Deputation to Toronto Board of Health, June 1, 2015 1pm.
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WHAT DO WE KNOW ABOUT WATERPIPE?

- Waterpipe smoke is toxic: it contains high levels of fine particulates, carbon monoxide, benzene, heavy metals and other contaminants.
- The water does not filter toxic materials from the smoke.
- Most of the smoke comes from the burning charcoal, but a significant amount also comes from the tobacco or herbal product.
- The tobacco or herbal product is not just warmed by the charcoal. It burns at a low temperature, which actually produces more toxic smoke from incomplete combustion.
- Except for nicotine, there is no difference in the toxicity of tobacco and herbal waterpipe smoke.
- Waterpipe use among Ontario students is now greater than cigarette use.
- Waterpipe use is associated with serious health effects, including cancer, coronary heart disease, chronic bronchitis, emphysema, high blood pressure, impaired lung function, CO intoxication, obstetrical complications, osteoporosis, gum disease, and several infectious diseases.

WHAT DID WE FIND IN THE TORONTO WATERPIPE STUDY?

- Most waterpipe cafes serve at least some tobacco products in contravention of the Smoke-Free Ontario Act.
- Levels of toxic waterpipe smoke found in waterpipe cafes may surpass occupational health and safety workplace regulations.
- Nonsmokers in waterpipe cafes are exposed to high levels of second hand waterpipe smoke.
- Use of waterpipe outdoors can also result in hazardous levels of exposure.

WHAT ARE OTHER JURISDICTIONS DOING ABOUT WATERPIPE?

- A dozen Ontario municipalities, three Canadian provinces and several Middle Eastern countries now ban or restrict the use of hookah, particularly indoors.
- Toronto now has an opportunity to protect patrons, nonsmokers, waitstaff and residents in the same building from this preventable toxic exposure.

THE ONTARIO TOBACCO RESEARCH UNIT
UNITÉ DE RECHERCHE SUR LE TABAC DE L'ONTARIO

Generating knowledge for public health

Hookah in Toronto

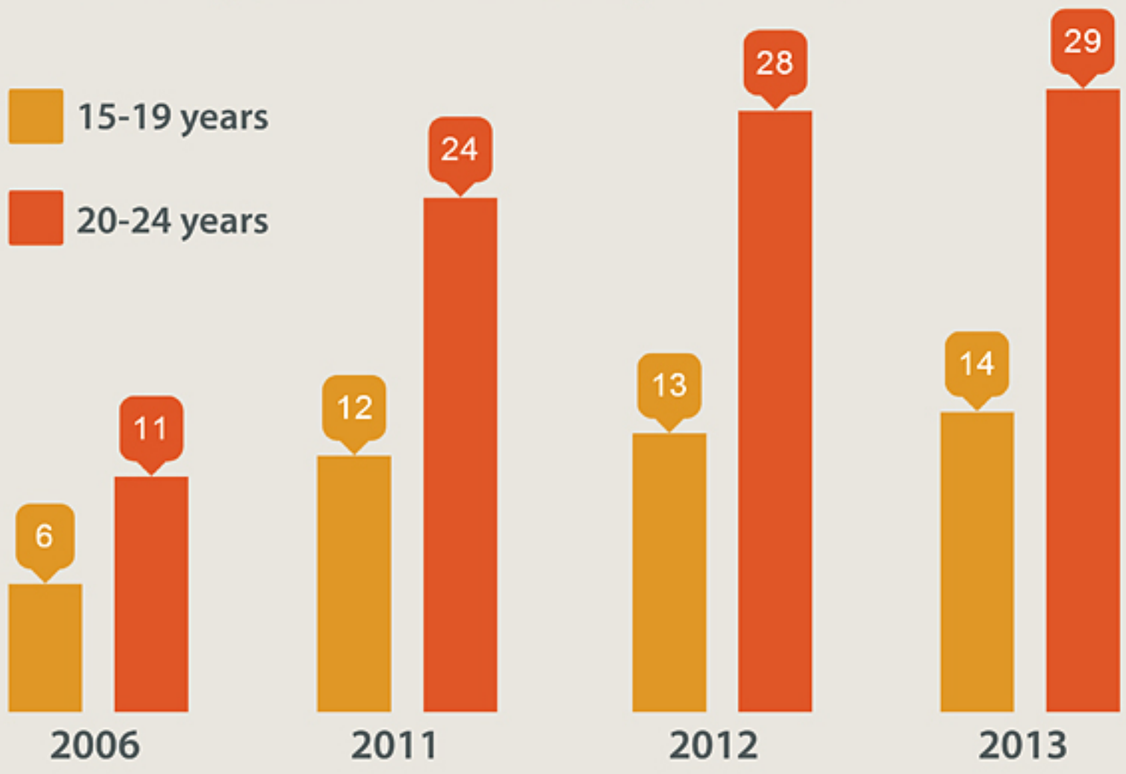
Why Study Hookah?

Misinformation about safety

Regulation and enforcement issues

New science on exposure & hazards

More Young Canadians Are Using Hookah (%)



What Was Measured?

