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**ТИББИЁТДА ЯНГИ КУН
НОВЫЙ ДЕНЬ В МЕДИЦИНЕ
NEW DAY IN MEDICINE**

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COMPREHENSIVE ASSESSMENT OF NON-SMOKING NICOTINE-CONTAINING PRODUCTS

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✓ Resume

The structure of the tobacco market has been noticeably changing in recent years. Non-smoking tobacco products occupy an increasing place in the volume of tobacco products consumed. The reason for this process is, on the one hand, a reaction to the growing awareness of the dangers of tobacco smoke to the health of smokers, on the other hand, strict laws regulating the prohibition of smoking in public places. And this, in turn, contributes to the spread of non-smoking tobacco products, the consumption of which is not associated with the formation of smoke. There has been a steady increase in the consumption of non-smoking tobacco products for a number of years.

Keywords: tobacco remains, tobacco products, chewing tobacco

ТУТУНСИЗ НИКОТИН САҚЛОВЧИ МАҲСУЛОТЛАРНИ КОМПЛЕКС БАҲОЛАШ

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✓ Резюме

Охирги йилларда тамаки бозорида сезиларли ўзгаришлар кузатишмоқда. Тутунсиз тамаки маҳсулотлари истеъмол қилинадиган тамаки маҳсулотлари умумий ҳажмида тобора катта ўрин эгаллаб бормоқда. Бу жараён, бир томондан, тамаки тутунининг инсон соғлиғига хавfli экани тўғрисидаги хабардорликнинг ўсишига жавоб, иккинчи томондан эса жамоат ҳоёларида чекишни тақиқловчи қатъий қонунларнинг амал қилиши билан боғлиқ. Бу эса, ўз навбатида, тутунсиз тамаки маҳсулотларининг тарқалишига ҳисса қўшмоқда. Сўнгги йилларда тутунсиз тамаки маҳсулотлари истеъмоли барқарор ўсишга эришмоқда.

Калит сўзлар: тамаки қолдиқлари, тамаки маҳсулотлари, чайналадиган тамаки

КОМПЛЕКСНАЯ ОЦЕНКА БЕЗДЫМНЫХ НИКОТИНОСОДЕРЖАЩИХ ПРОДУКТОВ

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✓ Резюме

В последние годы структура табачного рынка заметно изменилась. Бездымные табачные изделия занимают всё большее место в общем объёме потребляемой табачной продукции. Причиной этого процесса, с одной стороны, является растущее осознание вреда табачного дыма для здоровья курильщиков, с другой — строгое законодательство, регулирующее запрет курения в общественных местах. Всё это, в свою очередь, способствует распространению бездымных табачных изделий, употребление которых не связано с образованием дыма. На протяжении ряда лет наблюдается устойчивый рост потребления бездымной табачной продукции.

Ключевые слова: табачные остатки, табачные изделия, жевательный табак

Relevance

The technology used in the manufacture of non-smoking tobacco products remains traditional, which does not involve the use of techniques that regulate consumer properties and nicotine content in products. In the current context, scientific and technical innovations in technology improvement and the development of quality control methods for non-smoking tobacco products are becoming particularly relevant. The problem of improving the quality and reducing the toxicity of tobacco products is a priority for the tobacco industry. However, there are practically no studies devoted to improving the technology and methods of assessing the quality of non-smoking tobacco products. Therefore, the problem of improving the technology of non-smoking tobacco remains relevant, which makes it possible to obtain a product of improved quality with reduced toxicity [1].

The results of independent studies objectively show that the advantage of consuming the product is the absence of any effect on the lungs (accordingly, there are no manifestations inherent in smoking users - coughing, voice coarsening). The absence of smoke allows you to avoid such negative effects of smoking as deterioration of complexion, brittle hair and nails, unpleasant odor and aftertaste. In Sweden and other countries, research is constantly being conducted on the possible link between tobacco use and cancer (in particular, diseases of the oral cavity, pharynx, larynx, stomach, esophagus and lungs). At the moment, none of the studies have confirmed the existence of this connection. Since snus is a tobacco product and tobacco contains nicotine, snus can be addictive. The practice of snus consumption shows that it is much easier to give up snus later than to give up cigarettes. In the European Union, the use of smoking tobacco in public places is prohibited, and a similar law has also been adopted, which leads to an increase in the consumption of non-smoking tobacco in our country. For example, in Norway, after the introduction of a ban on smoking in bars and restaurants, sales of non-smoking tobacco increased dramatically [2,3].

