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**| RESEARCH ARTICLE**

## **The Role of Plants in Human Health**

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**| ABSTRACT**

Through extensive research, humans have discovered that the best way to achieve good health is by reconnecting with nature. Plants, which surround us, not only fulfill our physical needs for food and medicine but also our spiritual needs. Living in harmony with nature allows us to appreciate its beauty, including the awe-inspiring flowers, trees, and forests that invigorate our souls. Furthermore, the natural environment can have a religious significance, with Islam being a perfect and universal religion that offers a clear life program for the world. The holy book of Islam, the Quran, states that "TABAIENA LEKOLE SHAY IN" encapsulates this program succinctly. The importance of plants in human life cannot be overstated, as they have special effects on our lives in various ways, including helping us comprehend our intellectual relationships with nature. However, while the Quran contains numerous references to plants, there has been little systematic study on their use in human life. In this research, we will examine several verses from the Quran that discuss the effects of plants on the human body and soul.

**| KEYWORDS**

Plants, Importance, Human, Vital, needs, positive effects

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### **1. Introduction**

Throughout history, plants have been a crucial component of human life and society, serving our basic needs for food, medicine, and shelter, but their importance goes beyond these necessities. Plants play a critical role in human health and well-being by providing essential nutrients, such as vitamins, minerals, and fiber, which are essential for proper bodily function. By incorporating a variety of plant-based foods into our diets, we can improve our overall health and reduce our risk of chronic diseases such as heart disease, diabetes, and cancer (Grinde, B., & Patil, G. G. 2009). In addition to providing essential nutrients, plants have the potential to prevent and treat various diseases. For centuries, people have used plants to alleviate symptoms of illnesses and promote healing, and plant-based medicine is still a significant aspect of many traditional and modern medical practices (Niazi P. et al., 2023). For example, aspirin, one of the most widely used drugs worldwide, was originally derived from the bark of willow trees, while other plants, such as St. John's Wort and Echinacea, have been shown to have antidepressant and immune-boosting properties. Moreover, plants contribute to our mental well-being, as spending time in nature and green spaces has been shown to reduce stress, anxiety, and depression. Plants can also enhance our cognitive function, creativity, and productivity, making them

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an essential aspect of our work and home environments (Monib, A. W. et al., 2023, Chandrasekar, K. 2011); the role of plants in human health extends beyond our individual well-being to encompass environmental sustainability and planetary health, plants are critical components of our ecosystem, providing habitat and food for other organisms, contributing to the earth's oxygen and water cycles, and mitigating the effects of climate change by absorbing carbon dioxide from the atmosphere and reducing the urban heat island effect (Rawat, U. S., & Agarwal, N. K. 2015).

Plants are also essential for our physical environment, as they provide us with food, clothing, energy, and medicine. The existence of green environments and trees helps us to live longer by decreasing dust and pollution and absorbing dusty air. The mass of trees can absorb lead pollution from the air, and the covering of plants and trees has a remarkable role in absorbing the descendant, decreasing the speed of rain and snow, which can prevent floods and their effects on the earth (Decoteau, D. R. 2005). The wild trees and bushes save the summer and winter descents, keep them with the underground water, and spread them in the summer while preventing the destructive effects of the sun and avoiding surface soil evaporation (Hughes, J. D., & Thirgood, J. V. 1982). Trees, branches, and wild bushes help to resolve snow from the branches and leaves and prevent the accumulation of snow banks. The compacted roots of plants and bushes have an effective role in shaking the earth of the earth quickly (Bot, A., & Benites, J. 2005). Finally, keeping and extending forests are essential in mitigating the effects of carbon dioxide production, which can cause greenhouse gas emissions that increase the earth's temperature. Therefore, planting trees and preserving forests can help absorb and sequester carbon dioxide and prevent further environmental damage; the importance of plants in human life and society is multifaceted and crucial for our well-being and the health of our planet (Turner-Skoff, J. B., & Cavender, N. 2019).

