



European Parliament  
Directorate-General for  
PERSONNEL

Medical advice concerning

# ELECTRONIC CIGARETTES (VAPING) AND TOBACCO RELATED PRODUCTS

in a smokefree EP

Quaestors' meeting Strasbourg 14/1/2020

Dr [REDACTED]

Medical Service Brussels

Directorate for HR Support and Social Services

DG PERS

PE 644.257/QUEST/ANN 1.

DIRECTIVE 2014/40/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 3 April 2014

on the approximation of the laws, regulations and administrative provisions of the Member States concerning the manufacture, presentation and sale of tobacco and related products and repealing Directive 2001/37/EC

- classic tobacco combustion (**cigarettes**, cigars, pipe, water-pipe, ...)
- **heated tobacco** products (HTP)
- electronic nicotine delivery systems (ENDS) (**E-cigarettes**, vaping, ...)

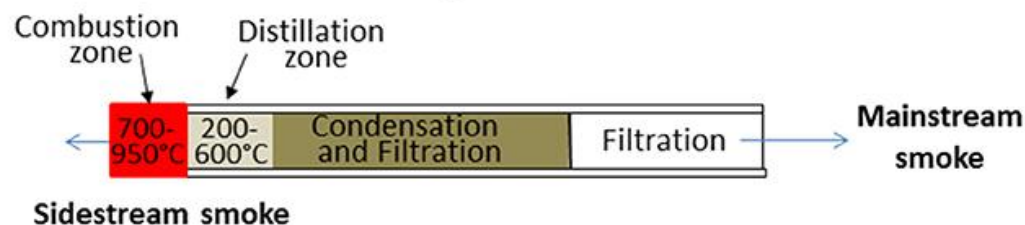
**Aim of the reglementation is « risk reduction »**



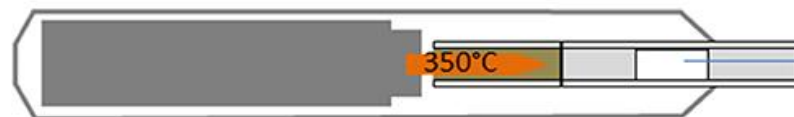
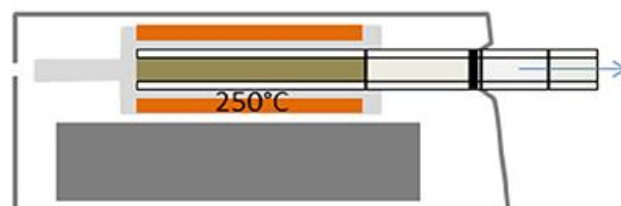
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# CIGARETTE vs HEATED TOBACCO PRODUCT (HTP)

## A Combustible tobacco cigarette



## B Different types of Heated Tobacco Products



BMJ review article 2018 - Conclusions  
Studies on HnB **secondhand emissions**  
and human use were heterogeneous and  
largely affiliated with the manufacturers.  
HnB **exposed users and bystanders to  
toxicants**, although at substantially  
lower levels than cigarettes.

(article 2 (14) of the Directive)



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# THE DIFFERENCE

BETWEEN

VS



HEATED TOBACCO



E-CIGARETTE

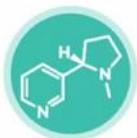
HEATS TOBACCO



USES REAL TOBACCO



NICOTINE NATURALLY PRESENT IN TOBACCO



NO ASH,  
NO SMOKE



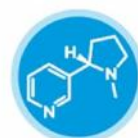
VAPORIZES E-LIQUID



NO TOBACCO



NICOTINE DERIVED FROM TOBACCO ADDED IN E-LIQUID



NO ASH,  
NO SMOKE



secondhand emissions

secondhand vape (SHV)

SMOKE-FREE PRODUCTS ARE NOT RISK-FREE AND ARE ADDICTIVE. THE BEST CHOICE A SMOKER CAN MAKE IS TO QUIT CIGARETTES AND NICOTINE COMPLETELY.

