

Harmful effects of e-cigarettes

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The Norwegian Institute of Public Health (NIPH) was commissioned by the Ministry of Health and Care Services (HOD) to assess whether the use of e-cigarettes containing nicotine can be harmful to health. The [report](#) is based on results from systematic overviews and a toxicological assessment of the ingredients in e-cigarette vapor.

The report is limited to consumption patterns, transitions and varying [health risks](#) between different tobacco and [nicotine](#) products.

The report is an update of the NIPH's previous knowledge summary from 2015.

May increase the risk of adverse health effects

Based on current knowledge, the overall assessment from NIPH is that the use of [e-cigarettes](#) containing nicotine can have [harmful effects](#) on the respiratory tract and the cardiovascular system.

As with other nicotine-containing products, vaping during pregnancy will also pose a risk to mother and child. Similarly, nicotine can affect development of the brain, which is not fully developed until the mid-20s.

In addition, there have been reported cases of poisoning after intake of e-cigarette liquid, as well as damage caused by explosion or where the unit / battery has overheated.

Most studies performed in humans have only investigated the effect of short-term use. In order to accurately estimate the increased risk, long-term studies performed on humans are required, but these do not exist.

"Nevertheless, the underlying knowledge is sufficient to conclude that [e-cigarette use](#) can be harmful to health," says Rune Becher, senior researcher at NIPH.

On sale since 2005

E-cigarettes were introduced to the American market in the period 2005–2010 without adequate studies to discover their potential harmful

effects.

"E-cigarettes are a complex product group with a wide variety of product type and ingredients in the liquids. This means that there will also be great variation in what the individual user will be exposed to. E-cigarettes should not be considered to be a harmless nicotine product," explains Becher.

In Norway, e-cigarettes can be sold with nicotine-free e-liquid. It is currently illegal to sell e-liquid containing nicotine, but [private individuals](#) may, under certain conditions, import a limited amount for personal use. New regulations have been adopted to allow the sale of e-liquid containing nicotine in Norway, based on the EU Tobacco Directive and these are expected to come into force during the coming year.

More information: Adverse health effects of electronic cigarette use: an umbrella review and toxicological evaluation.

www.fhi.no/contentassets/5ddc2...rette-use_110522.pdf

Provided by Norwegian Institute of Public Health

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