed and drink immediately.
- **Administration:** Taken by oral route at any time with food.
- **Precautions:** Food Supplements must not be used as a substitute for a varied and balanced diet and a healthy lifestyle. This Product is not intended to diagnose, treat, cure or prevent any

diseases. Do not exceed the recommended daily dose.

- **Warnings:** If you are taking any prescribed medication or has any medical conditions always consults doctor or health care practitioner before taking this supplement.
- **Side Effects:** Mild side effects like nausea, headache and vomiting in some individuals have been reported.
- **Storage:** Store in a cool, dry and dark place.

SUMMARY & CONCLUSION

Nutrese Powder, A blend of natural Antioxidant Phytonutrients to prevent & cure diseases. Antioxidant phytochemicals found in Nutrese powder plays an important role in the prevention and treatment of chronic diseases caused by oxidative stress. They often possess strong antioxidant and free radical scavenging abilities, which are also the basis of other bioactivities and health benefits. Phytonutrients in Nutrese powder play a positive role by maintaining and modulating immune function to prevent specific diseases. Being natural products, they hold a great promise in clinical therapy.

REFERENCES

- [1]. B. Halliwell and J. M. C. Gutteridge, “The Definition and Measurement of Antioxidants in Biological Systems,” *Free Radical Biology and Medicine*, 18(1), 1995, 125-126. doi:10.1016/0891-5849(95)91457-3
- [2]. B. Halliwell, “Biochemistry of Oxidative Stress,” *Biochemical Society Transactions*, 35(5), 2007, 1147-1150. doi:10.1042/BST0351147
- [3]. M. Carochi and I. C. F. R. Ferreira, “A Review on Anti-oxidants, Prooxidants and Related Controversy: Natural and synthetic compounds. Screening and Analysis Methodologies and Future Perspectives,” *Food and Chemical Toxicology*, 51, 2013, 15-25. doi:10.1016/j.fct.2012.09.021
- [4]. K. Rahman, “Studies on Free Radicals, Antioxidants, and Co-Factors,” *Clinical Interventions in Aging*, 2(2), 2007, 219-236.
- [5]. D. V. Ratnam, D. D. Ankola, V. Bhardwaj, D. K. Sahana and M. N. V. R. Kumar, “Role of Antioxidants in Prophylaxis and Therapy: A Pharmaceutical Perspective,” *Journal of Controlled Release*, 113(3), 2006, 189-207. doi:10.1016/j.jconrel.2006.04.015
- [6]. M. Valko, D. Leibfritz, J. Moncol, M. T. D. Cronin, M. Mazur and J. Telser, “Free Radicals and Antioxidants in Normal Physiological Functions and Human Disease,” *International Journal of Biochemistry & Cell Biology*, 39,(1), 2007,44-84. doi:10.1016/j.biocel.2006.07.001
- [7]. EFSA, “Scientific Opinion on the Reevaluation of Butylated Hydroxytoluene BHT (E 321) as a Food Additive. EFSA Panel on Food Additives and Nutrient Sources Added to Food (ANS),” *European Food Safety Authority Journal*, 10 (3), 2012, 2588. <http://www.efsa.europa.eu/en/efsajournal/doc/2588.pdf>
- [8]. C. H. Foyer and G. Noctor, “Redox Sensing and Signaling Associated with Reactive Oxygen in Chloroplasts, Peroxisomes and Mitochondria,” *Physiologia Plantarum*, 119(3), 2003, 355-364. doi:10.1034/j.1399-3054.2003.00223.x

- [9]. C. H. Foyer and S. Shigeoka, "Understanding Oxidative Stress and Antioxidant Functions to Enhance Photosynthesis," *Plant Physiology*, Vol. 155, No. 1, 2011, pp. 93- 100. doi:10.1104/pp.110.166181
- [10]. J. Bailey-Serres and R. Mittler, "The Roles of Reactive Oxygen Species in Plant Cells (Editorial)," *Plant Physiology*, 141 (2), 2006, 311doi:10.1104/pp.104.900191.

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