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## AN ANALYSIS OF HEALTH BENEFITS OF BANANA

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### ABSTRACT

*Banana is popular term for herbaceous vegetation of Musa genus, as well as fruit y produce. It is one among first vegetation to be grown. Roasted flowers are provided to diabetics to cure bronchitis & dysentery; astringent vegetation sap is used to cure hysteria, epilepsy, leprosy, fevers, haemorrhages, acute dysentery, & diarrhoea, as well as haemorrhoids, insect & or itches & bites; & fresh leaves are used as poultices on burn injuries & sting. Anti - fungal & antibiotic chemicals can be found in peel extract of fully riped bananas. Antibiotics are used to treat Mycobacteria infections. Fungicide found in covering & pulp of green fruit protects tomato vegetation from a fungal disease. ripe peel & pulp also contain norepinephrine, dopamine, & serotonin. first two raise blood pressure, whereas serotonin suppresses stomach output & activates intestinal smooth muscle.*

**KEYWORDS:** *Banana, diarrhoea, Health, Food, Medicine.*

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### 1. INTRODUCTION

Vegetable & fruits are an essential part of balanced diet. Banana, for example, provide many health advantages. This is partially due to fact that bananas help body retain phosphorus calcium, & nitrogen, all that help in creating vigorous & regenerated tissues. We'll go through a few of se advantages in following paragraphs. Bananas may be used to treat gastrointestinal problems such as ulcers. Bananas is one of little fruits that ulcer sufferers may eat without becoming sick. Bananas help to nullify acidity of gastric secretions, decreasing ulcer inflammation by coating stomach lining. Bananas may not only alleviate painful ulcers & or digestive problems, but y can also aid in healing process. fruit may also be used to heal burns & wounds. Make a paste out of riped banana & apply it on to burn for instant pain relief. Covering area with cotton b&age for best effects. Even banana leaves may be used to treat burns or wounds as a cold compress. Or health advantages of bananas include relief from constipation & diarrhoea, arthritis rapy, & anemia treatment[1].

#### 1.1 NUTRITIONAL VALUE OF BANANA:

Banana is a fantastic source of potassium. Potassium may be found in number of fruit, vegetable, & meats; though, single banana contains 23 percent of potassium that one need on regular basis. Potassium is beneficial to muscle because it aids in normal functioning & reduces muscular spasms. Furrmore, new research suggests that potassium may assist to lower blood pressure in those who are lacking in mineral. Potassium also helps to lower danger of stroke. Bananas are also high in vitamins, including following[2]:

- A –Promotes health of teeth, , soft tissuebones, & or body parts.
- B6 –supports immune system of body, improves brain & heart health, & more.
- C –Helps in wound curing, tissue development, ligament growth, & more.

- D –It aids calcium absorption in body.

Bananas help maintain body fit in a variety of methods, but there is significant advantage to bones & muscles in human body due to vitamins contained. Bananas contain 41% of vitamin B6 that people need each day, so eating them may help you concentrate & think more clearly. Bananas also promote vitality, which implies that people will have greater mental & physical energy as a result of eating them. In fact, several studies indicate eating bananas may help people feel better, when they're depressed or troubled from PMS. Banana is great meal for individuals who are trying to reduce weight. They are wonderful source of energy, while being heavy in calories (200 per banana) & carbohydrates (51 grams). A banana eaten before an exercise may give you with energy you need to finish a lengthier workout. Bananas have lot of health advantages, but they're also delicious. They may be eaten on their own or mixed into fruit salad, added to jello, or blended into smoothie or milkshake. They're one of most cost-effective fruit on market, & they're available all year long almost everywhere[3].

#### *1.2 Medicinal Properties of Banana:*

fruit acts as a moderate laxative. It can be used to treat constipation in youngsters & is thought to be useful in treatment of diarrhoea & dysentery. fruit is also used to repair intestinal ulcers. It is included in meals of undernourished children. core of stem is thought to be beneficial for stomach distress & diabetes. extract of core of stem is thought to be beneficial for dissolving kidney & urinary bladder stones as well as weight loss. flower is combined with coconut oil & spices to clear out urinary blockages. fruit is said to help children with their worm issues[4].

#### *1.3 Adverse effects of Banana:*

high carbohydrate content of this fruit, coupled with tryptophan level, is thought to alter user's state of consciousness, affecting brain activity & causing drowsiness. intake of bananas with alcohol may exacerbate migraine headaches. As a result, eating bananas while drinking alcohol is not recommended. Banana consumption may cause allergy responses in a small number of individuals[5].

