

## STUDY OF THE PREVALENCE OF HALITOSIS IN YOUNG PEOPLE WHO SMOKE

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**Ключевые слова:** галитоз, молодые люди, курение.

**Резюме:** наличие неприятного запаха из ротовой полости давно признано важной медицинской и стоматологической проблемой, с одной стороны рассматривается как проявление соматического заболевания у человека, а с другой - как низкий уровень индивидуального ухода за полостью рта. Исследование выполнено с целью изучения распространенности галитоза у молодых людей, которые курят.

**Resume:** the presence of an unpleasant odor from the oral cavity has long been recognized as an important medical and dental problem, on the one hand it is considered as a manifestation of a somatic disease in humans, and on the other hand, as a low level of individual oral care. The study was performed to study the prevalence of halitosis in young people who smoke.

**Topicality.** One of the serious medical and dental problems has long been recognized by the presence of bad breath [5]. Halitosis (ozostomy, stomatodisodia, fetor oris or fetor ex ore) is a persistent bad breath that is not eliminated by traditional means of prevention and hygiene. Today, the bad breath is considered, on the one hand, as a manifestation of pathology, and on the other - as a low level of oral hygiene [9].

Halitosis is nowadays a common pathology. Epidemiological studies conducted in different countries of the world have shown that about half of the world's population suffers from this pathology, the frequency of which varies from 60 to 80 % in different regions [6, 7]. The incidence of halitosis in Europe's population is 50-65 %. According to the American Dentists Association, 30 % of the population in the United States suffer from this disease, and nearly \$ 10 billion is spent on halitosis each year, with 10 % of U.S. dentists receiving more than six patients with halitosis each week. According to an independent survey in the UK, almost 50 % of respondents say that bad breath significantly impairs a successful career, 20% of those surveyed consider halitosis to be one of the most physiological manifestations of personality. Belgian scientists, when studying the problem of halitosis, found that unpleasant mouth odor worries 60 % of the population, and 90 % of them indicated that its main cause is inflammation of periodontal tissues [1, 3, 4].

The problem of halitosis is of great social and psychological importance, because bad breath is considered as a social factor, causing social isolation, obstacles to career, family and more. There is also a medical aspect of the problem of halitosis, which is that the presence of this pathological condition can be an indicator of pathologies of various organs and systems of the human body [6].

To date, a classification of halitosis has been developed, which includes the following concepts: pseudogalitos, halitophobia, true halitosis, which can be physiological and pathological, oral and extraoral [10, 7]. The main etiological factor in the appearance of bad breath is the production of hydrogen sulfide by anaerobic bacteria. In addition, there are a number of factors that contribute to the development of physiological halitosis, namely: diet

and diet, smoking, non-compliance with oral hygiene, hormonal fluctuations, stress, use of certain drugs, socio-economic status. Oral pathological halitosis occurs in the presence of diseases in the oral cavity: caries and its complications, diseases of periodontal tissues and the mucous membrane of the oral cavity, xerostomia. Extraoral pathological halitosis can occur in diseases of ENT-organs, upper respiratory tract, gastrointestinal tract, as well as other organs and systems that can cause hematogenous halitosis [2, 6, 9].

Smoking due to its high prevalence and harmful effects on the health of young people is a major problem, both in our country and abroad, due to the widespread use of this harmful habit. Influence on the oral organs, the development of pathological conditions, including halitosis, depends on the intensity, duration of action and type of smoking, as well as on the individual morphofunctional features of the tissues of the oral cavity, which are genetically caused [8].

**The purpose of the study:** the aim of our study was to study the prevalence of halitosis in young people who actively smoke different types of cigarettes and to make them aware of this problem.

**Materials and methods of research.** To achieve this goal, we surveyed and interviewed 100 young people between the ages of 18 and 21 without somatic diseases. All surveyed were divided into four groups: in Group I we included 25 people who actively smoke traditional cigarettes; and Group II - 23 people smoking electronic cigarettes (Vape); in group III there are 22 people who smoke IQOS; in group IV - 30 people who do not smoke. In each group, the distribution of persons by age and gender was uniform. During the dental examination, all young people were additionally subjected to a hardware diagnostic test for galitosis using an Air - lift company 's galimeter. Each respondent was interviewed anonymously, which included the question of mouth odor and its causes.

**The results of the survey and their discussion.** Conducted an anonymous survey of young people of all groups of observations have allowed to establish that 86 % of respondents are not concerned about bad breath, and the presence of galitos mainly surveyed indicated that they smoke traditional cigarettes. However, during the diagnostic test halitosis is the number of persons who are not concerned about halitosis was 1.6 times lower, namely 53 % of the people. 47 % of all subjects in varying degrees of manifestation have been identified unpleasant odor from the mouth. Predominantly in persons of group I (those that smoke traditional cigarettes) hardware diagnostic test revealed halitosis, namely in 82 % of the people. In the remaining surveyed halitosis was found to be significantly less in individuals of group II in 9 %, in persons of group III – 6 %, in individuals IV – 3 %. Among those which were found in halitosis, 58 % of the individuals the odor was weak, 42 % of the individuals the odor was moderate field. And unpleasant smell from the oral cavity to moderate the sharpness was identified only in individuals of the first group.

The analysis of the questionnaires also reveals that among the 14 % of persons who indicated galitos, only 4 people have turned to the dentist to resolve the problem. Others have solved this problem yourself using a refreshing mouthwashes, sprays, chewing gum, increasing the number of teeth cleanings, etc., instead of having to go to the dentist. These measures have led to fresh breath for a short period of time – from 1 to 4 hours.

Individual oral hygiene of the young people surveyed 100 % includes brushing your teeth, 73 % indicated that they clean the language daily, 64 % use conditioners and 44 % used dental floss as an additional subject of oral hygiene. To the question "How often do

you visit the dentist?" 77% indicated that the visit twice a year, 12 % indicated that they visit once complained, the rest, namely 11 % only if necessary.

All respondents indicated they wished to receive detailed medical information regarding the causes and deal with unpleasant smell in the mouth.

**Conclusions:** halitosis is an important and urgent medical and social problem, as it is found in almost half of young people surveyed (47 %), with predominantly those who regularly smoke traditional cigarettes. In addition, this group of surveyed mostly recorded an unpleasant odor of moderate sharpness, while the rest - a weak one was registered. Most of the surveyed have insufficient information on galitosis, its factors, its diagnosis, elimination. Therefore, among those examined, the main cause of halitosis was regular regular smoking of traditional cigarettes.

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