## **2. The role of plants in human nutrition and health is significant**

Food is something solid, liquid and gas which is replaced by lost charges in an animate so all creatures such as plants, animals, and humans need to be fed and get their energies to live; the only difference is that the plants, on the contrary to the animal are Heterotroph besides being expenditure they are a producer of autotroph. They get water from the soil with the aid of carbon dioxide in the air and sunshine. This process is called photosynthesis (Qahraman, 1396, p. 325). Human beings cannot receive their needed elements directly from the earth without plants; therefore always get help from plants that can fulfill their food through plants (Ozturk H. et al., 2023). We can say that the life of animate creatures, with some exceptions, are going to be stopped in a short time in the world of a lack of photosynthesis, wild animals aren't fed directly from plants but indirectly through the animal who is feeding by plants and they have lain to plants, this process to photosynthesis green cell which is common to be on the water as land, the animal ocean society is directly and indirectly protected through micro shapes or very small plant's life which are able to change material resources. Allah (SWT), after creating the earth and creatures (human & animal), made the animal ready to be fed by plants and made the human ready to be fed from both animals and plants. On the other hand, the existence of energy is the food chain of every ecosystem, which transfer each animates to another one, and the creator of actor of this system are animate creatures or consumers who are classified as vegetarian, non-vegetarian and parsers; all these consumers need the solar energy for their activities to be done. The Holy Quran Pointed out nutrition in different Surat like Baqara 126, Noh 112, Qeses 57, Abas 23-24, and Qraish 14, which are the explanation of such matters and the following are some related verses: Allah is one who saves the human from hunger and feeds them at anytime and anywhere (Quraysh:4). Allah (SWT) feeds all the human beings in the world whether believers or atheist. Allah (SWT) is the only one who grants us food, and he is one who makes it taste the envelopment of hunger and fear (Nahl: 112). The food and enjoyment in the world in a competition for paradise are just like a drop as Allah (SWT) says that "Whoever disbelieves, I will grant him enjoyment for a little".

To pay attention to the following verses, we see that the best role of plants in human life is the role of nutrition as Allah (SWT) says, "Then let mankind look at his food, how we pour down water in torrents, then we broke open the earth splitting it with sprouts and caused to grow within it grain and grapes and herbage and olive and palm trees and gardens of dense shrubbery and fruit and grass as enjoyment for you and grazing livestock (Surat Abasa 24-32). In verses 20 to 21 in Waqea Surat is mentioned that "The human can select any type of fruit and any type of meat". Allah (SWT) also mentioned in Tor Surat that "we give those fruit and meat gradually". Here in this verse, besides indicating prolific, extended food and variety of paradisiacal eating stuff, it is also mentioned that the food is always available; it doesn't finish. In the holy Quran, the word Fakeha (fruit) is mentioned 14 times as singular and plural, 11 times has come as the food of paradise and closest, while the meat is mentioned 18 times as food which is excluded the prohibition of pork or ham, Baqara (173), Maeda (3), Inaam (145), Nahel (115), and 2 times entitled as paradisiacal food was indicated that each time was mentioned after fruit Nahel (14), Fater (12), which are indicating more valuable of fruits to health. In both verses, fruit is in priority because of more enjoyment rather than other foodstuffs; whereas some people believe that human beings are the consumers of fruits and natural food, some people believe that human beings are the creator of fruit consumers and the natural food of them are fruits because using meat is not like getting fruit. The meat needs to be changed and composed with something else while cooking, but fruits are natural and do not need to be changed; we can consume them freshly. In the Holy Quran is the story of Abraham (AS), who advised his followers to eat fruits. When Abraham (AS) said: "Allah (SWT) make this city secured and feed the believers from the fruits" (Baqara:126). Science also says that more sugar exists in fruits, and it is digestive, which can easily absorb in the body while digesting the meat takes more than 3 hours. Moreover, fruits are contained proteins, important sources of materials for the body. It has been proven that consuming animals causes humans to be suffered