#### *1.4 Nutritional properties of Banana:*

A 100 grams of ripened banana has about 116 calories, making it a supplemental basic meal. Because bananas include less proteins than cereals, a lack of or meals which are protein-rich in diet may lead to protein deficit in individuals who rely on bananas as a main food. Bananas, when cooked or ripe, are readily digestible. Bananas are a good source of Vitamin B & Calcium. sugar content of a banana is about 20%.

#### *1.5 Medicinal Qualities of Banana:*

Bananas are a nutrient-dense fruit, but do they have any therapeutic qualities in addition to their nutritional value? While it might show as surprise to us who are only familiar with bananas being used for baking & banana splits, Purdue University asserts that each component of banana plant has therapeutic benefits. following are some of characteristics mentioned[6]:

- *Flowers:* Dysentery, ulcers, & bronchitis are all treated with flowers. Flowers, when cooked, are regarded healthy meal for diabetes.
- *Sap:* It has astringent properties on a chemical level. sap is used to cure a number of illnesses in traditional medicine, including fever leprosy, , digestive problems, bleeding, epilepsy, hysteria hemorrhoids, & bug bites.
- *Roots & Seeds:* Treating stomach problems with roots & seeds

- *Peel & pulp:* Covering & pulp have scientifically revealed for having antifungal & antibacterial properties. neurotransmitters norepinephrine, serotonin, & dopamine have also discovered in these structures.

#### *1.6 MEDICINAL IMPORTANCE OF BANANA:*

##### *1.6.1 Reduced danger of higher blood pressure:*

Potassium is an important element for sustaining normal blood pressure & heart functioning, & bananas are one of the finest sources. Medium banana has 350 milligrams potassium. A number of studies have shown efficacy of potassium-rich meals in reducing blood pressure. US Food & Drug Administration has given banana business permission to make formal claims about fruit's potential to lower blood pressure & stroke danger. "Diets including foods that are excellent sources of potassium & short in sodium may decrease danger of high blood pressure & stroke," according to FDA. Potassium also aids in maintenance of proper fluid & electrolyte balances in cells. Natural chemicals in bananas, according to scientists, work in a similar way to anti-hypertensive medications. researchers looked at six common banana types & discovered that they all exhibited ACE-inhibiting characteristics, but ripe bananas had a greater effect than unripe bananas. According to studies, individuals who ate 2 banana each day for a week had a 10% reduction in blood pressure[7].

##### *1.6.2 Reduced danger of stroke:*

Scientists believe individuals who consume too little potassium in diet have higher danger of stroke. A study of 5,600 individuals over age of 65 showed that those with lowermost potassium consumption were 50 percent more probable to have stroke. Foods with high-potassium, such as banana, might reduce danger of stroke, but more study is required to establish whether boosting potassium in diet may prevent strokes, according to experts.

Because bananas are high in nondigestible fibers (such as cellulose, hemicellulose, & alpha-glucans), they may help restore regular digestive function & relieve constipation & diarrhea. Bananas restore colon's ability to absorb significant quantities of water, which is necessary for regular bowel motions. Their value stems from their high pectin content, which makes them water-absorbent & allows them to produce bulk. Bananas are particularly high in fructooligosaccharide, a prebiotic that feeds probiotic (friendly) bacteria in colon. These helpful bacteria generate vitamins & digestive enzymes that enhance our capacity to absorb nutrients, as well as chemicals that protect us from harmful bacteria. When these friendly bacteria digest fructooligosaccharides, quantity of probiotic bacteria increases, as does body's capacity to absorb calcium. Antibiotics kill these helpful microorganisms as a result of this.

##### *1.6.3 Ulcer protection & heartburn relief:*

Bananas have known for antacid properties, which defend against stomach ulcers & ulcer harm. Leucocyanidin, flavonoid present in bananas, has shown to substantially enhance wideness of stomach mucous membrane layer. Banana is wonderful method for getting rid of heartburn since they assist to neutralize acidity. A simple combination of banana & milk substantially reduced acid production in an animal research.

##### *1.6.4 Protection against neurodegenerative illnesses (Alzheimer's disease):*

Cornell University researchers studied effects of apple, banana, & orange extracts on neuron cells & discovered that fruits' phenolic phytochemicals protected cells against neurotoxicity. Apples had most protective antioxidants of three fruits, followed by bananas & oranges. These findings indicate that include fresh apples, bananas, & oranges in our regular diet, as well as other fruits, may protect neuron cells from oxidative stress-induced neurotoxicity & may help to reduce danger of neurodegenerative diseases like Alzheimer's disease.