If the manufacturer or importer of non-smoking tobacco products has conducted toxicological studies on the ingredients or such studies were conducted on their order, the manufacturer or importer of non-smoking tobacco products must report on the fact of conducting toxicological studies in the report on the composition of non-smoking tobacco products and at the request of the federal executive authority responsible for the development and implementation of state policy, and regulatory and legal regulation in the field of healthcare, to submit to the specified federal body, within thirty days from the date of receipt of the request, information on the results of such studies, indicating the methods used, measurement techniques and types of measuring instruments. The fact that toxicological studies have been conducted on the ingredients and the results of such studies cannot be considered a trade secret [4].

The World Health Organization positively assesses the tough position of France and Spain, as well as individual cities, for example, San Francisco (California, USA) regarding the financial liability of tobacco manufacturers for environmental pollution. These countries and cities have successfully implemented "extended producer responsibility legislation," according to which the tobacco industry is responsible for eliminating the pollution it creates. WHO urges countries and cities to follow suit, as well as support tobacco farmers to switch to growing sustainable crops, impose high taxes on tobacco (which may also include an environmental tax), and provide services to help people quit tobacco use [5].

With the help of memes about snus, manufacturers advertise tobacco-free mixtures, believes. Each community publishes memes featuring certain brands. "This is a hidden advertisement aimed at a young audience, as memes are a clear language for communicating information to the masses. The owners of such public sites are not the typical owner of a group, but entrepreneurs themselves, whose goal is to promote their product to the market and occupy a niche. Obviously, the harm done should not be associated with real entrepreneurship in any way. Rather, they should be perceived as drug dealers. Most of the administrators of large public sites in VK flatly refuse to advertise them, even for millions of rubles of wholesale purchase" [6].

We are, in fact, the food industry. Therefore, our products are the least harmful relative to cigarettes or vapes," he believes. "In a good cigar, the strength is around 200 mg of nicotine, while people smoke them anyway, and nothing happens to them. With proper use of our products, poisoning does not happen. Of course, if a student tries several pads at once, especially from not particularly negligent manufacturers, something may happen to him. The problem is that they sell nickpacks to children in stores [6].

Nicotine and other substances are released upon resorption from snus into saliva, while they immediately enter the bloodstream, being absorbed through the oral mucosa. There is a common misconception that using smokeless tobacco is less harmful than smoking because it contains less dangerous chemicals. That's not so. The composition of snus contains a number of chemicals with a potential carcinogenic effect. The most dangerous of them are nitrosamines, they are formed during the production of snus, during the fermentation of tobacco. It has been proven that people who use snus are actually exposed to higher levels of nitrosamines

and other toxic substances than smokers of traditional cigarettes. The reason is that snus stays in the mouth longer than cigarette smoke, which means that harmful chemicals have a longer effect on the body. Although smokeless tobacco contains fewer carcinogens than cigarettes, this is not an argument in its favor. Even a single carcinogen can cause mutations leading to cancer [7].

The high concentration of nicotine causes the rapid development of tolerance, and the almost lightning-fast formation of dependence. Quitting snus is a more difficult process than quitting smoking, which is often impossible without the help of a specialist and a special rehabilitation course. Unfortunately, the use of snus is very common among teenagers and young people, where it is considered not only safe, but also fashionable. The consequences of using snus in adolescence are extremely dangerous: lag in physical development, increased aggressiveness and excitability; deterioration of cognitive processes; impaired memory and concentration; There is a high risk of developing oncological diseases, primarily of the stomach, liver, and oral cavity; weakening of resistance to infectious diseases [8].

How to ease the withdrawal period? Does it make sense to reduce the number of cigarettes smoked? Self-deception is the opinion that smoking can be given up gradually, instead of strong cigarettes, use lighter ones or reduce the number of cigarettes smoked, some use hookah, smoking mixtures, naswai, thereby causing irreparable damage to their health. In most cases, such actions do not lead to the desired result. If you take a serious approach to your health, you need to take a course with the following specialists: a psychiatrist, a narcologist, a doctor – a psychotherapist, a reflexologist, a medical psychologist who will provide qualified assistance, conduct a diagnostic complex for tobacco damage, identify the degree of nicotine dependence, motivation to quit smoking, determine the amount of carbon monoxide in the lungs, prescribe adequate treatment, according to the indications, the patient will undergo a course of reflexology, in particular acupuncture, drug therapy will be prescribed, allowing less it is painful to give up smoking, they will teach anti-stress methods that help to cope with psychological discomfort. As a rule, a person has a number of psychological problems that he is unable to solve without his "poisonous friend" and creates an illusion for everything. Is it true that after quitting smoking, a person gains weight? And if so, why? Yes, sometimes people who quit smoking get better, but some people do not succeed due to the presence of chronic diseases. And if children and teenagers smoke, the consequences can be very disastrous, leading to irreversible consequences! Unconsciously, a person strives to replace a fallen habit with some kind of mechanical action. And here, most often, food comes to hand. In addition, the absorption of food, like smoking, physiologically relieves anxiety, and the body just needs it. So it turns out that smoking is replaced by overeating. But then, as a rule, the weight returns to normal. It is advisable to contact a specialist with this problem, rather than moving from one addiction to another. What advice would you give to people who want to quit smoking? Motivation, which is a goal, is of great importance for the success of getting rid of nicotine addiction [4,5].

