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The Importance of Medicinal Plants in Preserving Human Health

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Abstract:

At the beginning of the 21st century, the demand for medicinal plants is increasing. Therefore, the study of medicinal plants, their effect on diseases and the production of natural bioactive substances from them in medicine are current topics. This article presented the latest information on the cultivation of medicinal plants, the effect of medicinal plants on diseases and their treatment.

Keywords: Medicinal plants, alkaloids, leaf, flower, fruit, seed, glycoside, ether, biologically active substances.

Medicinal plants are plants used to protect people's health and treat them with bioactive substances rich in nutritional vitamins, to prevent diseases, as well as in the preparation of bioactive substances, in the food, perfumery and cosmetic industry. It has been determined that there are 10-12 thousand species of medicinal plants on earth. The chemical and pharmacological properties of more than 1650 plant species have been investigated. There are more than 786 species of medicinal plants in Uzbekistan. Of these, about 120 species of plants grown in natural conditions and cultivated are used in scientific and folk medicine.

Currently, about 40-47%of the drugs used in medicine are obtained from plant raw materials. Plants are living natural chemical laboratories with complex structures and the ability to create complex organic substances or compounds from simple inorganic substances. Dried herbs, shoots, roots, rhizomes, rhizomes, bulbs, bark, leaves, flowers, buds, fruits (seeds), stems, juice, pulp, stone, essential oil of medicinal plants and others are used medicinally.

According to the chemical composition of medicinal plants, 2 different classifications are accepted:

1) depending on the composition of active substances - alkaloidal, glycoside, essential oil, vitamin;

2) depending on their pharmacological indications - sedative, pain reliever, hypnotic, cardiovascular system stimulant, central nervous system stimulant, blood pressure reducer.

The active substances of medicinal plants are alkaloids, various glycosides (anthraglycosides, cardiac glycosides, saponins, etc.), flavonoids, coumarins, astringent and mucilaginous substances, essential oils, vitamins, dyes, enzymes, phytoncides. , starch, proteins, polysaccharides, nitrogenous substances, oil and fatty acids and other compounds.

The effect of medicinal plants on the body depends on the amount of chemical compounds in its composition. These compounds accumulate in various parts of the plant. The period of high effectiveness and quality of the drug corresponds to the time of the beginning of their flowering and seeding period. Medicinal substances are collected in the bud, leaf or stem of some plants, in the flower or fruit of some plants, in the root or bark of some plants. Therefore, the part of the plants with the most biologically active substances is harvested. Roots, rhizomes, bulbs and buds of plants are usually prepared during the period when the plant goes into sleep - in late autumn or before the plant wakes up - in early spring. The fruits and seeds of the plant are collected when they are ripe, because they are rich in medicinal substances at this time. Freshly harvested medicinal plant products contain up to 85% moisture in the above-ground parts and 45% in the roots. If this moisture is not removed (by drying), the plant will rot and the medicinal substances will break down and become useless.

People have been using medicinal herbs to treat diseases since ancient times. 3-4 thousand years ago, in the countries of India, China, and Ancient Egypt, works were written that provide information about medicinal plants. In the East, in particular, in the folk medicine of Central Asia, it was treated using medicinal plants. Regarding the use of medicinal plants for medical purposes, Abu Ali Ibn Sina's work entitled "Kitab al-qanun fit tib" contains information about the medicinal properties of about 476 plants and the methods of their use. species increased, and folk medicine was enriched with medicinal plants.

More than medicinal plants, pomegranate, bitter gourd, almond, medicinal cauliflower, walnut, rankincense, rosehip, amonkara, pistachio tree, sachartqi, coyot, shildirbosh, wormwood, mint, red sedum and others are scattered. Alkaloids such as pachycarpine are obtained from bitter gourd, psoralen used in the treatment of scurvy from gorse, garmin from frankincense, anabazin from gorse, galantamine from gorse, and spherophysin alkaloids from gorse. An anthelmintic pelterin extract is prepared from pomegranate seeds. Medicinal safflower preparations are used as expectorants and softeners, medicines made from jaggery stop bleeding, and medicines made from pistachio and tea tree are used in the treatment of gastrointestinal diseases. At the Tashkent pharmaceutical plant named after S.Q.Islombekov, various topical medicines are prepared from medicinal plants grown and cultivated in Uzbekistan.

