

DISEASES CAUSED BY CONSUMPTION OF UNPURIFIED DRINKING WATER

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Abstract. *Currently, not all segments of the population have access to purified drinking water, so incidence rates vary from place to place, and incidence rates are low in areas with naturally purified water. The sanitary and hygienic assessment of diseases caused by the use of untreated drinking water is an in-depth study of the causes of infectious and non-infectious diseases that arise from the intake of untreated drinking water. Study and evaluate the positive effects of purified water on the human body.*

Keywords: *water balance, clean drinking water, worm eggs, diarrhea, dry, fresh water.*

Relevance. Useful properties of water

1) Getting rid of excess weight. Water is one of the best remedies in the fight against excess weight! Additionally, water is a powerful appetite suppressant, and when we think about hunger, we still want to drink water.

2) Healthy heart. Drinking plenty of water reduces the risk of heart attack.

3) Energy loss. Dehydration of just 1-2% of our total body weight can make us feel tired. If we are thirsty, it is a sign that we are dehydrated, which can lead to fatigue and muscle weakness.

4) Treatment of headaches. Another sign of dehydration is a headache. In most cases, headaches are the result of not drinking enough water.

5) Healthy skin. Water cleanses the skin. Of course, this won't happen overnight, but if we develop the habit of drinking more water, we will definitely notice a difference.

6) Digestive problems. The human digestive system requires large amounts of water to properly digest food. Often, water helps solve problems associated with high stomach acidity.

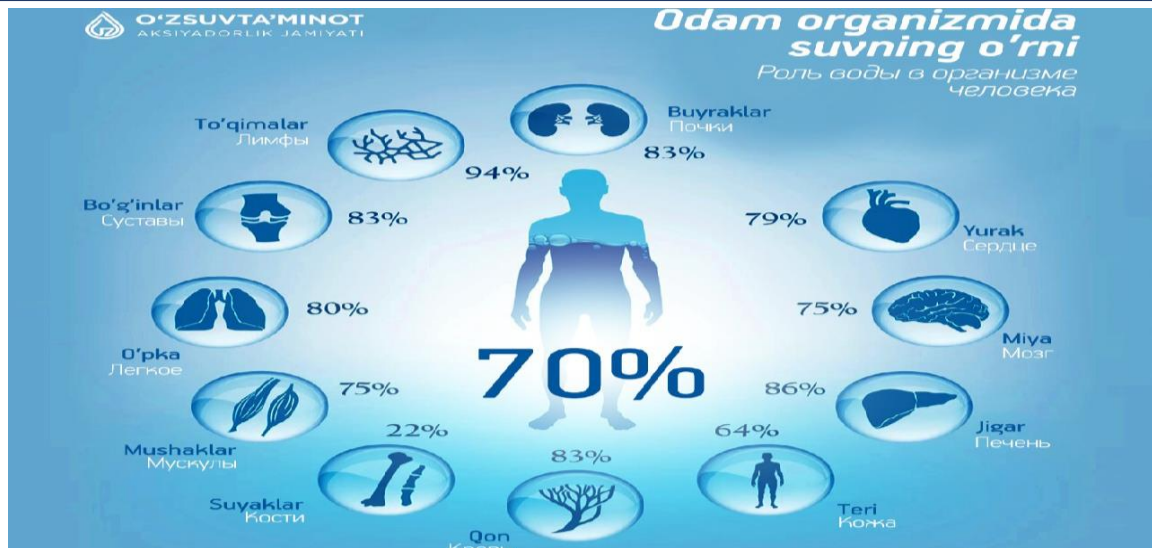
7) Toxins. Water helps remove toxins and harmful substances from the body.

8) Cancer. People who drink enough water have a 45% lower risk of developing digestive tract cancer than people who drink less water. Additionally, drinking enough water can reduce your risk of developing bladder and breast cancer by 50%.

9) Achievements in sports. Dehydration can be a serious barrier to exercise. Due to general fatigue, you will most likely not be able to cope with the load, which can lead to injury.

