

# Recent news and research

## 18B.4 Safety and abuse potential

*Last updated June 2018*

### News reports:

Andreatta, David. Webster vape shop sued over exploding e-cig battery. Democrat & Chronicle, 2018. Jan 16, 2018. Available from:

<https://www.democratandchronicle.com/story/news/2018/01/16/webster-vape-shop-sued-over-exploding-e-cig-battery/1037276001/>

Pepper, Jessica K, Cress, Margaret JM, Gammon, Doris G, Razi, Sima, Rupert, Douglas J, Lee, Youn O. Battery Safety Information and Warnings on E-cigarette Packages and Online. Tobacco Regulatory Science, Jan 2018. Available from:

<http://www.ingentaconnect.com/content/trsg/trs/2018/00000004/00000001/art00007>

<https://doi.org/10.18001/TRS.4.1.7>

#### *18B4.1 Safety risks*

No authors listed. Urgent: Voluntary Product Recall of Vuse Vibe Power Units. RJ Reynolds Vapor, 2018. Apr 16, 2018. Available from: <http://www.reynoldsamerican.com/about-us/press-releases/Press-Release-Details-/2018/Urgent-Voluntary-Product-Recall-of-Vuse-Vibe-Power-Units/default.aspx>

#### *18B.4.1.1 Explosions, fires and burns*

Corey, Catherine G, Chang, Joanne T, Rostron, Brian L. Electronic nicotine delivery system (ENDS) battery-related burns presenting to US emergency departments, 2016. Injury Epidemiology, Mar 2018. Available from: <https://doi.org/10.1186/s40621-018-0135-1>

Leiker, Amy Renee. E-cigarette battery explodes in Derby man's pants. 'It ignites like a bomb,' lawyer says. The Wichita Eagle, 2018. Mar 5, 2018. Available from:

<http://www.kansas.com/news/local/crime/article202246854.html>

Sanginiti, Domenic. The Link Between E-Cigarette Design And Explosions. Law 360, Jan 2018.

Available from: <https://www.law360.com/articles/997632/the-link-between-e-cigarette-design-and-explosions>

U.S. Fire Administration. Electronic Cigarette Fires and Explosions in the United States 2009 – 2016. Federal Emergency Management Agency, Jan 2018. Available from:

[https://www.usfa.fema.gov/downloads/pdf/publications/electronic\\_cigarettes.pdf](https://www.usfa.fema.gov/downloads/pdf/publications/electronic_cigarettes.pdf)

#### *18 B 4.1.2 Nicotine toxicity and accidental poisoning*

First, Lewis. E-Cigarettes and Young Children: The Dangers of Liquid Nicotine Exposure. AAP News & Journals, 2018. Apr 30, 2018. Available from: <http://www.aappublications.org/news/2018/04/25/e-cigarettes-and-young-children-the-dangers-of-liquid-nicotine-exposure-pediatrics-4-25-18>

Govindarajan, Preethi, Spiller, Henry A., Casavant, Marcel J., Chounthirath, Thitphalak, Smith, Gary A. E-Cigarette and Liquid Nicotine Exposures Among Young Children. Pediatrics, Apr 2018. Available from: <http://pediatrics.aappublications.org/content/pediatrics/early/2018/04/19/peds.2017-3361.full.pdf>

No authors listed. Liquid nicotine used in e-cigarettes still a danger to children despite recent decline in exposures. EurekAlert!, 2018. Apr 24, 2018. Available from: [https://eurekalert.org/pub\\_releases/2018-04/nch-lnu041618.php](https://eurekalert.org/pub_releases/2018-04/nch-lnu041618.php)

Park, Eun Jung, Min, Young-Gi. The Emerging Method of Suicide by Electronic Cigarette Liquid: a Case Report. J Korean Med Sci, Mar 2018. Available from: <http://synapse.koreamed.org/DOIx.php?id=10.3346%2Fjkms.2018.33.e52>

Ip, Stephanie and Gindlay, Lora. 14-year-old Delta baseball player dies after falling while vaping nicotine. Vancouver Sun, 2018. Jan 25, 2018. Available from: <http://vancouversun.com/news/local-news/teen-baseball-player-14-in-delta-dies-of-serious-injuries>

#### *18B.4.2 Abuse potential*

Small, Leah. Vaping while pregnant could cause craniofacial birth defects, study shows. Medical Xpress, 2017. Nov 17, 2017. Available from: <https://medicalxpress.com/news/2017-11-vaping-pregnant-craniofacial-birth-defects.html>

Newman, Tim. E-cigarette aerosols caused embryo defects in the laboratory. Medical News Today, 2017. Oct 27, 2017. Available from: <https://www.medicalnewstoday.com/articles/319854.php>

#### *18B4.2.2 Other drug abuse*

Agarlb, Amira. Beware, e-cigarettes are being used to smoke drugs in UAE. Khaleej Times, 2018. Apr 18, 2018. Available from: <https://www.khaleejtimes.com/news/general//beware-e-cigarettes-are-being-used-to-smoke-drugs-in-uae>

Pourchez, Jérémie, Forest, Valérie. E-cigarettes: from nicotine to cannabinoids, the French situation. The Lancet Respiratory Medicine, Apr 2018. Available from: [http://dx.doi.org/10.1016/S2213-2600\(18\)30069-9](http://dx.doi.org/10.1016/S2213-2600(18)30069-9)

Leoni, Victoria. Army releases warning on dangers of 'CBD' vape oils. Navy Times, 2018. Jan 30, 2018. Available from: <https://www.navytimes.com/news/your-military/2018/01/30/army-releases-warning-on-dangers-of-cbd-vape-oils/>

## Research:

Lippmann, S, Singh, D. Vaping marijuana? J Fam Pract. 2017 Nov;66(11):655. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29099516>

