

PHARMACOLOGICAL BASES OF HERBAL TEA EXPOSURE

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Annotation: There has been renewed interest in non-food bioactive compounds of food and beverages as "life-span nutrients" in reducing the risk of non-communicable diseases. Herbal drinks consumed as part of a balanced diet can improve antioxidant status and improve overall health. Herbal teas/beverages are rich sources of natural bioactive compounds such as carotenoids, phenolic acids, flavonoids, coumarins, alkaloids, polyacetylenes, saponins and terpenoids and others. A lot of available scientific data shows that natural bioactive compounds have a number of diverse biological effects, such as antioxidant, antibacterial, antiviral, anti-inflammatory, antiallergic, antithrombotic and vasodilating effects, as well as antimutagenic, anti-carcinogenic and anti-aging effects. A number of herbal drinks are consumed all over the world, and some drinks have gained more popularity than others, depending on their geographical origin. However, in the era of globalization, ethnic barriers have gradually disappeared, and such goods, although from different regions, are now available everywhere as international health products.

Keywords: herbal tea, herbal medicine, st. John's wort (grass), cinnamon rosehip (fruits), chamomile medicinal or pharmacy (flowers), warty birch (buds).

Nature has given man a bizarre therapeutic cocktail of a very complex and diverse chemical composition of medicinal plants. These chemicals act on the body, like classical pharmacological substances, by changing (stimulating or blocking) certain cellular receptors. At the same time, the richness of the chemical composition of plants creates a huge number of interactions of these plant components, which in turn determines and assumes the presence of diverse and versatile pharmacological properties. It is enough to recall at least the well-known St. John's wort - "grass from 99 diseases".

At an early stage of the development of pharmacology, scientists gave priority to plants with a single dominant pharmacological activity. Active chemical substances were isolated from plants, which became the progenitors (prototypes) of pharmacological classes. For example, the herb belladonna is the substance atropine, tobacco is nicotine, mac – morphine.

Currently, plants are being studied and used for another purpose as well. The development of modern civilization, which dictates the rhythm of life, often beyond the limits of human adaptive capabilities, has raised the question of preserving human health in the process of his social life for scientists of various specialties. The answer to this question is a variety of approaches to defining a healthy lifestyle. This concept includes physical activity, healthy eating, giving up bad habits, and so on. Preventive phytotherapy also has its weight, i.e. the use of plants (usually herbal preparations, the so-called phyto-teas) on a more or less regular basis to strengthen and preserve human health. However, the possibilities of preventive phytotherapy are not fully used. Herbal preparations are also insufficiently known among the population, especially new ones that have recently appeared on the pharmaceutical market.

Herbal tea "The recipe of youth: Tibetan". The preventive and healing effect of collecting medicinal herbs (herbal tea) "Youth recipe: Tibetan" is due to its composition: warty birch (buds) - 6.0; chamomile (flowers) - 15.2; St. John's wort (grass) - 15.2; immortelle (flowers) - 15.2; rosehip (fruits) - 8.4. Method usage: infuse 1 tablespoon of herbal tea for 10-15 minutes in a cup of boiling water (100-150 ml), use one cup 2-3 times a day for adults for 1.5-2 months. If necessary, the course can be repeated 2-3 times a year.

All five types of herbal tea plants are pharmacopoeia plants.

Birch is warty (buds). The chemical composition of birch buds is complex: they contain essential oil (up to 5.3%), flavonoids, saponins, carotene, vitamin C, nicotinic acid. This chemical composition explains the diverse therapeutic effect. The diuretic, choleric and disinfecting effects of birch buds have been experimentally proven [1, 2, 5]. The excretion of harmful products (toxins) from the body increases, which are formed in pneumonia, influenza, kidney diseases, etc. [7].

Chamomile medicinal, or pharmacy (flowers). It is believed that "chamomile is the oldest and one of the best medicinal substances" [5]. The flowers contain essential oil, apigenin, choline, bitterness, tannins, umbelliferon, salicylic acid, organic acids, trace elements. Azulene has been found in the essential oil, which has an antiallergic effect. Chamomile also has a calming effect. The infusion of chamomile flowers is used to normalize digestion, in case of physical overload, oversaturation of the body with coffee and tobacco, and in case of poor health [5]. At the same time, the normalization of digestion should be understood very broadly. Thus, chamomile is used in scientific medicine as an antispasmodic (for intestinal cramps, flatulence), normalizing intestinal motility (in some cases as a laxative, in others for the treatment of diarrhea) [4]. In folk medicine, the use of chamomile is extremely diverse: it is used as a sedative, for gastritis, enteritis, neuroses, inflammation of the bladder, hepatitis, colds, etc. [4].

