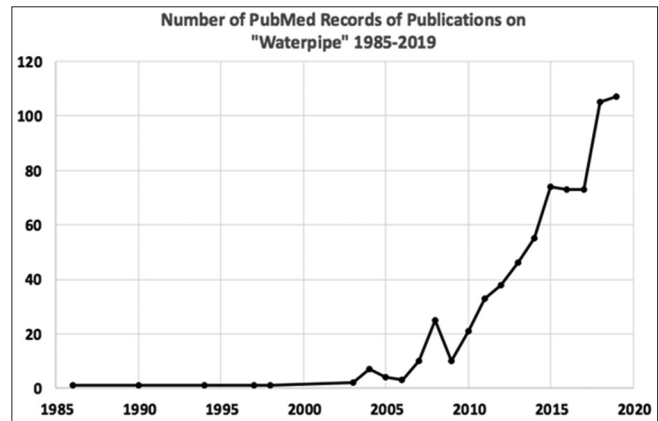


# Sacrificing Heart and Air Pipes for a Waterpipe: A Rising Epidemic

In the current issue of the *Journal*, Mogassabi *et al.* review the effects of waterpipe (WP) smoking on the respiratory system.<sup>[1]</sup> The article is a narrative, nonsystemic review on the acute and long-term effects of WP smoking on the respiratory system. Among the serious acute respiratory effects of WP smoking on the respiratory system that have been reported are acute eosinophilic pneumonia, carbon monoxide poisoning, increase in respiratory rate, transmission of infection, and acute reduction in lung function. Long-term effects include increased risk of lung cancer, chronic obstructive pulmonary disease, asthma exacerbation, and deterioration in lung function. The article describes the history and background of WP smoking, prevalence, factors responsible for the promotion of WP smoking, and the acute and long-term effects on the respiratory system.

Tobacco use is a major health problem and a leading cause of preventable death worldwide.<sup>[2]</sup> Reports show that WP smoking epidemic is on the rise and replacing cigarettes as the most popular method of tobacco use in many countries including the Middle East, with an alarming rise in the West as well.<sup>[3-5]</sup> The spread of WP smoking has been promoted by the marketing of flavored tobacco, a social media environment, and misperceptions about the addictive potential and possible adverse health effects. WP smoking among youth is attributed by a misperception of reduced harm as compared to cigarettes. Contrary to this, WP smoking contains many harmful constituents.

The medical interest in WP smoking has increased over the years. An analysis covering literature published up to 2012 was conducted by a group from Nablus, Palestine.<sup>[6]</sup> However, since then, there has been an exponential increase in the literature [Figure 1]. Khabour *et al.* studied the effects of acute exposure of WP smoking on lung in mice and compared them to cigarette smoking.<sup>[7]</sup> Furthermore, Derici Eker *et al.* suggested that smoking a hookah may cause genotoxic effects.<sup>[8]</sup> Earlier this year, the relationship between WP smoking and cardiovascular disease risk was underscored in a scientific statement from the American Heart Association (AHA).<sup>[9]</sup> The statement described the design and operation of WPs and their use patterns, identified harmful and potentially harmful constituents in WP smoke, documented the cardiovascular risks of WP use, reviewed current approaches to WP smoking cessation, and offered guidance to healthcare providers for the identification and treatment of individuals who smoke tobacco using WPs. The statement emphasized the growing evidence that WP tobacco smoking affects heart rate, blood pressure regulation, baroreflex sensitivity, tissue oxygenation, and



**Figure 1:** The increased medical interest in “water pipe” smoking is evident by the number of publications on “water pipe” between 1985 and 2019 retrieved by a PubMed search (Conducted on 23.10.2019)

vascular function over the short term. Long-term WP use is associated with increased risk of coronary artery disease and myocardial infarction. Several harmful or potentially harmful substances present in cigarette smoke are also present in WP smoke, often at levels exceeding those found in cigarette smoke. WP tobacco smokers have a higher risk of initiation of cigarette smoking than never smokers. The AHA called for future studies that focus on the long-term adverse health effects of intermittent WP tobacco use are critical to strengthen the evidence base and to inform the regulation of WP products and use.

The authors conclude that the impact of WP smoking on the respiratory system and health in general deserves more attention from researchers and healthcare policymakers. Increasing awareness about WP smoking harms through health warning labels, and public health campaigns represent a promising policy and regulatory strategy to curb WP smoking. Dedicated efforts to address this public health epidemic from both a research and education perspective are sorely needed.

## Authors' contribution

Both authors are equally responsible for the conception and preparation of the viewpoint and approval of its final version.

## Compliance with ethical principles

Not applicable.

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