#### *1.6.5 Perfect Baby food :*

Bananas are an excellent solid meal to introduce to babies. A ripe banana mixed into a puree is a simple & nutritious infant meal. Vitamins A, B2, B6, C, E, Niacin, Folate, & Pantonic Acid, as well as potassium, fiber, calcium, magnesium, phosphorus, selenium, iron, & vitamins A, B2, B6, C, E, Niacin, Folate, & Pantonic Acid. Bananas are also very simple to digest & seldom cause adverse responses. Bananas are part of BRAT diet, which is recommended by many doctors for children recuperating from gastrointestinal issues, especially diarrhea. A recent research showed evidence that increased intake of bananas & apple juice from concentrate may prevent youngsters against wheezing.

#### *1.6.6 Cholesterol-lowering impact :*

Animal studies have indicated that bananas may help reduce cholesterol levels. cholesterol-lowering action of banana pulp was thought to be due to dietary fiber component in pulp. During banana ripening, quantity of dietary fiber in fruit remains pretty consistent.

#### *1.6.7 Kidney health:*

Bananas help to enhance overall efficiency of kidneys' functions. Bananas have kidney-friendly properties owing to its high potassium content. Normal potassium consumption reduces calcium excretion in urine & lowers incidence of kidney stones. findings of a 13-year Swedish population-based prospective research of 61,000 women aged 40 to 76 indicate that consuming more than 75 servings of vegetation & fruits per month (equivalent to 2.5 servings per day) reduces danger of kidney cancer by 40%. Bananas were particularly defensive among fruits. Women who ate bananas four to six times a week had a 50% lower chance of getting illness than those who did not.

#### *1.6.8 Hangover:*

Making a dairy banana cocktail with milk & honey is one of quickest methods to treat a hangover. Bananas are believed to help rehydrate your body & soo an upset stomach. Bananas are high in magnesium & potassium, two essential electrolytes that are significantly depleted after excessive drinking. combination of banana & honey replenishes low blood sugar levels & provides energy.

#### *1.6.9 Energy booster:*

Bananas are a good source of energy since they include three natural sugars: sucrose, fructose, & glucose, as well as fiber. Potassium is also necessary for healthy muscular contraction during exercise & helps to prevent cramps. A banana provides an immediate, long-lasting, & significant energy boost. Two bananas offer adequate energy for a hard 90-minute exercise, according to research.

#### *1.6.10 Immunity booster :*

Bananas provide 25% of recommended daily intake (RDA) for vitamin B6, which is required for production of antibodies & red blood cells, as well as assisting in fat metabolism. Vitamin B6 also helps to strengthen immune system. As a result, this fruit fortifies your defenses against infectious illnesses. You get approximately 15% of your RDA for vitamin C, one of most powerful antioxidants, from an average-sized banana.

#### *1.7 CULTURAL & ENVIRONMENTAL CARE :*

Bananas need rich, fertile soils & a sunny, protected position for cultivation & environmental reasons. Bananas flourish in a consistent warm or hot environment. If temperatures drop below 60 degrees Fahrenheit, plant development decreases, & permanent freeze damage may occur below 32 degrees. High winds may shred & dry leaves, as well as collapse vegetation.

Banana vegetation need a lot of water & will die if soil dries up; nevertheless, y are not flood resistant. active stem must be cut away to enable new suckers to grow since each stem only produces blooms & fruits once.

#### *1.8 Pests & Diseases :*

Bananas contain 41% of vitamin B6 that people need each day, so eating m may help you concentrate & think more clearly. Bananas also promote vitality, which implies that people will have greater mental & physical energy as a result of eating m. In fact, several studies indicate eating bananas may help people feel better, whery're depressed or troubling from PMS. Before planting, corms should also be cleaned in hot water solutions.

#### *1.9 Food Uses:*

Although all banana trees may produce edible fruit, flavor, seediness, color, size, & or features of fruit vary depending on species or variety. Bananas may be peeled & eaten raw, roasted peeled or unpeeled, pureed for babies, & utilized in a variety of different ways. Peeled stems may be cut & used to salads or cooked with or vegetables, in addition to plant's extremely adaptable fruits.

*1.10 Non-food uses:* Banana leaves are widely used as vegetation, for covering food, as an eye shade, & for wear protection. fiber in banana pseudostem may be used. Although pulp may be used to make rope, paper, place mats, & or items, pseudostem is typically more economically useful when cut & placed in a field for its organic matter content. rapeutic benefit of banana may be found in all sections of fruit. Flowers, for example, may be cooked & consumed by diabetics, as well as used to treat bronchitis, diarrhea, & ulcers. Plant sap may be consumed or applied to stings & bites on skin. Skin irritations may be treated using young leaves as a poultice. Some areas & civilizations use roots, ashes of peels & leaves, & seed mucilage for rapeutic reasons.

