



Heated Tobacco Products—for healthcare professionals

What are Heated Tobacco Products?

Heated tobacco products (“HTPs”), sometimes marketed as “heat-not-burn” products, heat tobacco with battery-powered heating system to produce an aerosol, which users inhale into their lung. Unlike electronic cigarettes, which are heating devices coupled with chemical solutions, HTPs contain actual tobacco leaf.

Design of HTPs

HTPs deploy various aerosol-generating mechanisms. Some HTPs heat up tobacco sticks, or capsules of processed tobacco. Some work by heating up liquids to produce an aerosol which then passes through a capsule to pick up nicotine and other chemicals (such as flavouring agents) from the tobacco before it is inhaled by the user.

Health Hazards of HTPs

Both HTPs and conventional cigarettes contain nicotine, but research has indicated that HTPs may deliver nicotine more effectively than cigarettes. This has raised concerns about the possibility of HTPs being more addictive. Children and adolescents are particularly vulnerable to the neurophysiological effects of nicotine, as human brain is not fully developed until the age of 25.

Currently, studies on HTPs are still very limited. The available data are mainly from the tobacco industry, which show that HTPs release at least hundreds of chemicals, including carcinogens, that are also present in conventional cigarettes. Although some of these chemicals are present at lower levels than in cigarette smoke, such reduction does not automatically translate to lower risk because the dose-response relationship between many toxicants and health effects are not linear. There is also no known safe level of exposure for carcinogens. HTPs are a class of highly heterogeneous products. Research data on the chemical profile and toxicity of the emissions are lacking for most of the HTPs. Data revealed one of the HTP products contains 80 chemicals that are found to be either present in higher concentration in aerosols of that HTP product or not found in conventional cigarette smoke, including four chemicals that are possibly carcinogenic and more than a dozen chemicals that are identified with genotoxic and/or carcinogenic potential. The short- and long-term health effects of these novel exposures from HTPs are largely unknown. Similar to conventional cigarettes, HTPs also result in side-emission and second-hand smoke exposure.

Promotion of HTPs and the Misleading Effects

HTPs are aggressively promoted by the tobacco industry as substitutes of conventional cigarettes, but most HTP users in fact do not switch completely and use conventional cigarettes and HTPs concurrently instead. Thus, this so-called dual users expose themselves to both types of tobacco products and the associated risks.

The unsubstantiated claim of “modified risk” made by the tobacco industry is to dissuade smokers from quitting smoking altogether. In the past, the marketing of “low- tar” cigarettes was found to reduce cessation attempt without any reduction in tobacco associated risk. Studies found smokers often misconceive “reduced exposure” as “reduced risk”.

Ban on alternative smoking products

From 30 April 2022, no person may import, promote, manufacture, possess for commercial purposes or sell alternative smoking products, including heated tobacco products; no person may use alternative smoking products in statutory no smoking areas.

What Healthcare Professional Should Do

There is no evidence showing that use of HTPs can assist in smoking cessation. HTPs are tobacco products developed and marketed with the aim to sustain tobacco addiction, amid a global decline of cigarette consumption.

Smokers should be advised at every opportunity to quit smoking. There are no data to suggest that use of HTPs by cigarette smokers reduce the amount of their cigarette consumption, nor there is any evidence to suggest that reduction, rather than cessation, of smoking results in significant decrease in smoking-related diseases and deaths.

As a healthcare professional, you can...

- Advise patients to quit smoking at every opportunity. Every piece of quit smoking advices counts.
- Discuss the harms of HTPs with patients, and emphasise that all forms of tobacco use, including HTPs, are harmful
- Provide appropriate ways to quit smoking
- Referral to smoking cessation services (1833 183)
- Go to www.livetobaccofree.hk to know more

What are the marketing strategies used to promote HTPs?

- Reduce consumers' health concerns by claiming that HTPs are reduced-risk products compared to conventional cigarette, which is scientifically unsubstantiated.
- Design and market of HTPs to boost the user's image, e.g. availability in different colours, limited edition designs, reduced odour, etc.
- Involve community activators and brand ambassadors to promote HTPs through social media platforms and promotional videos.
- Advertise by acknowledging the health risks of conventional cigarettes and describe HTPs as cleaner and healthier alternatives.

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Reference

- 1) World Health Organization. Heated tobacco products (HTPS): information sheet. World Health Organization; 2018. Available at <https://apps.who.int/iris/bitstream/handle/10665/272875/WHO-NMH-PND-17.6-eng.pdf?ua=1>
- 2) Auer R, Concha-Lozano N, Jacot-Sadowski I, Cornuz J, Berthet A. Heat-Not-Burn Tobacco Cigarettes Smoke by Any Other Name. *JAMA Intern Med.* 2017;177(7):1050–1052. doi:10.1001/jamainternmed.2017.1419
- 3) Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, USA. Heated Tobacco Products. https://www.cdc.gov/tobacco/basic_information/heated-tobacco-products/index.html
- 4) UK Committees on Toxicity, Carcinogenicity and Mutagenicity of Chemicals in Food, Consumer Products and the Environment. Statement on the toxicological evaluation of novel heat-not-burn tobacco products. 2017.
- 5) World Health Organization. Heated tobacco products (HTPs) market monitoring information sheet. https://www.who.int/tobacco/publications/prod_regulation/https-marketing-monitoring/en/
- 6) Li X, Luo Y, Jiang X, Zhang H, Zhu F, Hu S, et al. Chemical Analysis and Simulated Pyrolysis of Tobacco Heating System 2.2 Compared to Conventional Cigarettes. *Nicotine & Tobacco Research.* 2019;21(1):111-8
- 7) World Health Organization. WHO study group on tobacco product regulation: report on the scientific basis of tobacco product regulation: seventh report of a WHO study group. Geneva: World Health Organization; 2019. Report No.: 9241210249.
- 8) St.Helen G, Jacob III P, Nardone N, et al. IQOS: examination of Philip Morris International's claim of reduced exposure. *Tobacco Control* 2018;27:s30-s36.
- 9) Jankowski M, Brożek GM, Lawson J, Skoczyński S, Majek P, Zejda JE. New ideas, old problems? Heated tobacco products – a systematic review. *International Journal of Occupational Medicine and Environmental Health.* 2019;32(5):595-634.