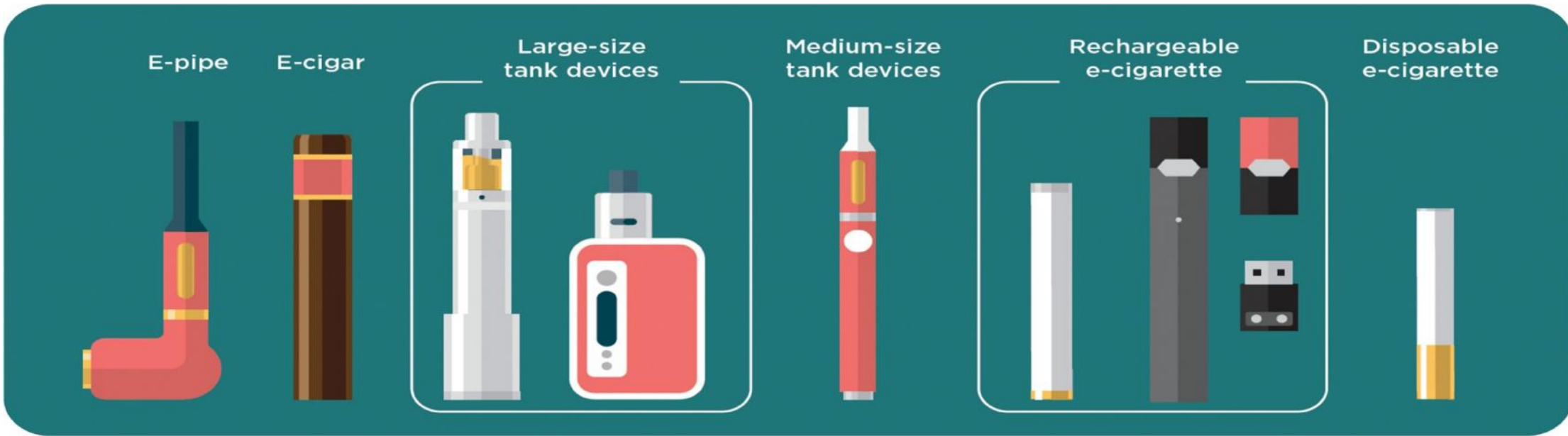


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# ELECTRONIC NICOTINE DELIVERY SYSTEMS (ENDS)



(article 2 (16) of the Directive)

**secondhand vape / aerosol (SHV)**

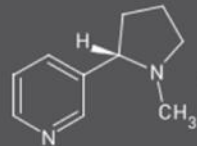


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**secondhand vape / aerosol (SHV)**