from different incurable diseases; consuming overusing meat causes osteoporosis, and it also increases acidotic joint diseases like gout, arthritis and rheumatoid arthritis. Vegetarians believe that all the documents which are in nature indicative of humans who eat fruits and check the human body, especially the digestive system, can be confirmed by such an idea. The animal stomach has high acidity to digest meat while the human stomach is not like this; it doesn't mean that the consumption of meat for humans is prohibited, but to have animal food in our supplement is also necessary for some parts of our body like Iron, calcium, vitamin B12, are existed in animal products, meat is fair for having enough nitrogen which is good for our liver's cell and for the heart but overconsumption of meat effects on nerves and causes forgetfulness and weakness in our body (Beasley, D. E., et al. 2015). Every single germinate which are named in verses are the kind of sample in basic foodstuffs for human and the way they were mentioned. If pointing out the value of them in the life process, because at the beginning there were cereal, grain, bear, wheat, Lentils, and protein, then the sugar like grape, olive, and finally fruit and vitamin are mentioned. It is very interesting that nutritionists believe in four groups of food; Proteins, Sugar, Fats, and Vitamins; these groups have an active role in nutrition (Dupin, 1374: 134). These are the compound groups which are at least responsible for one of the three main energetic produced activities; the body arranges processes and supplies to grow and repair tissue in the body; in mentioned verses of the holy Quran, the plants were used as food for human which is an indicator of their importance in human nutrition, resources of human nutrition are contained groups like animal food and plants food. Animal foods are the meat of animals, birds, and fishes; herbal food is contained grain, cereal, fruits and grasses, now day animal foods are appropriated as a dietary supplement for humans since, in the holy Quran, after leading humans to food the name of herbal is mentioned so according to above verses of holy Quran various food is provided for people in paradise especially fruits like Fakeha, Fawaka, samrathe, themrat are mentioned. Finally, the consumption of meat and dairy products is necessary for our body to observe the level of use, which should be less than vegetables. "And indeed in Cattle there is a sure lesson for you, we provide you drink from it what is in their bellies, and there are many more benefits for you in them, and of them, you eat" (Mominooon: 21). Plants have played a crucial role in human life and society for thousands of years. Beyond providing basic necessities such as food, medicine, and shelter, plants also play a critical role in human health and well-being; one of the most significant ways in which plants contribute to human health is by providing essential nutrients; plants are rich in vitamins, minerals, and fiber, all of which are necessary for proper bodily function. Incorporating a variety of plant-based foods into our diets can improve our overall health and reduce the risk of chronic diseases such as heart disease, diabetes, and cancer; plants also have the potential to prevent and treat various diseases; for centuries, people have used plants to alleviate symptoms of illnesses and promote healing (Atazadegan, M. A., et al. 2021). Today, plant-based medicine is still a significant aspect of many traditional and modern medical practices. In addition to their physical health benefits, plants also contribute to our mental well-being. Spending time in nature and green spaces has been shown to reduce stress, anxiety, and depression; plants can also enhance our cognitive function, creativity, and productivity, making them an essential aspect of our work and home environments; the role of plants in human health extends beyond our individual well-being to encompass environmental sustainability and planetary health. Plants are critical components of our ecosystem, providing habitat and food for other organisms and contributing to the earth's oxygen and water cycles. Moreover, plants can help mitigate the effects of climate change by absorbing carbon dioxide from the atmosphere and reducing the urban heat island effect, plants have been a fundamental aspect of human nutrition and health throughout history, and their importance continues to be relevant today, by recognizing and appreciating the vital role that plants play in our lives, we can take steps to promote our own health and the health of our planet (Arab Ameri, S. et al. 2016).

**Table 1: Summarizing the role of plants in human nutrition and health:**

Nutrient	Role of Plants
<b>Carbohydrates</b>	Primary source of energy
<b>Fiber</b>	Regulates digestion, lowers cholesterol levels, promotes satiety
<b>Vitamins (A, C, K, etc.)</b>	Essential for various bodily functions, such as vision, immune system, blood clotting
<b>Minerals (calcium, iron, magnesium, etc.)</b>	Essential for building strong bones and teeth, transporting oxygen, regulating muscle and nerve function
<b>Phytochemicals (flavonoids, carotenoids, etc.)</b>	Antioxidant properties, anti-inflammatory effects, potential disease-fighting properties
<b>Water</b>	Essential for bodily functions, such as regulating body temperature, transporting nutrients and oxygen, removing waste

