



Unfair Jeopardy of Third and Fourth Hand Smoking

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Smoking-related illnesses and fatalities continue to be a significant public health issue because it is still the world's biggest cause. The harmful effects of active smoking and second hand smoke on health are now well documented. Third-hand smoke (THS) and fourth-hand smoke exposure, on the other hand, are relatively new terms that have only recently been defined in the context of environmental and public health. Third-hand smoke is composed of pollutants that accumulate indoors when tobacco is smoked. Third-hand smoke is constituted of chemicals that adhere to surfaces. THS contains tobacco smoke components that can linger on interior surfaces and in dust for months before being gaseously released back into the atmosphere. Humans who have been exposed to third parties are more likely to develop cancer, have DNA damage, and heal wounds more slowly. Pregnant women are at an increased risk of stillbirth, premature birth, and sudden infant death syndrome (crib death). Smoking is a learned behaviour. Like third hand smoke fourth hand smoke also pose a potential health threat to children and young adults. When people see their role models, on-screen celebrities, friends, and co-workers smoking, the behaviour becomes normalised and acceptable. It is too early to predict the combined health effects of third and fourth hand smoke. Probably the most important intervention would be to raise public awareness of the problem, which adds yet another reason to remain active in the anti-smoking campaign.

KEYWORDS: Smoking, Tobacco, Exposure, Health, Environment

INTRODUCTION

Tobacco smoking is the six out of eight leading cause of death in the world. Tobacco smoking comprises of two types which includes active and passive smoking. Active or current smoking is defined as regular cigarette smoking for duration more than 6 months at the time of examination whereas passive smoking is defined as breathing in other people's tobacco smoke.¹ It is the exposure to smoking more than once per week and for longer than 1 year. Passive smoking includes second hand smoke, third hand smoke, and fourth-hand smoke. Under passive smoking second hand smoking is the common and dangerous as it comes from burning or heating tobacco through a cigarette, electric cigarette, hookah, pipe or cigar also from the air a smoker exhales while smoking. However 3rd and 4th hand smoke also prevail in our surrounding environment and do have the ill effects on one's health so here we will talk about the effects of third and fourth hand smoke.

THIRD HAND SMOKE

In the environmental and public health fields, third hand smoking is a relatively new phenomenon. This concept was first proposed by Winickoff et al. in Pediatrics in 2009, but it was popularised by the New York Times when they published an article on the subject titled: A New Cigarette Hazard: 'Third Hand Smoke'

Third hand smoke is made up of the pollutants that settle indoors when tobacco is smoked. The chemicals in third hand smoke include nicotine as well as cancer – causing substances such as formaldehyde and naphthalene.² Third hand smoke build up on the surfaces over time and in dust after tobacco has been smoked, they are re emitted into gas phase or react with other compounds in the environment to form secondary pollutants. Third hand smoke exposure consist of unintentional intake of tobacco smoke that occur in the absence of concurrent smoking mainly through inhalation but also via ingestion and dermal routes.

Third hand smoke possess a potential health hazard to non-smokers especially in children than adults owing to hand-to-mouth and dermal exposure from contact with contaminated surfaces like floors, toys, pacifiers toys and they also tend to spend more time indoors.³

Exposure to third hand smoke occur by mainly three routes. First, by oral route when pollutants enter mouth through fingers and objects. second by breathing in the particles and chemicals in the air and third through dermal route when it absorbs third hand smoke when skin comes in contact with the surfaces. Third hand exposure in humans display increased risk of cancer, damage DNA, delayed wound healing,



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Submitted on: 06-Apr-2022; Accepted on: 19-Aug-2021

altered inflammatory response, impaired collagen deposition, headache, earache, triggers asthma attacks, worsens respiratory illness and decrease immunity.⁴ In pregnant women there is increased risk for still birth, premature birth and sudden infant death syndrome (crib death). The only way to safeguard non-smokers, especially young children, from the dangers of third-hand smoke is to prohibit smoking in all indoor areas, including automobiles.⁵

FOURTH HAND SMOKE

Smoking is a learned behaviour. Observing role models, on-screen actors, acquaintances, and co-workers smoke normalises the behaviour, making smoking "the cool thing." This has a significant impact on the populace who respect and revere them, inculcating smoking as a symbol of glamour and increasing the attractiveness quotient to be perceived in the same way as on-screen personae— "rich, gorgeous, charismatic, and powerful"—even if it is causing havoc. Children and teens are particularly vulnerable.⁶

A total of 1,85,000 children and teenagers were "recruited to cigarette smoking by their exposure to on-screen smoking," according to a study by the Ontario Tobacco Research Unit, published by the Centre for Tobacco Control Research and Education, University of California, San Francisco, US, during the 10-year research period alone. Whatever harmful messages you may have heard about smoking, they are reversed when you witness a friend, colleague, or role model smoking. You will want to imitate them.

Visual mapping of smoking in outdoor bars and cafes across Wellington city was done as part of a study published by BioMed Central Public Health, New Zealand, which came to the conclusion that high rates of smoking normalised the behaviour and made it socially acceptable, encouraging younger people to start smoking and decreasing the likelihood of smokers quitting or even attempting to quit.

Fourth hand smoke has a number of benefits when it comes to peers, including friends and co-workers. For one, it helps manage tension, with phrases like "I NEED A SMOKE" implying that the other person may have found a method to escape the stress you both may be experiencing at the time. Therefore, a non-smoker who is around smokers feels left out, leading them to start smoking in order to experience a sense of belonging. Watching your friends and co-workers smoke might

function as a trigger, making fourth hand smoke considerably worse for individuals who have given up smoking.

Therefore, "we need a few of people who denounce smoking for a person who even unwittingly praises it."

CONCLUSION

The use of tobacco can be decreased by outright banning tobacco advertisements, promotions, and sponsorships. Both direct and indirect kinds are covered. Television, radio, billboards, and social media platforms are examples of direct formats. Brand sharing, price reductions, and free distribution are indirect types. The most effective strategy to lower health care expenses and tobacco usage is through cigarette taxes, especially among teenagers, young people, and low-income individuals.

The World Health Organization (WHO) introduced "the MPOWER" in 2007 as a useful and affordable worldwide measure for tobacco use prevention which includes the following:

- Deter people from smoking
- Provide support for quitting smoking Inform people about the hazards of tobacco
- Enforce restrictions on tobacco sponsorship, promotion, and advertising.
- Increase tobacco taxes.⁷

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Cite this article as:

Thakur N, Kumari L, Chauhan K. Unfair Jeopardy of Third and Fourth Hand Smoking). *Int Healthc Res J*. 2022;6(5):RV11-RV13. <https://doi.org/10.26440/IHRJ/0605.08551>

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Source of support: Nil, **Conflict of interest:** None declared

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