A large surface of the Earth is covered with water, which altogether makes up the World Ocean. The lakes have sources of fresh water. Rivers are the arteries of life in many cities and countries. The seas feed many people. All this shows that without water there is no life on the planet. However, man rejects the main source of nature, which has led to enormous pollution of the hydrosphere.

Relevance of the topic. Currently, the incidence of disease in the population is increasing every year due to the consumption of untreated drinking water. To prevent and treat these diseases, it is necessary to promptly identify these diseases and in-depth analyze their complications.



Purpose: To study diseases caused by untreated drinking water, their negative impact on the human body, early detection and prevention measures. Study of the positive effects and beneficial properties of clean drinking water on the human body. Analysis of the causes of water pollution. Infectious and non-infectious diseases caused by drinking untreated water, studying their manifestations. measures to prevent water pollution.

Causes of water pollution.

Surface waters have many inhabitants water source for points because of bodies of water

The main cause of pollution is anthropogenic activity

The main sources of hydrosphere pollution:

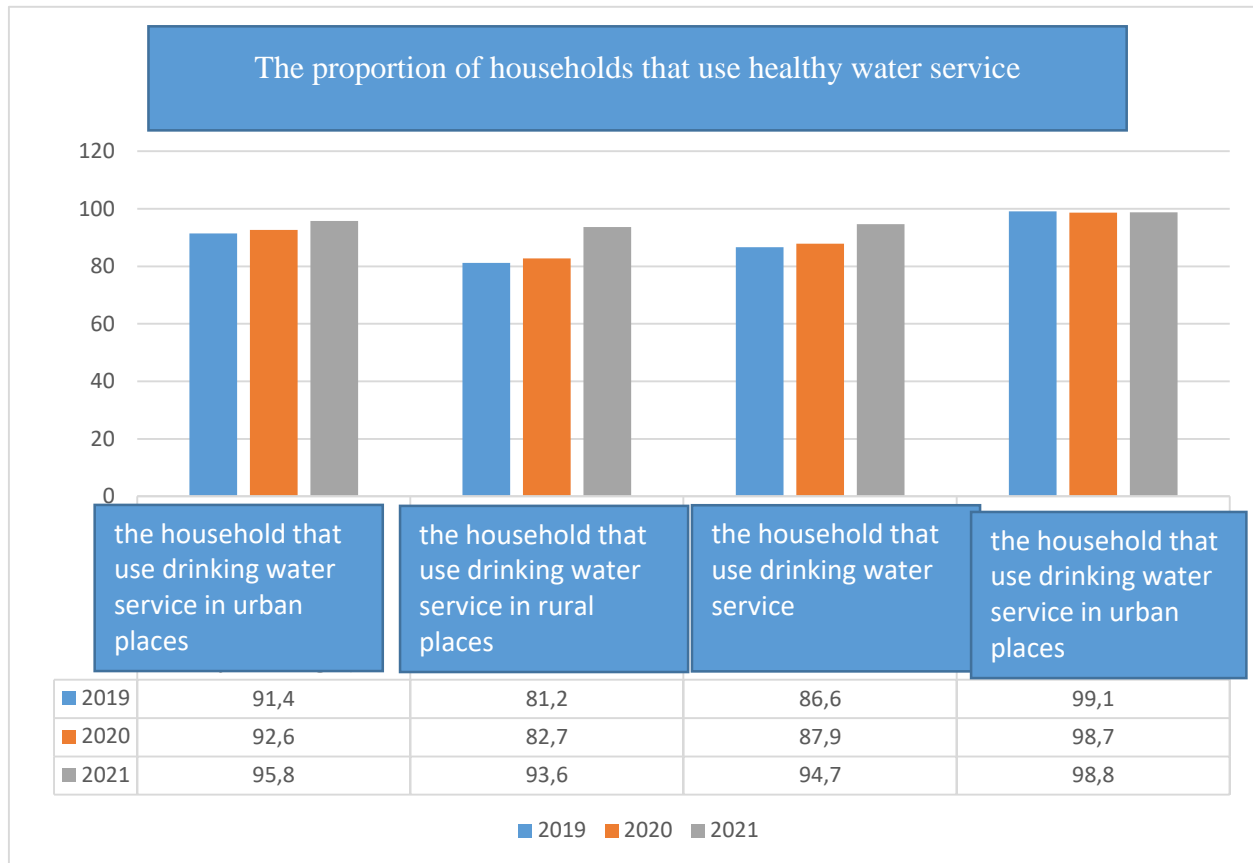
- domestic wastewater;
- operation of hydroelectric power stations;
- dams and reservoirs;
- use of agricultural chemicals;
- biological organisms;
- industrial water runoff;
- radiation pollution.

