

12:30-14:00

**PS-671-4 Passive exposure to e-cigarette emissions: irritation symptoms, severity and duration**A Tzortzi<sup>1,2</sup>, S Teloniatis<sup>1</sup>, G Mattiampa<sup>1</sup>, G Bakellas<sup>1</sup>, V Vyzikidou<sup>1</sup>, Chara Tzavara<sup>3</sup>, C Vardavas<sup>1,2</sup>, E Fernandez Munoz<sup>4,5</sup>, P Behrakis<sup>1,2,6</sup><sup>1</sup>Hellenic Cancer Society, George D. Behrakis Research Lab, Athens, Greece, <sup>2</sup>American College of Greece, Institute of Public Health, Athens, Greece, <sup>3</sup>National and Kapodistrian University of Athens, Athens, Greece, <sup>4</sup>WHO Collaborating Center for Tobacco Control, Institut Català d'Oncologia - Institut d'Investigació Biomèdica de Bellvitge (ICO-IDIBELL), Barcelona, Spain, <sup>5</sup>Universitat de Barcelona, Epidemiology and Public Health, Barcelona, Spain, <sup>6</sup>Academy of Athens, Biomedical Research Foundation (BRFAA), Athens, Greece. E-mail: atzortzi@researchlab.gr**Background:** The current study, part of the EU H2020 funded TackSHS project, aimed to test the hypothesis that passive exposure to e-cigarette emissions provokes systemic symptoms and to determine their severity and timing.**Methods:** 30 nonsmokers, 18-35 years old, BMI < 30, with no significant medical history, no medications, normal physical examination and spirometry, were passively exposed in a 35m<sup>3</sup> room, during a 30-minute Control (no passive smoking) and Experimental (standardized e-cigarette smoking by a human smoker) session.PM<sub>2.5</sub> concentrations were 0.027 mg/m<sup>3</sup> and 3.3 mg/m<sup>3</sup> during the Control and Experimental sessions, respectively. Participants completed an irritation questionnaire, grading symptom severity at T0 (pre-exposure), T15 (midway), T30 (exposure endpoint) and T60 (30-minute post-exposure) in both sessions.The questionnaire showed internal consistency (Cronbach's  $\alpha > 0.70$ ). Scores 1-5 were generated for the environmental, ocular, nasal, airway and general complaints by adding symptoms per system. Analysis was performed using Wilcoxon-signed rank sum test and Spearman correlation ( $p < 0.05$ ).**Results:** The most frequent and intense symptoms reported were mild eye burning, nasal and airway dryness.Ocular irritation score gradually increased from T0 reaching a significant increase by T30 ( $p = 0.034$ ). Nasal score increased significantly from T0 to T15 ( $p = 0.008$ ) and remained significantly higher at T30. Airway irritation score increased significantly from T0 to T15 ( $p = 0.004$ ) and furthermore from T15 to T30 ( $p = 0.018$ ). All symptoms returned to T0 scores by T60 ( $p > 0.05$ ). The increased scores for ocular, nasal and airway complaints were positively correlated with increased environmental scores at T15 and T30. General complaint scores showed a tendency to increase at T30 that was positively correlated with increased environmental scores at T30.**Conclusions:** Short-term exposure of nonsmokers to e-cigarette emissions resulted in mild ocular, nasal and airway symptoms that persisted up to 30 minutes and were positively correlated with environmental indices. Further research is needed to investigate long-term health implications.**Tob. Induc. Dis. 2018;16(Suppl 1):A257****DOI:10.18332/tid/84038**