### *18B.4.1.1 Explosions, fires and burns*

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Hickey, S, Goverman, J, Friedstat, J, Sheridan, R, Schulz, J. Thermal injuries from exploding electronic cigarettes. Burns. 2018 Mar 1. pii: S0305-4179(18)30081-0. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29503045>

Ackley, E, Williams, JTB, Kunrath, C, Monson, M, Ignatiuk, A, Gaensbauer, J. Too Hot to Handle? When Vaporizers Explode. J Pediatr. 2018 Jan 25. pii: S0022-3476(17)31727-4. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29395175>

Foran, I, Oak, NR, Meunier, MJ. High-Pressure Injection Injury Caused by Electronic Cigarette Explosion: A Case Report. JBJS Case Connect. 2017 Apr-Jun;7(2):e36. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29244675>

Satteson, ES, Walker, NJ, Tuohy, CJ, Molnar, JA. Extensive Hand Thermal and Blast Injury From Electronic Cigarette Explosion: A Case Report. Hand (N Y). 2017 Nov 1:1558944717744333. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29192506>

### *18B.4.1.2 Nicotine toxicity and accidental poisoning*

Govindarajan, Preethi, Spiller, Henry A., Casavant, Marcel J., Chounthirath, Thitphalak, Smith, Gary A. E-Cigarette and Liquid Nicotine Exposures Among Young Children. Pediatrics, Apr 2018. Available from: <http://pediatrics.aappublications.org/content/pediatrics/early/2018/04/19/peds.2017-3361.full.pdf>

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Weiss, D, Tomasallo, CD, Meiman, JG, Creswell, PD, Melstrom, PC, Gummin, DD, Patel, DJ, Michaud, NT, Sebero, H A, Anderson, HA. Electronic Cigarette Exposure: Calls to Wisconsin Poison Control Centers, 2010-2015. WMJ. 2016 Dec;115(6):306-10. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29094867>

Noble, MJ, Longstreet, B, Hendrickson, RG, Gerona, R. Unintentional pediatric ingestion of electronic cigarette nicotine refill liquid necessitating intubation. Ann Emerg Med. 2017 Jan;69(1):94-97. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27988056>

Frasch, HF, Barbero, AM. In vitro human epidermal permeation of nicotine from electronic cigarette refill liquids and implications for dermal exposure assessment. *J Expo Sci Environ Epidemiol*, Dec 2016. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27924817>

Eggleston, W, Nacca, N, Stork, CM, Marraffa, JM. Pediatric death after unintentional exposure to liquid nicotine for an electronic cigarette. *Clin Toxicol (Phila)*. 2016 Jul 7:1-2. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27383772>

Zolot, J. Toxic exposures of young children to E-cigarettes are on the rise. *Am J Nurs*. 2016 Aug;116(8):15. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27466908>

#### *18B.4.2 Abuse potential*

Smethells, JR, Harris, AC, Burroughs, D, Hursh, SR, LeSage, MG. Substitutability of nicotine alone and an electronic cigarette liquid using a concurrent choice assay in rats: A behavioral economic analysis. *Drug Alcohol Depend*. 2018 Feb 5;185:58-66. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29427916>

Barnes, AJ, Bono, RS, Lester, RC, Eissenberg, TE, Cobb, CO. Effect of Flavors and Modified Risk Messages on E-cigarette Abuse Liability. *Tob Regul Sci*. 2017 Oct;3(4):374-387. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29204463>

#### *18B4.2.1 Nicotine addiction*

Dowd, AN, Motschman, CA, Tiffany, ST. Development and Validation of the Questionnaire of Vaping Craving. *Nicotine Tob Res*. 2018 Mar 12. pii: 4930918. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29546379>

No authors listed. Nicotine Addiction and E-cigarettes. *J Addict Nurs*. 2017 Oct/Dec;28(4):229-230. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29200053>

Raymond, B H, Collette-Merrill, K, Harrison, RG, Jarvis, S, Rasmussen, RJ. The Nicotine Content of a Sample of E-cigarette Liquid Manufactured in the United States. *J Addict Med*, 2017. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29280749>

Bold, KW, Sussman, S, O'Malley, SS, Grana, R, Foulds, J, Fishbein, H, Krishnan-Sarin, S. Measuring E-cigarette dependence: Initial guidance. *Addict Behav*. 2017 Nov 22. pii: S0306-4603(17)30425-2. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29174664>

Kennedy, AE, Kandalam, S, Olivares-Navarrete, R, Dickinson, AJG. E-cigarette aerosol exposure can cause craniofacial defects in *Xenopus laevis* embryos and mammalian neural crest cells. *PLoS One*. 2017 Sep 28;12(9):e0185729. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28957438>

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Spindle, TR, Hiler, MM, Breland, AB, Karaoghlanian, NV, Shihadeh, AL, Eissenberg, T. The influence of a mouthpiece-based topography measurement device on electronic cigarette user's plasma nicotine concentration, heart rate, and subjective effects under directed and ad libitum use conditions. *Nicotine Tob Res*, 2016. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27613914>

Papaseit, E, Farre, M, Graziano, S, Pacifici, R, Perez-Mana, C, Garcia-Algar, O, Pichini, S. Monitoring nicotine intake from e-cigarettes: measurement of parent drug and metabolites in oral fluid and plasma. *Clin Chem Lab Med*, 2016. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27559692>

#### *18B4.2.2 Other drug abuse*

Frohe, T, Leeman, RF, Patock-Peckham, J, Ecker, A, Kraus, S, Foster, DW. Correlates of cannabis vape-pen use and knowledge among U.S. college students. *Addict Behav Rep*. 2017 Nov 21;7:32-39. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29450254>