

Call of Abstracts - "International conference on the E-Cigarette: patterns of use and health impacts"



Call of abstracts

"International conference on the E-Cigarette: patterns of use and health impacts" - Paris, on 5-6th December 2022

Submission form

Poster & oral presentation

Contact details of the corresponding author

Title

Ms

First name

Charlotte

Last name

Pauwels

E-mail

charlotte.pauwels@rivm.nl

Institution / company

Dutch National Institute for Public Health and the Environment

Unit / department

Centre for Health Protection

Address

Antonie van Leeuwenhoeklaan 9
Bilthoven, 3721 MA
Netherlands

Background information

Type of submission

Oral or poster

Theme of conference

Health impact

Keywords

Clinic research

Effects of major components of e-cigarette

Nicotine/nicotine salts

Abstract title

Sensory appeal and puffing intensity of e-cigarette use: influence of nicotine salts versus free-base nicotine in e-liquids

Author's contact details :

Title

Ms

First name

Charlotte

Last name

Pauwels

E-mail

charlotte.pauwels@rivm.nl

Institution / company

Dutch National Institute for Public Health and the Environment

Co-author's contact details :

Number of co-authors

10

Co-author 1

Wouter Visser 1. National Institute for Public Health and the Environment (RIVM), Centre for Health Protection

Co-author 2

Jeroen Pennings National Institute for Public Health and the Environment (RIVM), Centre for Health Protection

Co-author 3

Karin Boer National Institute for Public Health and the Environment (RIVM), Centre for Health Protection

Co-author 4

Ernesto Baloe National Institute for Public Health and the Environment (RIVM), Centre for Health Protection

Co-author 5

Arnout Hartendorp National Institute for Public Health and the Environment (RIVM), Centre for Health Protection

Co-author 6

Loes van Tiel Essensor BV

Co-author 7

Mirjam van Mourik Essensor BV

Co-author 8

Wim Vaessen Essensor BV

Co-author 9

Sanne Boesveldt Division of Human Nutrition and Health, Wageningen University & Research

Co-author 10

Reinskje Talhout National Institute for Public Health and the Environment (RIVM), Centre for Health Protection

Abstract details (poster & oral)

Background, method, results and conclusions

Background: E-liquids from the United States have relatively high nicotine concentrations (>20 mg/mL). The e-liquids with nicotine salts have been reported to facilitate inhalation, being less harsh and bitter than free-base nicotine e-liquids. This in-home study aimed to determine whether nicotine salts increases sensory appeal and ease of inhalation in a naturalistic setting, at concentrations relevant for the European market (< 20 mg/mL).

Method: E-liquids were prepared from commercially available nicotine boosters (free-base or nicotine benzoate) and tobacco aroma. In a randomized, double-blinded, within-participants design, healthy adult e-cigarette users (n=68) vaped during online sessions. Participants vaped either a free-base or a nicotine salts e-liquid (12 mg/mL) ad libitum, with their own device, while watching a neutral video. The sensory parameters perceived liking, nicotine intensity, harshness, and pleasantness were rated on a 100-unit visual analog scale. Intensity of use was determined by the recorded puff number, duration and interval.

Results: Test scores on appeal, harshness and puffing behavior parameters did not show any significant differences between the nicotine salt and the free-base condition. Average inhalation time was 2.5 seconds. Additional analyses found no significant effect of liquid order, age, gender, smoking status, vaping frequency and being used to nicotine salts. Significant positive correlations were found between the sensory parameters except for harshness.

Conclusions: Contrary to a previous study that used higher nicotine concentrations and standardized puffing conditions in a laboratory setting, we did not observe effects of nicotine salts on sensory appeal in our real-life study paradigm. Moreover, we did not see effects on study parameters related to puffing intensity.

Main messages

Nicotine salts have been reported to facilitate inhalation of large amounts of nicotine as compared to free-base nicotine. We found no differences in sensory appeal and inhalation intensity for e-liquids with a low nicotine concentration of 12 mg/mL.

Type of study / research

Human study

Geography of the study

Europe

Funding of study

Federal source

Yes

State source

No

Nonprofit Grant Funding Entity Source

No

Nonprofit Grant Funding Entity Source

No

Academic Institution Source

No

Pharmaceutical Industry Source

No

Tobacco/E-Cigarette Industry Source

No

Declaration of interest

The submitter declares that during the past 5 years have a direct nor indirect link (professional*, personal or financial**) with the tobacco and e-cigarette companies

No