According to the UN, about 40 percent of the world's population lives in places where there is a lack of clean drinking water. By 2025, 6 in 10 people, or 5.5 billion people, could live in areas where clean drinking water is scarce. Also, more than 80 percent of infectious diseases are associated with poor quality of drinking water and violations of sanitary and hygienic rules of water supply. Today, about 3 billion of the world's more than 7 billion people consume contaminated water, resulting in nearly 2 billion of them contracting various diseases. The saddest thing is that every day 6 thousand children in the world die prematurely due to drinking water that does not meet sanitary and hygienic requirements.

In order to lead a healthy lifestyle, a person needs 50 liters of water per day according to sanitary standards. In developing countries in the arid (arid) region, 1.1 billion people use just 5 liters of water per day. 200 liters per day, and in the USA - 400 liters. The same distribution of water is observed in the regions of our country, in particular, in the city of Tashkent, daily water consumption per capita is 350-400 liters, while in some regions this figure is 20-50 liters.

Currently, the indicator of the provision of clean drinking water to the population of our country is reflected in the following graph:

□ Proportion of population segments provided with safe drinking water:



The lack of safe drinking water has a negative impact on public health along with great economic hardship.

There are many non-communicable and infectious diseases.

The role of water in the spread of non-communicable diseases

Natural water contains biological microelements necessary for the life of humans, animals and various plants. Small amounts of trace elements and others are essential for human health. Calcium, potassium, sodium, phosphorus, copper, zinc, iodine, manganese, molybdenum, cobalt, iron and other similar elements are very necessary for the functioning of the body. These substances enter the body with a certain amount of water and food products and satisfy the body's need for these elements. If the body does not receive 120-200 mcg of trace elements iodine per day, a person may develop endemic goiter, that is, endemic goiter. , the normal functioning of the thyroid gland is disrupted. Today, gonorrhoea is less common than in the 30s and 40s. This disease usually occurs in iodine-deficient regions. For example, this is observed in the Fergana Valley, Altai Territory and some regions of Ukraine. In this case, the thyroid gland is enlarged.

Determining water hardness is of great importance when studying the composition of water. Water hardness is determined by the amount of calcium and magnesium salts in 1 liter of water. It is known that water hardness causes various stone diseases in the body. According to information received from the regions of Khorezm and Karakalpakstan, water hardness in the Amu Darya basin is the main cause of stones in the bladder, kidneys and gall bladder of people.

In recent years, the widespread use of mineral fertilizers has caused many problems. The detection of nitrogen nitrates in drinking water indicates the poor sanitary condition of water bodies. In 1945, two children died after drinking water containing nitrogen nitrate. Children developed bruises after drinking water. When their blood was tested, it was found to contain high

levels of methemoglobin. This is due to the high levels of nitrate nitrogen in the well water they consume.

Fluoride is very necessary for the human body. 10-80 percent of it enters the body through water. At the beginning of the 20th century, the effect of the fluorine element on the human body was studied, and the literature notes that when the amount of fluoride in one liter of water reaches 2-8 mg, various changes may appear in the body. human and animal tooth enamel. Bones also undergo changes. This is called fluorosis. It is clear that such diseases are common among people living in regions with a deficiency of fluoride in water. A lack of the fluoride element in water or insufficient intake from food leads to the appearance of caries.

The main cause of waterborne diseases is water containing pathogenic microorganisms. Waterborne diseases can be spread by bathing, washing, drinking water, or eating food contaminated with water. One of the most common symptoms of waterborne illnesses is diarrhea. Other symptoms include problems with the skin, ears, breathing, or eyes. The most prominent example is the various forms of waterborne diarrheal diseases that severely affect children in developing countries. According to the World Health Organization, water-borne diseases account for 3.6% of all diseases.

