

## The Role of Spring Water in Human Health

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### ABSTRACT

*The article describes the composition of spring waters, how spring waters are formed, water pollution and methods of their purification, protection of spring waters. it is revealed that the work is being done.*

Man is a part of nature. Humanity has changed the composition of water in historical stages and is changing it very rapidly. Water has self-healing and cleaning properties. Water is restored as a result of mixing polluted water with clean water, mineralization of organic substances and death of added bacteria. Bacteria, fungi and algae in the water clean the polluted water. If the water is very polluted, it will not be able to clean itself even if several tens of times more water is added to it.

Springs. The natural release of groundwater to the surface (on land or under water). Springs appear due to the crossing of aquifers by river valleys, ravines, lake sediments, tectonic faults, the presence of transitional and sedimentary rock contact zones, and uneven filtration properties of aquifers. Springs are divided into 2:

1) Hot springs - under the influence of hydrostatic, pressure, gas and vapors come to the surface of the earth.

2) Quiet springs - seepage is formed due to the blocking of impermeable rocks and the emergence of karst springs to the surface of the earth. Depending on the level of underground water supply and hydrodynamic characteristics, the springs are divided into free-flowing and downward-flowing groups. Springs flowing from below are formed as a result of the free flow of underground water to the surface of the earth along river valleys, mountain slopes, ravines and depressions without the pressure of soil, stratum, interlayer and tectonic barriers. Springs erupting from the bottom up are mainly pressure (artesian) water layers coming out to the surface of the earth, blocking of these artesian water layers with tectonic cracks, existing pressurized water breaking out of the upper rock layers under a certain pressure to the surface of the earth, or it appears as a result of the flow of pressurized water to the surface of the earth under the influence of the flow of underground groundwater.

According to G. V. Bogomolov, the largest springs in the world are located in the territories of the USA, the Republic of South Africa, Libya, the United Arab Republic, Israel, Greece, Italy, the Czech

Republic, Slovakia, Hungary, Turkey, India, and Australia. The discharge of some springs from the states of Iowa, Georgia, and Florida in the USA is 8000 m<sup>3</sup> per hour, and the discharge of springs in the territory of the Republic of South Africa is 2000 m<sup>3</sup> per hour. The number of springs in Uzbekistan is about 1250. Muhammad Ibn Musa Khorezmi (783-850) in his work called "Kitab surat al-arz" (Picture of the Earth) or "Geography" in today's language, describes the role of underground water (springs) in the saturation of rivers at that time. It is possible to get information about the list and the amount of water.

The springs in Uzbekistan are rich in minerals. Waters with different chemical composition are used as medicinals that heal the human body. Mineral spring waters are very important due to their richness in hydrogen sulfate, iodine, bromine, calcium, magnesium, various trace elements, alkalis, and radon. Fergana Valley (Shorsuv, Jalalabad, Shahimardan), Kashkadarya (Karabulok), Samarkand (Nurota, Deytbaland), Surkhandarya (Qaynarbulagok), Tashkent (Ukkosha), Namangan (Chortoq), Andijan (Uchbulok, Sufi Ota) ) springs are rich in various minerals and healing minerals, and their cure for various diseases has been mentioned by mankind for many years in many sources. Chimyon, Chortoq, Sitirai Mokhi Khosa, Tashkent mineral water sanatoriums are healing, clean waters are also found in desert zones of our country and are used for various purposes. Even in ancient times, our ancestors used the methods of well drains in order to use underground water.

**"Chortoq"** mineral water is located in Chortoq district of Namangan region. It is a cure for diseases such as gastrointestinal system, liver, gall bladder, pancreas, and diabetes. In addition, it has a mechanical and thermal effect on the oral cavity, esophagus and stomach. In this way, the secretion of juice from the stomach is improved.

**"Uch buloq"** mineral water is located in Baliqchi district of Andijan region. Each of the three springs has its own special properties and healing properties. The 1st spring has a very cold temperature and is good for the stomach and intestines, the 2nd spring is moderately warm and is good for goiter, and the 3rd spring is hotter and is used to treat various rashes.

**"So'fi ota bulog'i"** mineral water - located in Baliqchi district of Andijan region. Its water composition is ecologically close to Zam-Zam water. Due to the rich content of iodine, bromine, potassium, calcium and mineral salts, it is a cure for many goiters and various rashes. This spring has such a wonderful miracle that it has a cold temperature in summer and a hot temperature in winter.

Pollution of drinking water: Natural sources - cosmic dust, wind, hurricanes, tornadoes, rain, floods, volcanic eruptions, death and decay of plants and animals, flying aeroplankton cause pollution of drinking water. Sources of artificial water pollution - oil, meat, beer and wine, leather factories, car maintenance enterprises, radioactive substances and waste, nuclear weapons testing, household and communal waste, personal household waste, health wastes of healthcare organizations, holiday homes. The clean water used in industrial sectors of many countries is several times more than the water used in communal households. As a result of the detonation of thermonuclear bombs, various radioactive substances are released, irradiating living and non-living nature in different amounts. People who drink such water develop radiation sickness and suffer from it for many years.

In the world, mainly four methods are used for the treatment of sewage and drinking water: mechanical (physical), biological, chemical and disinfection methods. The mechanical method is widespread, and with the help of special structures, undissolved heavy particles added to the water, oil, grease, petroleum and other organic and mineral substances on the surface of the water are retained. The main purpose of settling is to retain suspended matter in water and to form sediment. Sediment is a substance that quickly rots, sour, and emits an unpleasant odor. It contains a large number of disease-causing microorganisms and eggs. Microorganisms multiply and create complex organic compounds. They slowly turn into harmless mineral substances. The main purpose of the biological method is to remove impurities that cannot be cleaned by mechanical means. In the physical-chemical method, the dirty substances in the water are broken down, separated, coagulated and condensed with the help of special solvents, and the water becomes clean in this way.

Disinfection method, as everyone knows, has two goals in cleaning dirty water: first, to break down the water polluting substance and remove it from the water. Secondly, extracting some valuable substances from waste water. Even when water is purified by modern technological methods, dissolved mineral substances remain in the water, for this it is necessary to add a large amount of clean water.

Currently, drinking water rich in various cultures is packaged and distributed to consumers by private enterprises in various ways. The healing spring waters sold in beautiful bottles by the private enterprise "Zarifjon Ziya" in Khatirchi district of Navoi region are popular with customers. In Chortok, drinking water rich in minerals from the springs is recommended to patients for the treatment of various diseases in the recreation shrines, and it is packaged and exported to all districts of our Republic and foreign countries.

### **Summary**

In conclusion, all the natural springs in Uzbekistan differ sharply from each other in terms of their composition and healing properties. The need for water has forced people to search for underground and surface water since ancient times. Centuries-old wells, long drains, cisterns, which are still preserved in the desert and mountainous areas, testify to the struggle of our ancestors for water in the past. forced to search for underground and surface water. But nowadays, due to the lack of rational use of water, many ancient natural springs and fountains are disappearing. It is in each person's hands to preserve our natural heritage unchanged for future generations. After all, water is the source of life.

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