



## **FACTORS AND CAUSES OF HELMINTHIC DISEASES AND THE INFLUENCE OF THESE FACTORS ON THE INCIDENCE RATE (ON THE EXAMPLE OF THE CITY OF TASHKENT)**

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**Аннотация:** Соғлом турмуш тарзи учун қишилоқ хўжалигини юқори технологияларга асосланган ҳолда ривожлантириши, инсонларнинг камроқ қасалликларга чалинишини борасида керакли чорала-тадбирларни ишлаб чиқишидан иборат. Бироқ, паразит организмлар табиатда кенг тарқалган бўлиб, миллий иқтисодиёт ва инсон саломатлигига катта зарар етказаётган бир давирда уларни ўрганиши ва қарши курашиши ҳам муҳим топшириқлардан биридир.

**Калит сўзлар:** паразитар қасалликлар, алоқа усули, аскридоз, гельминтознинг барча турлари.

**Аннотация:** Для благополучного здорового образа жизни важно развивать сельское хозяйство на основе высоких технологий, разрабатывать и применять меры для того, чтобы люди реже болели. Однако, в природе широко распространены паразитические организмы, наносящие большой вред национальной экономике и здоровью людей, важно изучать их и разрабатывать контрмеры.

**Ключевые слова:** Паразитарные заболевания, способ общения, аскридозы, все виды гельминтозов.

**Relevance of the topic:** In many regions, the endemicity of helminthiasis is associated with socio-economic, historical and demographic processes. Therefore, the fight against these diseases is relevant both from an economic and political point of view. The improvement of the cultural and living standards of the population, the growth of the culture of agricultural activities, as well as regular preventive measures against helminthiasis contributed to a significant decrease in the incidence of parasitic infections in our republic.

**The purpose of the study:** The aim of the study is to study the factors causing helminthiasis in Uzbekistan, as well as the influence of these factors on morbidity rates.

**Research materials:** The study used official reports of the Sanitary and Epidemiological Service of the Republic of Uzbekistan and the city of Tashkent on



the incidence of helminthiasis for the period from 2015 to 2022, as well as data from epidemiological studies conducted in foci of infection.

**The results of the study:** In Tashkent, from 2015 to 2022, 594350 (in 2015) to 551083 (in 2022) people were tested for the presence of helminthiasis. In 2015, out of 594,350 people tested, 10936 (1.8%) were infected, and in 2020, out of 569931 people, 9184 (1.6%) were infected. During the period under review, a total of 75,124 cases were registered, among which mainly contact-transmitted helminthiasis - enterobiosis (72722 people, 1.6%) were diagnosed. Also, 688 patients with ascariasis were registered in the city, the infection index was 0.01%. For other helminthiasis, the following data were obtained: teniarynchosis - 170 people (0.003%), hymenolepidosis - 1315 people (0.02%), echinococcosis - 229 people (0.9%). The incidence of helminthiasis among the population of Tashkent in 2015-2022 is presented in Table 1.

**Table 1**

**The incidence of helminthiasis among the population of Tashkent in 2015-2022 (in absolute numbers).**

Years	Number of samples	The sick are absolute.with	Including				
			Enterobiosis mutlok.with	Hymenolepi dosis absolute.wit h	Ascariasis absolute.wit h	Teniarinchoz absolut s	Echinococc osis absolute.wit h
2015	594350	10936	10450	292	106	42	46
2016	568713	10641	10231	188	153	28	41
2017	590654	10084	9779	157	95	22	31
2018	575046	9629	9355	149	83	22	20
2019	568921	9243	8977	161	63	19	23
2020	569931	9184	8942	142	68	16	16
2021	558833	7635	7424	118	58	10	25
2022	551083	7772	7564	108	62	11	27

According to the results of checking external sources of the environment, fruits and vegetables for helminth eggs in Tashkent in 2016-2022, the following data were obtained (Table 2).

**Table-2**

**Information from the Department of Parasitology of the SESTashkent on the number of studies conducted**



Years	The number of eggs subjected to research	Positive results	Soil		Vegetables and fruits		Open water sources		The number of helminth eggs subjected to research	
			Total	Positive results	Итого	Positive results	Total	Positive results	Total	Positive results
2016	98338	524	1312	9	1504	2	555	2	949667	511
2017	96353	462	1524	1	1614	5	739	5	92476	451
2018	88628	268	2211	-	1589	-	653	3	84768	265
2019	86460	306	1490	-	1621	-	659	2	82690	304
2020	86210	358	1246	3	1362	3	568	2	83034	350
2021	85647	288	1463	-	1379	-	608	-	82197	288
2022	88164	300	1531	-	1649	-	752	2	84232	298
Итого	629800	2506	10777	13	10718	10	4534	16	604364	2467

According to the results of the inspection of external environmental sources in Tashkent, 10777 soil samples were taken in 2016-2022, of which 13 (0.12%) gave a positive result. Similar results were also obtained when checking fruits and vegetables: out of 10,718 samples, 10 (0.09%) were positive. When checking samples from open reservoirs and samples of epidemiological significance, the level of positive results was significantly higher. For example, out of 4,534 tested samples of open reservoirs, 16 (0.35%) turned out to be positive. Out of 604,364 samples taken in institutions, 2,467 (0.4%) positive results were obtained.

Thus, the collected data indicate that in the conditions of Tashkent there are sufficient conditions for the spread of all types of helminthiasis (bio-, geo- and contact pathways). This, in turn, underlines the need to strengthen measures aimed at interrupting the second stage of the epidemic process. A comparative analysis of the incidence of helminthiasis in Tashkent for 2018-2022 is presented in Table 3.

**Table-3**



## Comparative analysis of the incidence of helminthiasis in Tashkent in 2018-2022

Identified helminthiasis	2018	2022
	Absolute. With	Absolute With
Number of analyses	<u>568921</u> 429805	<u>569931</u> 431067
Number of identified patients	<u>9243</u> 8815	<u>9184</u> 8749
Ascariasis	<u>63</u> 49	<u>68</u> 50
Teniarinhoz	<u>19</u> 3	<u>16</u> 5
Hymenolepidosis	<u>161</u> 132	<u>142</u> 127
Enterobiosis	<u>8977</u> 8629	<u>8941</u> 8564
Echinococcosis	<u>23</u> 2	<u>16</u> 3

**Note:** all verified persons are represented, the certificate contains information about children. The table shows that in 2018, 568,921 people in Tashkent were checked for the presence of helminthiasis, of which 429,805 (75.5%) were children. The infection index among adults was  $1.62 \pm 0.016\%$ , and among children —  $2.05 \pm 0.21\%$ . Similar figures were obtained in 2022 ( $1.61 \pm 0.16\%$  and  $2.02 \pm 0.021\%$ , respectively).

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