1) Record daily the reasons for which you want to quit smoking, keep a diary where you will consciously get closer to your goal and regain your lost health.

2) Set yourself a deadline when you are ready to quit.

3) Take care of the support from relatives, friends, acquaintances, etc.

4) Use physical activity, motor activity is important – walking, swimming, cycling, etc.

5) Read literature related to quitting smoking, strengthen yourself spiritually. Of course, it is wise to consult a specialist who will help you cope with all the symptoms of quitting smoking. And if it is still difficult to make a decision, he will conduct motivational counseling with you aimed at awareness of the problem of smoking. In any case, take the problem seriously and make this attempt the most important event in your life. You don't have to wait for instant results, because you didn't become a smoker overnight. Your body and psyche need time to rebuild.

According to the amendments adopted in the second reading, the use of substances aimed at increasing the attractiveness of non-smoking tobacco products is not allowed as ingredients: flavorings, as well as dyes and additives that enhance tobacco (nicotine) dependence, including nicotine salts, ammonium and ammonium derivatives, ammonia, acetaldehyde, sugars (using sugar to replace sugar lost during processing is allowed under the condition, that this does not lead to taste and/or aroma or enhance them, or does not enhance the effect of tobacco (nicotine) addiction, toxic effects, or carcinogenic, mutagenic, or reprotoxic properties of the product). The law "On the Protection of Citizens' health from exposure to ambient tobacco smoke, the effects of tobacco consumption or consumption of nicotine-containing products" is being amended accordingly in terms of fixing the following terms: Nasvai is a type of non-smoking tobacco product designed for sucking and made from tobacco, lime and other ingredients.; "sucking tobacco (snus)" is a type of non-smoking tobacco product intended for sucking and made in whole or in part from purified tobacco dust and (or) a fine fraction of cut tobacco with or without the addition of other ingredients. The law "On State Regulation of the Production and Turnover of Tobacco Products, Tobacco products, nicotine-containing

products and Raw materials for their production" is being amended to completely ban the production of tobacco and snus in the Russian Federation. Currently, there is a ban in the Russian Federation regarding the trafficking of these substances [7].

Non-smoking tobacco products are products that are consumed without igniting or pyrolysis of tobacco by resorption in the oral cavity (sucking tobacco), chewing (chewing tobacco), or inhaling (snuff). Non-smoking tobacco products are positioned by manufacturers as an alternative to the consumption of smoking products. Non-smoking products differ in appearance, method of consumption, ingredient composition, level of toxicity, manufacturing technology, and physiological effect. In recent years, Russia has seen a steady increase in the consumption of both chewing tobacco and tobacco-free nicotine-containing products. The main danger is a critically high nicotine content and a comfortable form of use, which leads to the rapid development of nicotine addiction in adolescents. In one dose of dangerous sweets, the nicotine content can reach up to 40 mg per gram. At the same time, simultaneous use of 60 mg of nicotine can be fatal for a child. Lower doses lead to severe poisoning, accompanied by symptoms of nicotine intoxication: tachycardia, arrhythmia, seizures, vomiting, diarrhea [8].

Conclusion

Oral tobacco products are products that do not require pyrolysis and/or the production of tobacco aerosol (smoke) at the time of consumption. In the absence of data on the toxicological risks of non-smoking tobacco, their consumption is potentially increasing. The variety of non-smoking tobacco products creates certain problems in identifying chewing tobacco and sucking tobacco (prohibited for sale) as products identical in physiological effects, method of consumption and component composition. A methodology for the comprehensive assessment of non-smoking products, including the determination of consumer properties and technological indicators by instrumental methods, as well as the determination of the level of toxic components (nicotine, TSNA, B(a)P). The difference between the types of smokeless tobacco consists mainly in the granulometric composition of the product: snus – finely ground tobacco, chewing tobacco – tobacco fragments with a removed middle vein. Identification indicators were determined: the presence of tobacco raw materials, the size of its particles and the number of large fragments in the finished product. The presence of tobacco raw materials can be determined by optical microscopy and/or luminescence analysis, and the quantitative content can be determined by sieve analysis. The quantitative content of a large fraction in chewing tobacco (at least 15%) is the main indicator of the product.

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