



**INDIAN COUNCIL OF MEDICAL RESEARCH**

Department of Health Research – Ministry of Health & Family Welfare  
Government of India

**Press Release**

**White Paper on Electronic Nicotine Delivery System (ENDS) released at  
ICMR Hqrs**

31<sup>st</sup> May 2019, New Delhi

On the eve of world no tobacco day Indian Council of Medical Research released White Paper on Electronic Nicotine Delivery System (ENDS).

***Paper Summary***

ENDS or e-cigarettes are battery-powered devices used to smoke or ‘vape’, a flavoured solution containing a varying concentration of nicotine, an addictive chemical found in cigarettes and other forms of tobacco products. These devices also contain other ingredients as flavouring agents and vapourizers, which are also found to be harmful for health. The most common type of such devices is e-cigarettes that produce an aerosolized mixture of the flavoured liquids and nicotine, which is inhaled by the user. Nicotine is considered as one of the most addictive substances and the rapidity at which it is introduced into the body, age of first exposure and the dosage administered all add to determine the potential risk of a person being addicted to it throughout life.

ENDS or e-cigarettes are manufactured in such a way to resemble traditional tobacco products like cigarettes, pipes, cigars, and common gadgets like flash drives, flashlights, or pens. Currently, there are more than 460 different e-cigarette brands with varied configuration of nicotine delivery available in the market.

Use of e-cigarettes adversely affects almost all the human body systems with impact across the life course, from the womb to tomb. E-cigarette use adversely affects the cardiovascular system, impairs respiratory immune cell function and airways in a way similar to cigarette smoking and is responsible for severe respiratory disease. It also poses risk to foetal, infant, and child brain development.

ENDS or e-cigarettes are also harmful to non-users and have adverse health impacts even when people are exposed to second-hand vapours. Passive exposure to vapours during pregnancy can severely affect the health of both the mother and foetus. There are reports of poisoning due to accidental swallowing by children. These devices also can cause fire and explosion.

Use of ENDS or e-cigarettes by non-smokers can lead to nicotine addiction and regular smoking. Studies have found that youths using ENDS or e-cigarettes are more likely to use regular cigarettes later. E-cigarettes increase the likelihood to experiment with regular tobacco products and increase intention to indulge in cigarette smoking. They also increase the risk of dual-use due to lack of awareness about the harmful effects of ENDS.

### ***On the occasion***

Prof. K. Srinath Reddy, President, Public Health Foundation of India and a renowned cardiologist and public health expert who have chaired the ICMR expert group for this white paper said that the tobacco consumption, especially cigarette smoking, has shown a decline in India in recent years, in response to several tobacco control measures that has already been initiated. Thus, at this juncture, marketing of a product like ENDS or e-cigarettes, with unproven benefit and high potential harm from addiction and health risks, is unwarranted as a tobacco control measure. The risk of youth addiction is high, as borne out by international experience and in Indian media reports. The adverse population-level health impact will outweigh any presumed benefit to individual cigarette smokers. Moreover, it can open a gateway for new tobacco addiction which is a potential threat to

the country's tobacco control laws and ongoing tobacco control programs and efforts.

Prof. Ravi Mehrotra, Director, ICMR-National Institute of Cancer Prevention and Research said the declining trends of tobacco smoking in India is a good positive indication to tobacco control measures. However, "Smokeless tobacco use still remains a public health concern beyond the Southeast Asia Region and requires a comprehensive approach to deal with the various challenges its control. ENDS or e-cigarettes are not the only products which have been marketed as an alternative to regular tobacco smoking. There are other devices like heating but not burning of tobacco, Non-Nicotine Delivery Systems, already available in the markets which are also used by both the Smokers and well as non-smokers without any known safety and efficacy of these products as tobacco cessation aid.

Prof. Balram Bhargava, Secretary, Department of Health Research, Government of India and Director General ICMR, New Delhi said, "Given the extent of harmful health effects of e-cigarettes to the users as well passive exposure and multiple faces of the ENDS or e-cigarettes use epidemic around the world" where it was introduced, if no appropriate interventions are taken at the right time by bringing together all stakeholders under one umbrella to prevent this impending epidemics of e-cigarettes use, it can lead to a public health disaster in India.

***For more details:-***

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**Key recommendations:**

Based on the currently available scientific data from multiple streams of research, the ICMR recommends complete prohibition on ENDS or e-cigarettes in India in the greater interest of protecting public health, in accordance with the precautionary principle preventing public harm from a noxious agent, considering the following facts and circumstances:

- ENDS or e-cigarettes contain nicotine solution, which is highly addictive, and also contain other ingredients as flavouring agents and vapourizers, which are also harmful for health.
- Use of ENDS or e-cigarettes has documented adverse effects on humans which include DNA damage; carcinogenesis; cellular, molecular and immunological toxicity; respiratory, cardiovascular and neurological disorders and adverse impact on foetal development and pregnancy.
- The magnitude of potential short-term and long-term health risks to the users still remains undetermined at the population level since the products are recent and come in diverse forms. •
- Whereas, the degree to which, if at all, the ENDS or e-cigarettes benefit as tobacco cessation aides is not firmly established, evidence suggests that there is a risk of dual use to some extent and initiation to tobacco addiction to non-smokers. Hence, on the balance these products have a net negative impact on public health.
- Use of ENDS can open a gateway for new tobacco addiction which is a potential threat to the country's tobacco control laws and on-going tobacco control programmes.
- The rapidly increasing trend of use of ENDS or e-cigarettes by young persons, in countries where it was introduced, underscores a potential threat to public health.