

PHARMACOTHERAPY OF NICOTINE DEPENDENCE

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Nicotine addiction is a state of craving for tobacco, which sooner or later develops in 90 % of smokers. Nicotine dependence is caused by the ability of nicotine contact c acetylcholinergic receptors in the brain. This leads to the release of adrenaline and a short-term increase of blood pressure. Nicotine indirectly increases the release of dopamine, which causes a feeling of euphoria, the tide of cheerfulness. It is known nicotine in low doses acts as a psychostimulator. Physical and psychological dependence develops when tobacco use.

For the treatment of nicotine dependence used behavioral methods (self-help, medical advice, group methods, and aversive therapy) and methods of physiological effects. Physiological methods are divided into medication (nicotine and non nicotine replacement therapy, antidepressants and anxiolytics) and non-pharmacological (reflexology, hypnosis). The aim of nicotine replacement therapy is to eliminate or decrease the maximum manifestation of withdrawal symptoms. The mechanism of action of nicotine medications is very similar to the effect of nicotine on the dopaminergic system of the brain. However, the concentration of nicotine in the blood rises more slowly than during smoking, and has lower values and prolonged action. Nicotine medications necessarily prescribed to patients who have a high degree of nicotine dependence. In the pharmaceutical market of Ukraine nicotine preparations is presented in the form of drug Nicorette chewing gum, transdermal patch and inhaler. Among the non nicotine replacement therapy prescribed varenicline (Champix), bupropion hydrochloride (Zyban), cytisine (Tabeks). Varenicline binds nicotinic receptors in the brain and, as their partial agonist; it causes the release of small amounts of dopamine, smaller than when activated by nicotine, because receptor blocked by varenicline. As a result, production of dopamine is stop and a decrease in pleasure when smoking. The mechanism of action of cytisine is close to the mechanism of action of nicotine, but with much less toxicity and greater therapeutically effect. Cytisine competitively inhibits the interaction of nicotine to the corresponding receptors, which leads to a gradual reduction and disappearance of nicotine addiction.

Thus, pharmacotherapy of nicotine addiction presented drug therapies: nicotine replacement therapy and non nicotine replacement therapy, which take into account when choosing a stage of nicotine addiction.