**3. Important Role of Aloe Vera**

Aloe Vera is the most popular herbal which was used in traditional medicine, and it is used in present medicine as well (Mangaiyarkarasi, S. P., et al. 2015). And it's known for its remedial feature in the world. One of the important specialities of Aloe Vera is to use for curing small wounds. According to Holy Quran, the importance of plants in human life is certainly not only in life continuation of humans and other creatures on the earth, but also the need for plants is on priority in human life. The Holy Quran is mentioned the way how to live. And it is also mentioned that human beings should use plants in life (Norani, 1391, p. 94). As it

was mentioned before, one of the important specialities or one of the popular specialities of this plant is used for the treatment of small wounds on the skin. Skin senility: as it was mentioned earlier, one of the best speciality treatments of this plant is to shrink on the skin. There is also to say that Aloe Vera has the characteristics of anti-aging that can be used for rejuvenation and freshness of the skin. Psoriasis: It is one of the skin problems which can be found due to violation of body immunity; thus, the cellular division of such individuals is abnormal during the day, which can cause irritation on the body. Also, this plant has a basic role in the amplification of the immunity system. On the other hand, creams containing aloe Vera can help Psoriasis sufferers to relieve their irritation and skin inflammation. Cancer: beside aloe Vera cures skin diseases, it can also prevent skin cancer, and this plant in addition to reinforce the immunity system, it can build reproduces the cancer cell, which has an impressive role in Uterus cancer as well (Christaki, E. V., & Florou-Paneri, P. C. 2010).

**Table 2: Role of Aloe Vera, its usage, percentages, advantages, and disadvantages:**

Important Role of Aloe Vera	Usage	How to Use	Percentages	Advantages	Disadvantages
<b>Moisturizes skin</b>	Creams, lotions, gels, and ointments	Apply directly to the skin	10-100%	Hydrates and soothes dry, irritated skin; helps with sunburns	Possible allergic reactions; not suitable for all skin types
<b>Digestive aid</b>	Supplements, juices, and capsules	Drink or swallow as directed	1-2%	Relieves constipation, aids digestion, and soothes stomach irritation	Can cause diarrhea, abdominal cramping, and electrolyte imbalances; not suitable for everyone
<b>Wound healing</b>	Gels, creams, and ointments	Apply directly to the wound	10-100%	Helps heal burns, cuts, and other wounds; reduces inflammation and pain	Possible allergic reactions; may not be effective for all types of wounds
<b>Oral Health</b>	Mouthwashes, toothpaste, and gels	Use as directed	10-100%	Fights bacteria, reduces inflammation and promotes healthy gums	May cause oral irritation; not suitable for all individuals
<b>Immune system booster</b>	Supplements, capsules, and drinks	Drink or swallow as directed	1-2%	Boosts immunity, reduces inflammation and fights harmful bacteria	May interact with certain medications; not suitable for everyone

#### 4. Conclusion

In this present research, what is clearly seen is that peace and health are a return to the lap of nature and plants because plants are always with humans and respond to the physical and spiritual needs of humans. Humans get food, medicine and many of their needs from plants; on the other hand, by being in nature and looking at beautiful flowers, green trees and dense forests, they feel spiritual vitality. Reflecting on the stages of life and the state of plants will also be the source of religious inspiration for him; from the beginning of creation, mankind has faced a set of needs, and in order to find a suitable answer to those needs, he learned from the very beginning that the best reference for meeting his needs is natural resources, especially plants, and he can use plants to prepare food, medicine, clothing, and shelter, and take advantage of their needs. Today, nutrition science researchers talk about the importance of the four food groups, respectively (proteins, sugars, fats and vitamins), which play an important role in human nutrition and health, and they are extremely important in the matter of energy production, regulation of body processes and provision of growth and repair of body tissues, plants are used to make most of the spices in the pharmaceutical industry, and in this research, we have focused on several types of plants, which, from the point of view of scientists and the verses of the Holy Quran, have also indicated that God has hidden secrets in plants, so that humans can take advantage of it, plants play a vital function in human health. Cereals are high in starch and low in protein, while legumes are high in protein and low in starch, fruits contain various vitamins and vegetables contain various minerals. Human health depends on the food they eat. Humans need the energy to continue the biological activities of their bodies; this power is received from the breakdown of meals inside the body. Food has many components, the main components of which are fats, proteins and carbohydrates; in addition to the ingredients mentioned above, there are small amounts of vitamins and minerals. Although the amounts of vitamins and minerals are small, their role in the body's existence and defense against various diseases is important; fats and proteins are generally found in animal foods, while carbohydrates, vitamins and minerals are found in plant foods such as fruits and vegetables, in count, fruits and

vegetables contain dietary fiber, which is a major component of food, although fiber is not digested in the stomach and not absorbed by the body, its role in preventing ailments such as hemorrhoids, colon cancer, obesity, constipation, diabetes, and appendicitis stands out.

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