The Institute of Chemistry of Plant Substances of the Academy of Sciences of Uzbekistan has made a great contribution to finding medicinal plants and extracting alkaloids from them. In this institute, more than 4,000 different organs of plants were studied for the purpose of obtaining alkaloids, and about 1,000 natural compounds were isolated from them. On this basis, more than 20 valuable drugs such as cytisine and galantamine were created and introduced into medicine. Scientific staff of the Institute of Botany of the Academy of Sciences of Uzbekistan and the laboratory of essential oil, medicinal and dye plants of the Botanical Garden, in cooperation with experts, are treating yellow (hepatitis), the most dangerous infectious disease in Central Asia, from an ecological point of view. it was allowed to prepare herbal teas from many natural medicinal plants prepared from the raw materials of pure, highly effective medicinal plants, and to use and produce these herbal medicinals in scientific medicine. Also, the technology of growing medicinal plants is being studied at the Tashkent State Pharmaceutical Institute. There are special farms that grow medicinal plants in

Tashkent, Namangan, Jizzakh, Samarkand, Kashkadarya, Surkhandarya regions and Khorezm Ma'mun Academy.

The flora of Uzbekistan is very rich and colorful. Deserts and steppes, mountains and hills, lowlands and river deltas are located side by side to create a wonderful landscape. It may seem incredible, but in fact, compared to the neighboring regions of Central Asia, the number of plants per unit of area in the mountains of Uzbekistan is several times greater.

The rich flora of the country includes more than six thousand different plants, including medicinal plants. Such herbs are environmentally friendly and are used as raw materials for the production of food, aromatic and pharmaceutical products.

Complex processing of plant materials is carried out in accordance with all modern regulations, within the framework of which extraction, purification, concentration, standardization are carried out that meet all international quality standards of production. In conducting these experiments, it is necessary to have a perfect knowledge of mathematical laws and rules.

The most common medicinal plants in Uzbekistan are basil (basil), cilantro (coriander), dill, mint, sebarga. Wild plants can be found in plains and mountains, and can be bought in markets and pharmacies.

Local people know in advance about the miraculous power of such plants. They are eaten, added to food as a spice, brewed into tea, used as medicine, and also used in cosmetology. In pharmacies and cosmetic stores, you can buy monoherbs, special herbal tinctures, herbal bath preparations, various beneficial supplements, essential oils, and more. Each product contains natural minerals, vitamins and biologically active substances.

A number of measures aimed at the development of the health care system in Uzbekistan, prevention of non-communicable diseases, support of a healthy lifestyle of the population, introduction of modern achievements and technologies of medical science, formation of a healthy lifestyle of the population measures are being implemented.

As proof of this, we are witnessing an unprecedented level of work being carried out in the field of medicine in general, to prevent the infection of the coronavirus in these trying days.

On April 10, 2022, another important Resolution "On additional measures to develop folk medicine in the Republic of Uzbekistan" was adopted by our President. In this document, the issue of providing medical and sanitary assistance to the population, development of proven folk medicine in terms of quality, safety and effectiveness in the prevention and treatment of various, especially chronic diseases is decided.

Conclusion

The main goal of studying medicine is to rapidly integrate the effective methods of folk medicine for the prevention, diagnosis and treatment of diseases into modern medicine and medical practice, to further strengthen the health of citizens, to train and retrain specialists in this field, and to improve their qualifications, as well as scientific research. With this decision, a number of issues in this direction will be resolved. In this regard, a number of scientific works on the integration of pharmaceutics, agriculture and biological sciences are currently being conducted. In particular, in scientific research, pedagogical models of biological processes were studied, analytical and numerical solutions were found. In teaching models in the educational fields of various biological processes are presented and analyzed.

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