Cinnamon rosehip (fruits). Rosehip fruits are a natural multivitamin-mineral preparation. In addition to the high content of ascorbic acid, they contain vitamins B1, B2, P, PP, K, E, rutin, carotenoids (among others provitamin A and lycopene), salts of iron, potassium, magnesium, manganese, phosphorus, calcium [5, 7]. They include a variety of organic acids and flavonoids, essential oil, tannins, and sugar [7]. Such a chemical composition of rosehip fruits determines its choleric, diuretic, anti-inflammatory and metabolic effect [7]. Lycopene has a preventive anti-cancer effect [5]. Due to the high content of ascorbic acid, the fragility of blood vessels decreases, the resistance of the body's defenses to infections increases, mental and physical performance increases, and cholesterol levels decrease [5, 7]. Rosehip fruits contribute to the normalization of hematopoiesis in anemia, especially against the background of exhaustion of the body [7]. In national medicine, rosehip fruits are also used for diseases of the liver, kidneys, bladder, hypertension, colds and to increase the acidity of gastric juice [4].

Sand immortelle (flowers). The flowers contain flavonoids and flavonoglycosides. There are also small amounts of coumarins, tannins, saponins, essential oil, organic acids, polysaccharides, ascorbic acid, salts of potassium, calcium, manganese, copper, aluminum, chromium [5]. The experiment proved that the infusion of immortelle flowers enhances the secretion and outflow of bile, increases the secretion of gastric and pancreatic juice, which in combination with reduced motility of the stomach and intestines contributes to deeper digestion of food [5]. Immortelle preparations reduce cholesterol levels in the blood, since they increase the removal of cholesterol from the body with bile, and therefore they are useful in the treatment of atherosclerosis, obesity, and diabetes mellitus [5].

St. John's wort (herb). Various biologically active compounds have been found in St. John's wort. The main active ingredients are photoactive condensed anthracene derivatives [5]. Flavonic compounds, essential oil, saponins, anthocyanins, tannins, trace elements (zinc, manganese) and vitamins (vitamin P, nicotinic and ascorbic acids) are also present. One of the flavone compounds (avetoflavone) has anti-inflammatory and anti-ulcer activity. St. John's wort herb has extremely diverse pharmacological properties, which causes, in particular, an improvement in the regenerative abilities of tissues, calming of the nervous system, and pronounced antidepressant effect [5]. Pharmacological drugs for the treatment of depression, created on the basis of St. John's wort herb, are known in the clinic [6]. St. John's wort herb infusion is used (more often in a mixture with other medicinal plants) for a wide variety of diseases: diseases and disorders of the digestive system (peptic ulcer of the stomach and duodenum, colitis, diarrhea or constipation, liver and gallbladder diseases), kidney stones, cystitis, headaches, bronchitis, as a tonic for diseases cardiovascular system, etc. [4, 5]. Like any powerful pharmacological agent, the use of St. John's wort preparations has its limitations: due to the photosensitizing effect immediately after using any St. John's wort preparation, in order to avoid sunburn, one should refrain from being in the sun [5]. It is not recommended to exceed the dose of St. John's wort preparations. Thus, if you drink an excessive amount of strongly brewed St. John's wort herb tea, acute gastritis or severe cramps and pain in the intestines may occur [5].

The mixture of plants included in the herbal tea "Youth recipe: Tibetan" with regular use has a clearly pronounced corrective and preventive orientation for the human body. The corrective effect is due to the effect on the digestive organs of St. John's wort, birch, immortelle, rosehip and chamomile. Moreover, chamomile in this vegetable collection neutralizes (or softens) the possible excessive effect on the bile secretion of immortelle and rosehip, as well as potentially possible hyperstimulation and irritation of the mucous membrane of the gastrointestinal tract with St. John's wort. Maintaining the health of the digestive system is especially important for a modern person, for whom stress and irregular diet are typical. The preventive effect of the herbal collection "Youth Recipe: Tibetan" is carried out by saturating the body with vitamins and trace elements (rosehip), which, like all plant components, are absorbed more fully than their chemical analogues [3]. Chamomile preparations have a calming (antistress) effect on the central nervous system and stimulate diuresis, thereby contributing to the elimination of toxins from the body.

Conclusions:

1. The herbal collection "Recipe of youth: Tibetan" can be recommended for the prevention of diseases of the gastrointestinal tract, for the elimination of toxins from the body and normalization of metabolism in the body.
2. Normalization of body functions and systems when using herbal tea directly contributes to maintaining homeostasis and indirectly to slowing down the aging process of the body.
3. The composition of herbal tea is optimally balanced and suitable for regular health improvement of the population, especially people who, for various reasons, are under stress, irregular diet and frequent colds.
4. Due to the high pharmacological activity of some components (primarily St. John's wort), restrictions on daily and course doses of herbal tea have been established, which prevents its possible side effects.

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