## **2. LITERATURE REVIEW**

Kaur A et al. discussed bioactive compounds in banana &ir associated health benefits in which y discussed how Bananas are a highly popular fruit in global market, & many nations eat m as a staple meal. It is cultivated all over globe& is fifth most significant agricultural food crop in terms of global commerce. re are two types of bananas: dessert or sweet bananas & cooking bananas or plantains. It's eaten raw or cooked, & it's also used as a functional component in a variety of foods. bioactive chemicals found in bananas, such as phenolics, carotenoids, biogenic amines, &phytosterols, are very desired in diet because y have many health & well-being benefits. Many of se chemicals have antioxidant properties & may protect body from different oxidative stressors. Bananas were formerly widely utilized to cure a variety of ailments, including lowering danger of numerous chronic degenerative illnesses. historical context, cultivar categorization, beneficial phytochemicals, antioxidant activity, & health advantages of bananas are all covered in this paper[8].

Apostolopoulos V et al. discussed Green Bananas &ir Health Benefits in which y discussed how Bananas are an excellent source of nutrients for both animals & humans. Since ancient times, y have utilized as a complementary medicine to cure pathological diseases. scientific validity of bananas' positive benefits in relieving & curing illness problems such as ulcers, infections, diabetes, diarrhea, colitis, & blood pressure has recently piqued attention. We discuss possible medicinal & functional advantages of specific banana species when eaten green, as well as characteristics of extracts from plant's non-fruit sections. Green bananas seem to provide a wide range of health &rapeutic advantages, according to our findings[9].

Zafar T et al. discussed Bioactive compounds in banana fruits &ir health benefits in which y discussed how Banana is an edible fruit that grows on a herbaceous flowering plant in Musa



genus & family Musaceae. Bananas may also be consumed as a cooked vegetable (& is n called plantains). *Musa acuminata* Colla & *Musa balbisiana* Colla are two major species of edible bananas, both of which are seedless (parnocarpic). *Musa x paradisiaca* L., a hybrid of se two species, is also accessible today. Although bananas are native to Indonesia & Australia, y were originally domesticated in Papua New Guinea. Banana has already exp&ed to almost 135 nations worldwide. According to statistics from 2016, India & China produce almost a quarter of world's bananas. In Western nations, Cavendish group banana, which is primary export item from banana-exporting countries, typically refers to soft, sweet, & dessert bananas, while plantain bananas contain firm, starchy fruit that may be cooked as a vegetable[10].

### **3. DISCUSSION**

Banana varieties (Genus *Musa*) have cultivated for a long time all over globe. Bananas have nutritional & traditional rapeutic benefits in all of ir components. Several in vitro research, animal model studies, & clinical investigations indicate that different portions of banana may be used to treat illnesses such as diabetes, hypertension, cancer, ulcers, diarrhoea, urolithiasis, Alzheimer's disease, & infections. Surgical dressings, pain treatment, food & medicines, nanomedicine, pollution management, apoptosis, & cell cycle are among or medical applications. banana plant & its different components are eaten all over world & are used in traditional medicine to cure a variety of illnesses. Several studies have shown that different portions of banana may be used to treat a variety of illnesses & can also be helpful in or areas. Several properties of banana has discussed in this paper. More research is needed to identify useful compounds that may be used as new dietary medications in future.

### **4. CONCLUSION**

banana has a lot of nutrients. It contains a unique blend of energy, tissue-building components, protein, vitamins, & minerals. It is an excellent source of calories since it has a high solids content & a low water content when compared to or fresh fruits. Bananas are high in Vitamin C, which aids in recovery of immune system. Bananas are also very simple to digest when compared to or meals, making m particularly beneficial to individuals with weakened immune systems. Vitamin C also aids in absorption of iron & production of blood; se two health advantages of bananas make m excellent for people suffering from anemia or or blood-related issues. Bananas may also be included in a high blood pressure diet since y contain potassium, which aids in reduction & management of high blood pressure. Furrmore, bananas contain no detectable quantities of fat, cholesterol, or salt, making m a healthy food choice for even most restricted diet programs. Bananas are divided into many kinds based on irflavor& skin color. skin of a red banana is red, while flesh of fruit is pale pink. Allowing red bananas to mature completely at room temperature yields finest results. y may be used to brighten up a mixed fruit dish by adding color&flavor. Apple bananas are golden in color& smaller than or banana types. y ripen more quickly than or fruits, so it's essential to keep an eye on m to make sure y don't spoil. baby banana is one of tiniest banana types available, & it is yellow in color. y're extremely pleasant, &y're ideal for babies & toddlers. It's recommended to mash se bananas into a thick puree before giving m to babies. Baking bananas are big bananas that are frequently used as a distinctive & unusual replacement for potatoes in baked meals. health advantages of ripe bananas are many, & y should be considered while developing a diet plan.

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