

## **Injuries due to burns and explosion**

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The Opinion deems the risk of injury due to battery explosion to be strong but the incidence to be low. Li-ion batteries are used in phones, laptops, electric cars and in powerpacks for power tools. Li-ion batteries can become volatile if they are misused due to overcharging, overstressing, or as a result of poor manufacturing processes. They are used by millions of people every day, yet the instances of explosion and fire are relatively low. This issue is not specific to e-cigarettes.

As with so much of this report, there is a failure to compare the risks associated with vaping with the risks associated with the behaviour which vaping is replacing, i.e. smoking combustible cigarettes.

Public Health England's 2018 evidence review stated that between 2015 and 2017 there were 3527 fires due to cigarettes and 44 deaths, and in the same timeframe there were 13 fires due to e-cigarettes and no deaths (McNeill et al). The US National Fire Protection Association reported that between 2012 and 2016 there was 18000 fires annually caused by smoking, and just 15 fires caused by e-cigarettes in 2015 (Ahrens, 2019). Vaping is therefore far less of a fire risk than smoking combustible cigarettes.

## **References**

1. Ahrens, M. (2019) 'Home Fires Started by Smoking', *National Fire Protection Association (NFPA)*, 590(January), pp. 7–9.
2. McNeill, A. *et al.* (2018) 'E-cigarettes and heated tobacco products: evidence review Annual update of Public Health England's e-cigarette evidence review by leading independent tobacco experts.', *Public Health England*, pp. 1–243