**VOLATILE ORGANIC COMPOUNDS**



**NICOTINE**

**ULTRAFINE PARTICLES**



**CANCER-CAUSING CHEMICALS**

**HEAVY METALS SUCH AS NICKEL, TIN, AND LEAD**

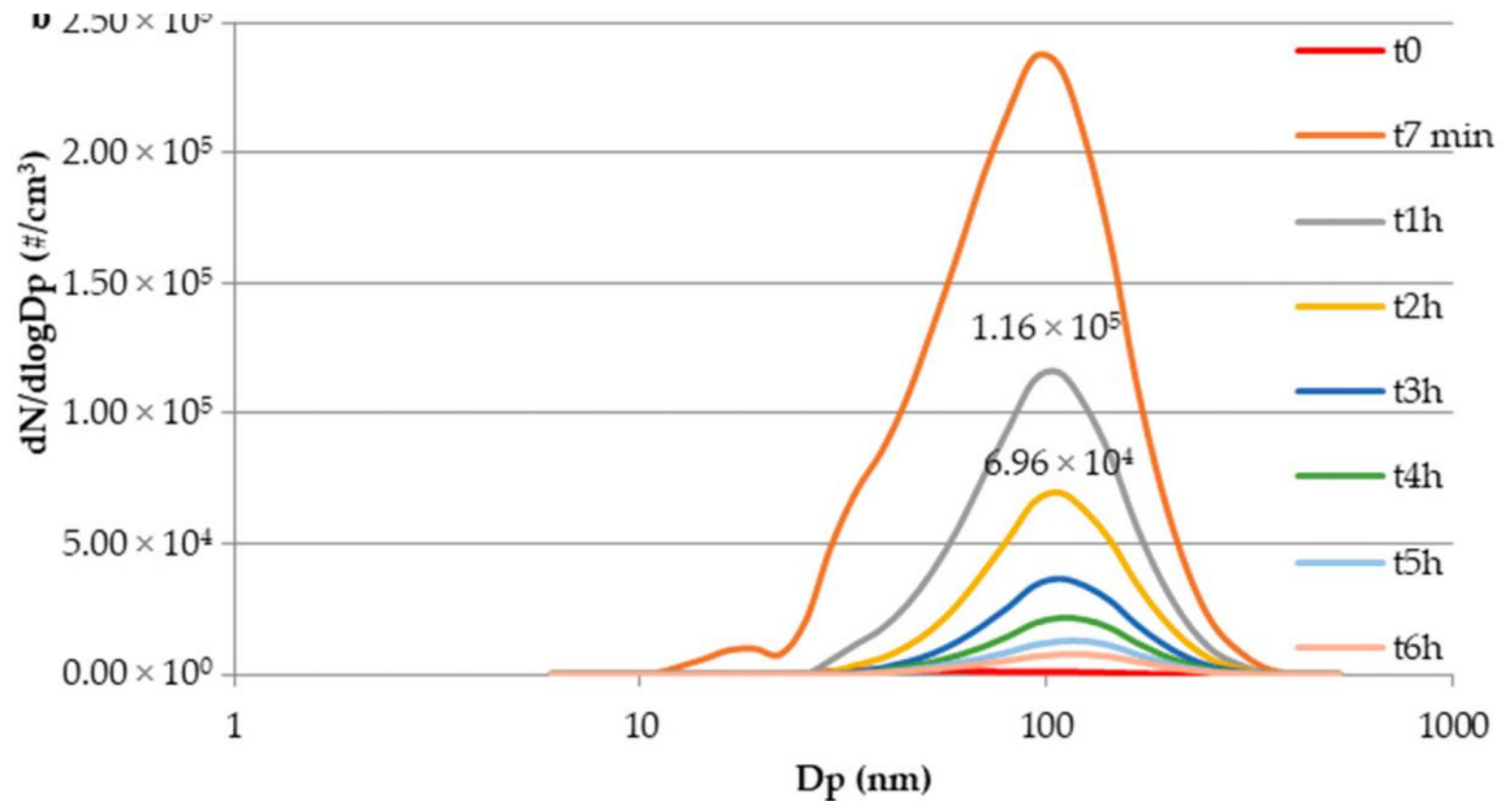


**FLAVORING SUCH AS DIACETYL, A CHEMICAL LINKED TO