Infectious diseases transmitted through water

Waterborne diseases can have significant economic impacts locally and internationally. People contracting waterborne diseases often face associated costs and often significant financial burdens. This is especially true for less developed countries. Financial losses are mainly associated with the cost of treatment and medications, transportation costs, special food and losses of manpower. Many families even have to sell their land to pay for treatment at the relevant hospital. The average family spends about 10 percent of their monthly household income on each infected person.

Kasallik va yuqish	Mikrobal vosita	Suv ta'minotidagi agent manbalari	Umumiy simptomlar
Botulizm	<i>Clostridium botulinum</i>	Bakteriyalar ifloslangan suv manbalaridan ochiq yaraga tushishi mumkin. Yuqtirilgan iste'mol qilish orqali oshqozon-ichak traktiga kirishi mumkin ichimlik suvi yoki (odatda) oziq-ovqat	Quruq og'iz, xiralashgan va / yoki ikki tomonlama ko'rish , yutish qiyinligi, mushaklarning kuchsizligi, na fas olish qiyinlashuvi, noaniq nutq, qusish va ba'zan diareya . O'lim odatda sabab bo'ladi nafas etishmovchiligi .
Kampilobakterioz	Ko'pincha sabab bo'ladi <i>Campylobacter jejuni</i>	Ifloslangan ichimlik suvi najas	Ishlab chiqaradi dizenteriya bilan o'xshash alomatlar yuqori isitma . Odatda 2-10 kun davom etadi.
Vabo	Bakteriya tomonidan tarqaladi <i>Vibrio vabo</i>	Bakteriya bilan ifloslangan ichimlik suvi	Og'ir shakllarda bu ma'lum bo'lgan eng tez o'limga olib keladigan kasalliklardan biri ekanligi ma'lum. Alomatlar orasida juda suvli diareya, ko'ngil aynish , kramplar , burun qoni , tez zarba , qusish va gipovolemik shok (og'ir holatlarda), bu vaqtda o'lim 12-18 soat ichida sodir bo'lishi mumkin.
E. coli infektsiya	Ba'zi shtammlari <i>Escherichia coli</i> (odatda E. coli)	Bakteriyalar bilan ifloslangan suv	Ko'pincha diareya. O'limga olib kelishi mumkin immunitet tanqisligi jismoniy shaxslar, juda yosh va qariyalar tufayli suvsizlanish uzoq davom etgan kasallikdan.
M. marinum infektsiya	<i>Mycobacterium marinum</i>	Tabiiyki suvda, aksariyat hollarda ta'sirlanish natijasida paydo bo'ladi suzish havzalari yoki tez-tez akvariumlar ; noyob infektsiya, chunki u asosan yuqtiradi immunitet tanqisligi jismoniy shaxslar	Alomatlar kiradi jarohatlar odatda tirsaklar, tizzalar va oyoqlarda joylashgan (dan suzish havzalari) yoki qo'llarning shikastlanishi (akvariumlar). Lezyonlar og'riqsiz yoki og'riqli bo'lishi mumkin.
Dizenteriya	Bir qator turlar tomonidan kelib chiqqan <i>Shigella</i> va <i>Salmonella</i> eng keng tarqalgan mavjudot bilan <i>Shigella dizenteriyasi</i>	Bakteriya bilan ifloslangan suv	Tez-tez o'tish najas bilan qon va / yoki mukus va ba'zi hollarda qon qusishi.

