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Youth and nicotine addiction: the emerging epidemic of e-cigarettes and tobacco heaters

Dear Editor,

Our recent focus has been on the concerning rise of e-cigarettes and tobacco heaters among younger users. Despite the implementation of numerous anti-smoking campaigns, these products continue to gain popularity, particularly among the youth, who seem to be undeterred by the associated health risks.

In recent years, alternatives to traditional cigarettes have been introduced, assuming these products are less harmful. They have also become more attractive due to the lack of the unpleasant smell that accompanies conventional tobacco products and their easy availability. Unfortunately, they contain highly addictive nicotine, which leads to the need to smoke regularly.

E-cigarettes are often marketed as a healthier alternative to traditional cigarettes, primarily due to the absence of tar. However, the aerosol produced when heating these products contains a cocktail of toxic substances, including acetone, glycerols, acrolein, and formaldehyde, along with the highly addictive nicotine. This deceptive marketing strategy underscores the need for increased public awareness [1].

We found research that showed several adverse effects caused by smoking e-cigarettes. These are initially trivial symptoms such as headache, nausea and contact allergies, and more dangerous ones, such as carcinogenicity and effects on the circulatory system — increased blood pressure and increased risk of thrombosis [2].

The second, newer alternative is heated tobacco systems (HBN) and heated tobacco products (HTP). The presence of carcinogenic and toxic substances in aerosols has been proven. These products have also been shown to hurt the increase in heart rate and blood pressure, which results in increased vascular stiffness. In recent years, the effects of HBN and e-cigarettes on the oral cavity have also been studied, showing an increase in dryness, irritation of mucous membranes, carcinogenic effects, and an increase in the risk of periodontal diseases [3–5]. When it comes to the respiratory system, a relationship has been shown between smoking e-cigarettes and HBN and the occurrence of COPD and asthma, and the immune response in the lungs is also weakened, which may ultimately lead to many diseases [4, 6].

An increased risk of using conventional cigarettes in the future by people previously addicted to these products has also been proven [7].

There is very little research showing the problem of passive smoking; these products are often smoked in closed rooms, which only increases the risk of contact with the vapours for other people; this is a signal to expand research in this direction.

This should be a priority in our efforts to raise awareness and protect public health.

The lack of control and availability of these preparations for minors is also alarming. Flavoured liquids are particularly tempting among young people; limiting the availability of flavoured products would significantly

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reduce the use of these products. We also believe that advertising of these products should be banned. Advertisements for these products should be banned, especially since they are currently targeted mainly at young people, who are attacked by them on social media. The role of doctors is also to make patients aware that switching to these alternatives does not mean quitting the addiction because they still deliver nicotine to the body. From our observations, we know how many people perceive the use of e-cigarettes or HNB in this way. Currently, there is still a lack of research assessing the long-term effects of smoking and a thorough analysis of the harmfulness of these products on the body.

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