Air Quality Inside Hookah Cafés and on Patios

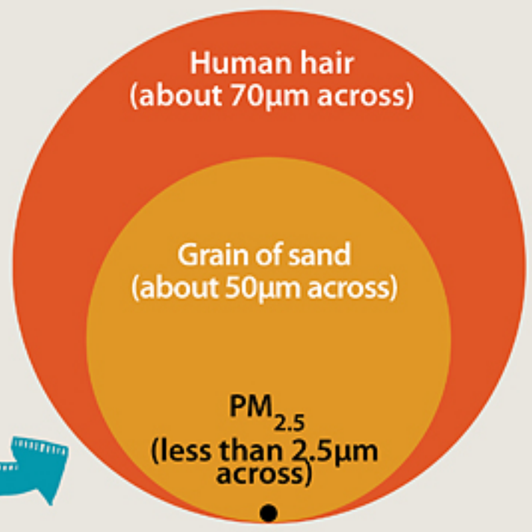
Nicotine in tobacco smoke

Carbon monoxide (CO) A poisonous gas that you can't see, smell or taste

Fine particulate matter ($PM_{2.5}$)
Very tiny particles inhaled deep into the lungs.

Particles are 30-40 times smaller than a grain of sand.

Compare these diameters



According to Ontario's Air Quality Index, a level of fine particulate matter over 91 µg/m³ is very poor, with possible serious respiratory effects

What Did the Study Find?

Average air nicotine in 'tobacco-free' hookah cafés is similar to levels of nicotine in smoky bars

2 hrs = **10**

exposure in a Toronto hookah café = cigarettes smoked based on CO levels

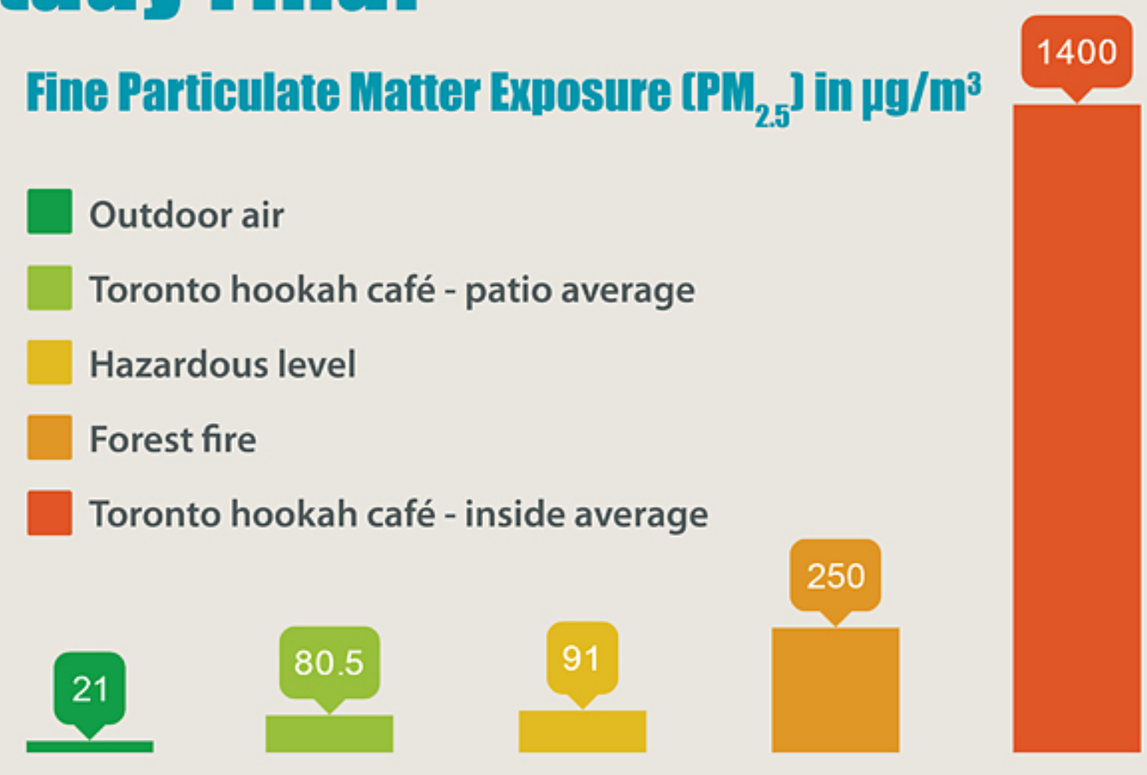
Compared to Outdoor Air, Hookah Cafés Had:

4x higher $PM_{2.5}$ on patios

69x higher $PM_{2.5}$ inside cafés

89x higher CO inside cafés

Fine Particulate Matter Exposure ($PM_{2.5}$) in µg/m³



The Bottom Line

Particulates and CO found in Toronto hookah cafes are hazardous to the health of smokers, nonsmokers and particularly to café staff who are exposed regularly for longer periods

What About Legislation?

10+ Ontario municipalities ban or restrict hookah

3 Provinces legislate hookah use: AB, QC, NS

Many Middle Eastern countries ban or restrict hookah, including Jordan, Syria, Lebanon, Dubai, Saudi Arabia, and Turkey

Findings from the Ontario Tobacco Research Unit

For references, go to http://otru.org/hookah-in-toronto/. May 2015