A SERIOUS LUNG DISEASE**

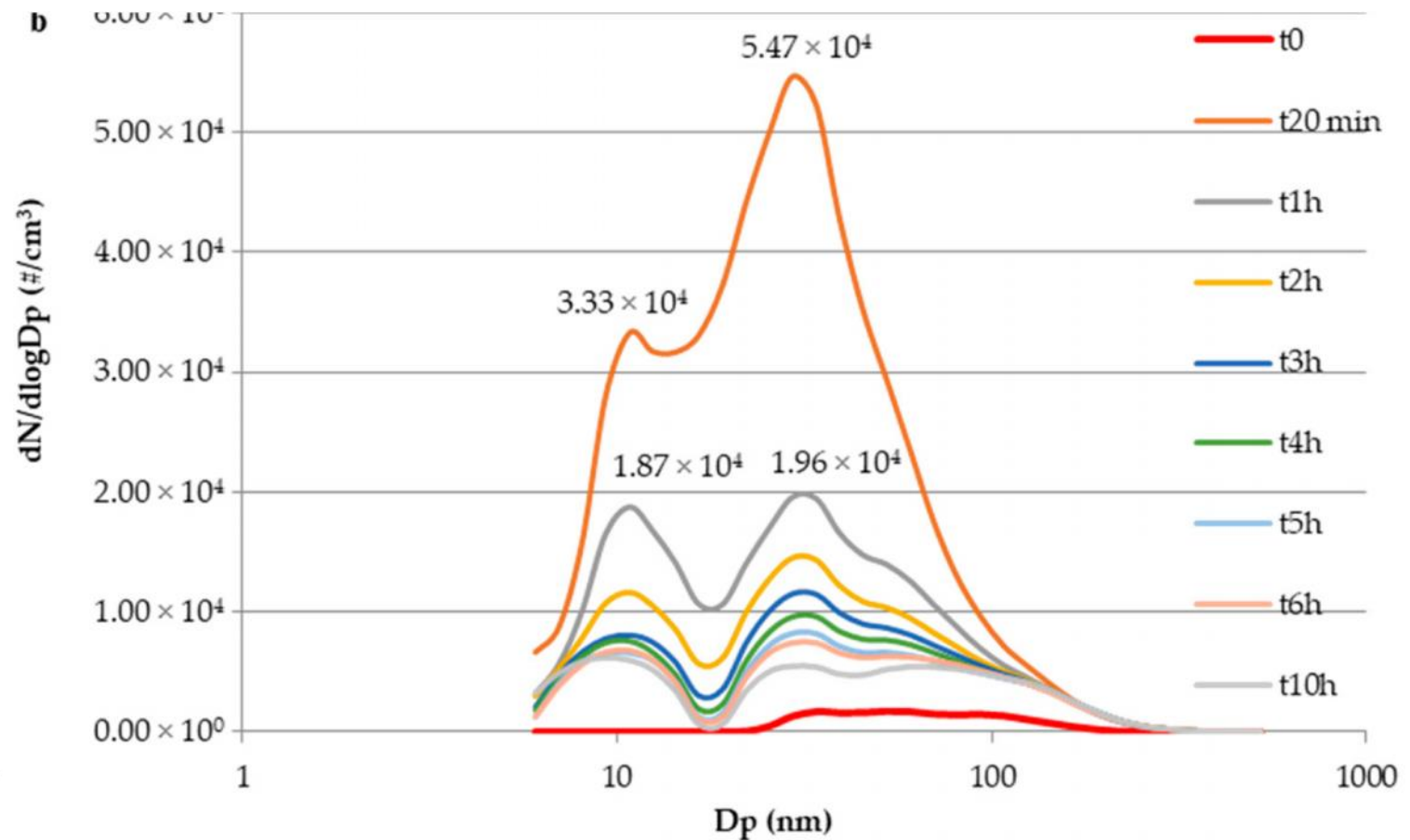




# PARTICLE SIZE – SECOND HAND TOBACCO SMOKE (LOGARITHMIC SCALE)



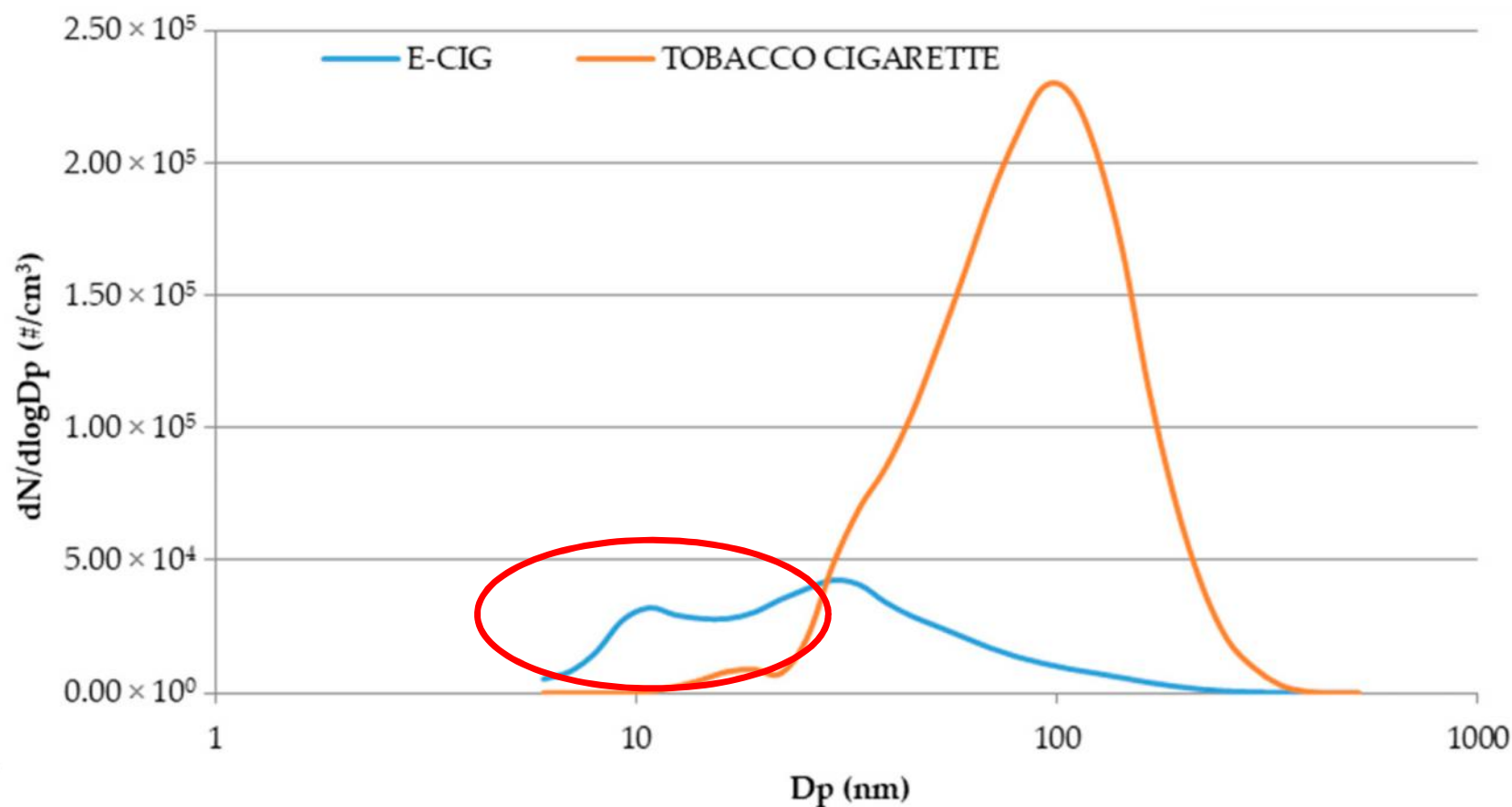
# PARTICLE SIZE – SECOND HAND VAPE/AEROSOL (LOGARITHMIC SCALE)



