

ABSTRACT

The aim of this thesis is to provide an insight into the current status of nicotine dependence in the Czech population and to give an overview of pharmacological interventions for the treatment of this condition, emphasizing the mechanisms of action.

Main findings: A quarter of the Czech population aged over 15 uses nicotine and tobacco products. While the number of conventional cigarette smokers is decreasing, the usage of alternatives such as electronic cigarettes, heated tobacco, and nicotine pouches is on the rise. Despite the desire of most users to quit, only 5% of those attempting to do so are successful. Pharmacotherapy relieves withdrawal symptoms, makes it easier to quit and greatly increases the chance (up to 3 times) of achieving abstinence. Alleviation of withdrawal symptoms can be achieved by various pharmacodynamic actions. The most effective pharmacological interventions for adults available in the Czech Republic are cytisine, bupropion for adolescents and nicotine replacement therapy for pregnant women. However, the use of these interventions in the latter two population groups is limited.

Conclusions: Addiction to tobacco and nicotine products is a serious health problem with socio-economic consequences. Pharmacological interventions significantly increase abstinence rates, but this potential is largely untapped, as only five percent of users are offered treatment (pharmacological or non-pharmacological). Particular attention should be paid to prevention among children and to educating addicts about the availability of health interventions. If not used, even the most effective health intervention will not increase the number of successful abstainers.

keywords: nicotine dependence, tobacco, pharmacotherapy, abstinence, nicotine, varenicline, cytisine, lobeline, bupropion, baclofen, nortriptyline, clonidine, psilocybin, nicotine vaccine, pregnancy, adolescent