The table below lists infectious diseases transmitted through water

Legionellyoz (ikkita alohida shakl: Legionerlar kasalligi va Pontiak isitmasi)	Jinsga mansub bakteriyalar sabab bo'ladi Legionella (90% holatlar sabab bo'lgan Legionella pneumophila)	Legionella - iliq suvda ko'p miqdorda ko'payadigan juda keng tarqalgan organizm; [10] ammo faqat aerozollanganda og'ir kasallikka olib keladi. [11]	Pontiak isitmasi o'tkirroq alomatlarni keltirib chiqaradi gripp holda zotiljam. Legionerlar kasalligi kabi og'ir alomatlarga ega isitma , itron , pnevmoniya (ba'zida hosil bo'lgan yotal bilan balg'am), ataksiya , anoreksiya , mushak og'rig'i, bezovtalik va vaqti-vaqti bilan diareya va qusish
Leptospiroz	Jins bakteriyasi tomonidan kelib chiqadi Leptospira	Bakteriyalarni tashiydigan hayvon siydigi bilan ifloslangan suv	Bilan boshlanadi grippga o'xshash alomatlar keyin hal qiladi. Keyinchalik ikkinchi bosqich o'z ichiga oladi meningit , jigar zarar (sabablar sanqilik) va buyrak etishmovchiligi
Tashqi o'ti (suzuvchining qulog'i)	Bir qator sabab bo'lgan bakterial va qo'ziqorin turlari.	Mas'ul patogenlar tomonidan ifloslangan suvda suzish	Quloq kanali shishiradi, teginish og'rig'i va yumshoqligini keltirib chiqaradi
Salmonellyoz	Ko'p turdagi bakteriyalar tomonidan kelib chiqadi Salmonella	Bakteriyalar bilan ifloslangan ichimlik suvi. Kabi keng tarqalgan oziq-ovqat bilan kasallanish .	Alomatlar kiradi diareya , isitma , qusish va qorin bo'shlig'i
Tifo isitmasi	Salmonella typhi	Bilan ifloslangan suvni yutish najas yuqtirgan odamning	40 ° C (104 ° F) gacha bo'lgan doimiy isitma bilan tavsiflanadi terlash ; diareya, mushaklarning og'rig'i, charchoq va ich qotishi mumkin. Semptomlar o'sib boradi deliryum , va taloq va jigar davolash qilinmasa kattalashtiring. Bunday holda, u to'rt haftagacha davom etishi va o'limga olib kelishi mumkin. Tifo isitmasi bilan og'rikan ba'zi odamlarda "atirguli dog'lar" deb nomlangan toshma paydo bo'ladi, qorin va ko'krak qafasidagi mayda qizil dog'lar paydo bo'ladi.
Vibrio kasalligi	Vibrio vulnificus , Vibrio alginolyticus va Vibrio parahaemolyticus	Kirish mumkin yaralar ifloslangan suvdan. Bundan tashqari, ifloslangan suvni ichish yoki kam pishgan holda iste'mol qilish orqali sotib olinadi istiridye .	Semptomlarga qorin sezuvchanligi, qo'zg'alish, qonli axlat, titroq, chalkashlik, e'tibor berishda qiyinalish (diqqat etishmasligi), deliryum, o'zgaruvchan kayfiyat, gallyutsinatsiya, burun qonashlari qattiq charchash, sekin, sust, sustlik, zaiflik kiradi.

The chart below shows the year-over-year change in the incidence of waterborne infectious diseases:

Measures to prevent water pollution

1. Reduce the use of chemical pesticides in agriculture.

The use of various chemical fertilizers and pesticides are some of the main elements that can pollute water widely used in intensive agriculture. This is one of the main chemical products in contact with the ground, increasing the level of pollution of all surrounding water sources due to chemical and physical processes occurring in contact with the aquifer system².

2. Waste reduction and cleanup

It should be noted that one of the main sources of water pollution, especially wastewater, is discharged into both seas and rivers. All this leads to an increase in physical pollution in places where household waste accumulates.

3. Reducing deforestation

Reducing water pollution is necessary to prevent deforestation, especially forest ecosystems, where the main water reserves are located in various underground layers. By increasing different levels of forest mass, the greatest amount of clean water can be achieved by becoming part of natural water reserves.

4. Economical use of water in agriculture and industry and wastewater treatment

If it is necessary to conserve water from reservoirs, it is necessary to change the technological process at production enterprises, reduce the amount of wastewater and return treated wastewater to production enterprises as much as possible. A closed system should be used to reuse treated wastewater. It is necessary to find measures to reuse water in interconnected technological processes. This includes the use of wastewater in agricultural irrigation. To do this, the water of the enterprise must be thoroughly cleaned and disinfected.