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# PARTICLE SIZE – SECOND HAND VAPE/SMOKE (LOGARITHMIC SCALE)



# HEALTH CONCERNS

- insufficient data on consequences and important differences for
  - different population groups (age/pregnant women/vulnerable groups)
  - tobacco smokers / ex-smokers / non-smokers
  - active users vs exposed bystanders
  - different products, devices (T<sup>°</sup>, ) ,and combinationsneed for independent scientific analysis
- **nicotine addiction** (gateway?) versus benefits of **risk reduction** (smoking cessation)
- **short term effects** (airway irritation, palpitations, blood pressure, anxiety)
- **mid and long term consequences** (cardio-vascular, pulmonary, neurological, depression, cancer)
  - need for more studies on new risks and newly emerging illnesses (EVALI, bronchiolitis obliterans (popcorn lungs))
  - need for longitudinal studies



# WHO - World Health Organisation

1

- **serious public health concern**
- aggressive marketing with **deceptive claims** on cessation efficacy and health/ use of flavours / internet & social media /
- ENDS are **not harmless** but are generally less dangerous than cigarettes; toxic substances; **long-term health effects still unknown**; further research required (cancer, cardiovascular, pulmonary disease); particular risk for minors, pregnant women and vulnerable groups
- **second hand exposure of bystanders**
- safety concerns related to explosion risk



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# WHO - World Health Organisation

2

## 4 key objectives:

- **Prevent initiation** of non-smokers, minors and vulnerable groups;
- **Minimize health risks for ENDS users and protect non-users from exposure to their emissions;**
- Prevent the use of unproven health claims being made for ENDS
- Protect tobacco control from all commercial and other vested interests related to ENDS, including interests of the tobacco industry.

# ADVICE

## Precautionary principle

- do not expose bystanders to second hand vapor/aerosol (*primum non nocere*)
- avoid normalising -and thus promoting- vaping

→ **smokefree and aerosol/vape free work environment**

But also: avoid stigmatising vaping. Do not ban them from the smoking cabins (to avoid them from switching back to cigarette smoking)

# REFERENCES AND FURTHER READING

- EU Directive [https://ec.europa.eu/health/sites/health/files/tobacco/docs/dir\\_201440\\_en.pdf](https://ec.europa.eu/health/sites/health/files/tobacco/docs/dir_201440_en.pdf)
- WHO fact sheet: <https://www.who.int/news-room/fact-sheets/detail/tobacco>
- WHO, Tobacco Product Regulation: Basic Handbook, 2018  
[https://www.who.int/tobacco/publications/prod\\_regulation/basic-handbook/en/](https://www.who.int/tobacco/publications/prod_regulation/basic-handbook/en/)
- Review articles, studies and editorials in major peer reviewed scientific journals (including Nature, Science, BMJ, NEJM, JAMA)
- European Commission reports
  - [https://ec.europa.eu/health/sites/health/files/tobacco/docs/potentialrisks\\_specs\\_refillableecigarettes.pdf](https://ec.europa.eu/health/sites/health/files/tobacco/docs/potentialrisks_specs_refillableecigarettes.pdf)
- National and international guidelines
- See also public health information video for general public (youth) [https://www.youtube.com/watch?v=9dZS\\_Rniak0](https://www.youtube.com/watch?v=9dZS_Rniak0)





# BIG-TOBACCO & SCIENCE – A WORD OF CAUTION

Regul Toxicol Pharmacol. 2018 Feb;92:278-294. doi: 10.1016/j.yrtph.2017.12.017. Epub 2017 Dec 23.

## Indoor air quality (IAQ) evaluation of a Novel Tobacco Vapor (NTV) product.

■■■■ H<sup>1</sup>, ■■■■ M<sup>2</sup>.

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