

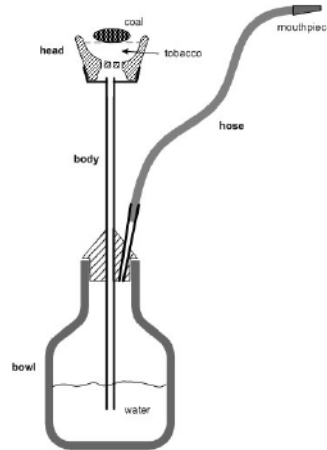
# Non-Smokers' Rights Association Smoking and Health Action Foundation

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## Second-hand Smoke and Hookah Pipes

Water pipe smoking is a worldwide trend that has been gaining popularity in recent years,<sup>1,2,3</sup> including in Canada. The increasing prevalence is noteworthy among post-secondary students and young people. Known by many different names including hookah, shisha, narghile, goza and hubble bubble, water pipes are typically composed of 4 parts: a bowl, a base which is filled with liquid, a rigid pipe through which the smoke travels into the liquid, and one or more hoses and mouthpieces

used to inhale the smoke.



Moist, flavoured tobacco called *mo'assel* or *ma-assel* is placed in the bowl and covered with perforated tin foil with a piece of charcoal placed on top. The tobacco is not actually burned but is smoked by indirect heat. *Maassel* is a mixture of tobacco and fruit, stuck together with molasses or honey in a moist paste. The percentage of tobacco in *maassel* probably varies, but is understood to be approximately 30%. There are also flavoured non-tobacco hookah products available, of which the exact ingredients remain unclear. The increasing popularity of hookah smoking,

both with and without tobacco, may be explained in part by the veritable explosion of flavours that are now available, including cola, sambuca, earl grey tea, apple, strawberry, apricot and mango. Hookah smoke is reportedly mild and smooth with an aroma not unlike caramelizing sugar from a cotton candy machine.<sup>4</sup> The more traditional unflavoured tobacco is typically favoured by older generations, especially men.

Hookah smoking holds wide appeal, even among non-smokers. It is seen as a social, exotic activity that is safer and less addictive than smoking cigarettes due to the water filtering toxic substances out of the smoke, and because the tobacco is heated and not directly burned.<sup>5</sup>

<sup>1</sup> World Health Organization. TobReg Advisory Note. *Waterpipe Tobacco Smoking: Health Effects, Research Needs and Recommended Actions by Regulators*. 2005.

<sup>2</sup> Asfar, T, Ward KD, Eissenberg T et al. Comparison of patterns of use, beliefs, and attitudes related to waterpipe between beginning and established smokers. *BMC Public Health* 2005;5:19.

<sup>3</sup> Maziak, W, Rastam S, Ibrahim I et al. Waterpipe-associated particulate matter emissions. *Nicotine & Tobacco Research* 2007;10:519-523.

<sup>4</sup> Shihadeh, A. Investigation of mainstream smoke aerosol of the argileh water pipe. *Food and Chemical Toxicology* 2003;41:143-152.

<sup>5</sup> World Health Organization. TobReg Advisory Note. *Waterpipe Tobacco Smoking:*

It is true that the chemical composition of hookah smoke differs from that of cigarette smoke, which is produced at temperatures several hundreds of degrees higher. Studies have shown that the risk for tumours and genetic mutations increases with temperature.<sup>6</sup> Although the water may absorb some of the nicotine, hookah smoke still contains carbon monoxide and numerous toxins known to harm health.<sup>7</sup> In fact, one study found that relative to the smoke of a single cigarette, hookah smoke contained high levels of arsenic, chromium and lead.<sup>8</sup> New SHS research on hookahs demonstrates that levels of particulate matter can build up to toxic levels similar to those mea-

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*Health Effects, Research Needs and Recommended Actions by Regulators*. 2005.

<sup>6</sup> Shihadeh, A. Investigation of mainstream smoke aerosol of the argileh water pipe.

*Food and Chemical Toxicology* 2003;41:143-152.

<sup>7</sup> World Health Organization. TobReg Advisory Note.

*Waterpipe Tobacco Smoking: Health Effects, Research Needs and Recommended Actions by Regulators*. 2005.

<sup>8</sup> Shihadeh, A. Investigation of mainstream smoke aerosol of the argileh water pipe.

*Food and Chemical Toxicology* 2003;41:143-152.

sured from cigarettes.<sup>9</sup> A typical hookah session lasts 20-80 minutes, with smokers taking up to 200 puffs. This is in contrast to the 5-7 minutes and 8-12 puffs taken for a cigarette. As a result, much more SHS is produced from a hookah than from a cigarette.<sup>10</sup>

Some hookah lounges claim to offer non-tobacco hookah to their customers and have successfully sought exemptions to clean indoor air laws in Toronto, Calgary and Vancouver. This is problematic. Smoke-free laws are designed to protect health. The presence of any kind of smoke in an enclosed public place, tobacco or otherwise, pollutes the air. Municipalities are wise to adopt a broad definition of smoking, such as that found in Vancouver's new health bylaw: "Smoke or smoking means to inhale, exhale, burn, or

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<sup>9</sup> Maziak, W, Rastam S, Ibrahim I et al. Waterpipe-associated particulate matter emissions. *Nicotine & Tobacco Research* 2007;10:519-523.

<sup>10</sup> World Health Organization. TobReg Advisory Note. *Waterpipe Tobacco Smoking: Health Effects, Research Needs and Recommended Actions by Regulators*. 2005.

*carry a lighted cigarette, cigar, pipe, hookah pipe, or other lighted smoking equipment that burns tobacco or other weed or substance.*" In contrast, a narrow definition of smoking undermines health messaging, leaves a loophole to be exploited and poses serious enforcement challenges.

The science on hookah smoking and its SHS is still emerging, and the science on non-tobacco hookah is non-existent. More study is definitely needed to gain a better understanding. However, it is widely known that the combustion of any vegetable matter produces by-products which are harmful to human health. From a policy standpoint, immediate action is justified. As more hookah lounges open in Canadian cities, health officials will no doubt be faced with increased requests for non-tobacco smoking exemptions. The focus needs to remain on clean indoor air, regardless of smoke's origin. Amended bylaws like that of Vancouver, which includes a broad definition of smoking and a "no new hookah lounges" provision, may become necessary.