5. Collection, disposal and processing of solid waste.

Garbage is the main consequence of excessive human consumption and is of great importance for use in homes and offices, in this case it is recommended not to use packaged products, otherwise they may have very few types of packaging. It is also important to know the

different types of classifications for different products to help with proper waste recycling and pollution reduction.

6. Reduce hazardous substances such as oils and batteries.

There are very harmful pollutants that can contribute to water pollution, they can pollute water and cause serious damage to the biodiversity present in aquifer ecosystems, affect the oxygenation of rivers and affect all species present. It is recommended that used oils be stored and disposed of in a fully filled, sealed bottle.

Kasallik va yuqish	Virusli agent	Suv ta'minotidagi agent manbalari	Umumiy simptomlar
Gepatit A	Gepatit A virusi (HAV)	Suvda (va ovqatda) o'zini namoyon qilishi mumkin	Alomatlar faqat o'tkir (yo'q surunkali virusga bosqich) va o'z ichiga oladi Charchoq , isitma, bezovtalik , qorin og'rig'i, ko'ngil aynish, diareya, vazn yo'qotish, qichishish, sariqlik va depressiya .
Gepatit E (feka-ora)	Gepatit E virusi (HEV)	Suv orqali kiradi najas yuqtirgan shaxslarning	O'tkir alomatlar gepatit (jigar kasalligi), shu jumladan isitma , charchoq , ishtahani yo'qotish, ko'ngil aynish , qusish, qorin og'rig'i, sariqlik , siydikning quyuqligi, loy rangidagi najas va bog'implarda og'riq
O'tkir oshqozon-ichak kasalligi [AGI] (feka-ora; oziq-ovqat, suv, odamdan odamga va fomitlar bilan tarqaladi)	Norovirus	Suv orqali kiradi najas yuqtirgan shaxslarning	Diareya , qusish, ko'ngil aynish , oshqozon og'rig'i
Poliomeliit (Poliomiyelit)	Poliovirus	Suv orqali kiradi najas yuqtirgan shaxslarning	Bemorlarning 90-95 foizida simptomlar yo'q, 4-8 foizida mayda simptomlar mavjud (qiyosiy) deliryum , bosh og'rig'i , isitma va vaqti-vaqti bilan soqchilik va spastik falaj , 1% paralitik bolmagan belgilarga ega aseptik meningit . Qolganlari jiddiy alomatlar olib keladi falaj yoki o'lim
Poliomavirus infeksiyasi	Ikki Polyomavirus : JC virusi va BK virusi	Juda keng tarqalgan, o'zini suvda namoyon qilishi mumkin, aholining ~ 80% antikorlar Polyomavirusga	BK virusi engil hosil qiladi nafas olish yo'llari infeksiyasi va yuqtirish mumkin buyraklar ning immunitetni bostirilgan transplantatsiya bemorlar. JC virusi nafas olish tizimi , buyraklar yoki olib kelishi mumkin progressiv multifokal leykoensefalopatiya ichida miya (bu

Kasallik va yuqish	Mikrobial vosita	Suv ta'minotidagi agent manbalari	Umumiy simptomlar
Acanthamoeba keratiti (kontakt linzalarini ifloslangan suv bilan tozalash)	Acanthamoeba spp. (A. castellanii va A. polyphaga)	ko'p miqdordagi suv muhitida, shu jumladan er usti suvlari, suv oqimi suvlari, suzish havzalari va kontakt linzalar eritmalarida keng tarqalgan erkin yashovchi amiyobalar.	Ko'z og'rig'i, ko'zning qizarishi, loyqa ko'rish, yorug'likka sezgirlik, ko'zda nimadir sezilishi va haddan tashqari yirtilish
Amyobiaz (og'zidan qolga)	Protozoyn (Entamoeba histolytica) (Kistga o'xshash ko'rinish)	Kanalizatsiya, tozalanmagan ichimlik suvi, chivinlar suv ta'minotida, tupurikni uzatishda (agar boshqa odam kasal bo'lsa)	Qorin bo'shlig'idagi noqulaylik, charchoq , Ozish, diareya , shishiradi , isitma
Kriptosporidiaz (og'zaki)	Protozoyn (Cryptosporidium parvum)	Mumkin bolmagan suv filtrlari va membranalarida yig'ildi dezinfeksiya qilingan, hayvon qo'ngi , mavsumiy suv oqimi suv.	Grippga o'xshash alomatlar , suvli diareya, ishtahani yo'qotish, vazni sezilarli darajada yo'qotish, shishiradi , ko'paytirilgan gaz, ko'ngil aynish
Siklosporiyaz	Protozoyn parazit (Siklospora cayetanensis)	Kanalizatsiya, tozalanmagan ichimlik suvi	kramplar , ko'ngil aynish, qusish , mushaklarning og'rig'i, isitma va charchoq
Giardiasis (najas-og'iz) (qo'ldan og'izga)	Protozoyn (Giardia lamblia) Ko'p tarqalgan ichak paraziti	Tozalanmagan suv, yomon dezinfeksiya, quvurlarning uzilishi, oqish, er osti suvlari ifloslanish, lagetlar bu erda odamlar va yovvoyi tabiat bir xil suv manbasidan foydalanadilar. Qunduzlar va mushkratlar yaratmoq suv havzalari kabi harakat qiladi suv omborlari Giardia uchun.	Diareya, qorin bezovtaligi, shishiradi va meteorizm
Mikrosporiyoz	Protozoan filum (Mikrosporiya), lekin bilan chambarchas bog'liq qo'ziqorinlar	Ensefalitozoon ichak ichida aniqlandi er osti suvlari , ichimlik suvining kelib chiqishi[9]	Diareya va isro f qilish yilda immunitet tanqisligi jismoniy shaxslar.
Naeglerioz (ildamchi amebiy meningoensefalit) [PAM] (burun)	Protozoyn (Naegleria fowleri) (Kistga o'xshash ko'rinish)	Suv sportlari, xlorlanmagan suv	Bosh og'rig'i, qusish, tartibsizlik, muvozanatni yo'qotish, yorug'likka sezgirlik, gallyutsinatsiyalar , charchoq , Ozish,

Kasallik va yuqish	Mikrobial vosita	Suv ta'minotidagi agent manbalari	Umumiy simptomlar
Desmodezm infeksiya	desmodezm armatus	Tabiiyki, suvda uchraydi. Ochiq yaralarga kirishi mumkin.	Qo'ziqorin infeksiyasiga o'xshash.
Kasallik va yuqish	Agent	Suv ta'minotidagi agent manbalari	Umumiy simptomlar
Drakunkuliaz [Gvineya qurt kasalligi] (ifloslangan suvni yutish)	Dracunculus medinensis	Ayol qurti mezbon terisidan chiqadi va suvdagi lichinkalarni chiqaradi.	Engil isitma , qichiydigan toshma , ko'ngil aynish , qusish , diareya , bosh aylanishi, so'ngra og'riqli pufak paydo bo'lishi (odatda tananing pastki qismlarida)

Conclusion: Based on the above information, no matter how medicine develops, the incidence rate among the population is growing every day. One of the reasons for this is infectious and non-infectious diseases caused by the consumption of untreated drinking water. According to the World Health Organization, water-borne diseases account for 3.6% of all diseases and 80% of infectious diseases. We have witnessed the emergence of water-borne diseases in areas where the population is not provided with clean drinking water. To reduce the incidence of this disease, you should also use water sparingly and not pollute clean open water bodies. Population groups using untreated drinking water are required to boil water (from various rivers, canals, tube wells, etc.) to a temperature of at least 100°C and then drink it. It is also advisable to undergo periodic medical examinations to prevent diseases caused by untreated drinking water. Improving the medical and sanitary-hygienic culture of the population is an urgent task, especially in emergency situations. Official organizations are obliged to provide all segments of the population with purified drinking water as soon as possible. Because in this regard, comprehensive measures have a particularly good effect. It is necessary to systematically launch propaganda and propaganda work among the population, to explain to them in simple, popular language the harm of untreated drinking water. Promoting the rules of hygiene and healthy eating among young children. And most importantly, it is necessary to provide the population with clean drinking water.

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