A new report released by Australia’s independent chemical regulator has further sounded the alarm on e-cigarette safety.

The National Industrial Chemicals Notification and Assessment Scheme (NICNAS) reviewed chemicals included intentionally in e-cigarette liquids, contaminants in e-cigarette liquids and chemicals produced when the liquids are heated, to identify those that could impact human health.

The findings support emerging research that e-cigarette use – whether the e-cigarette contains nicotine or not - is likely to have adverse health impacts.

Key findings of concern were:

- Many of the 243 chemicals identified as ingredients used in e-cigarette liquids “are of concern to human health”, with not all ingredients used yet identified.
- Contaminants identified were metals, volatile organic compounds (e.g. formaldehyde), phthalates (used to make plastics harder), pesticides and tobacco-specific nitrosamines (one of the most important groups of carcinogens in cigarettes).
- E-cigarette emissions contain contaminants mostly derived from the e-cigarette liquid but also from the device.
- Small particles found in e-cigarette aerosol, and modelling of their distribution when inhaled, indicate there would be a significant deposit of these particles deep in the lung (inhalation of particles from tobacco smoke has been shown to reduce lung functioning and increase the long-term risk of lung cancer or other lung disease, such as emphysema.)

Public Health Association of Australia CEO, Mr Terry Slevin, welcomed the NICNAS report, saying it added to a growing body of evidence about the potential harms of e-cigarettes.

“This report highlights exactly why Australia is right to adopt a cautionary approach to e-cigarette use. This is our nation’s authority on chemicals and their view is that e-cigarette use can cause acute short-term adverse health effects.”
“Chemicals used to achieve flavouring in e cigarettes are safe as food flavouring, designed to be ingested, into the gastro intestinal system. The impact of them being heated and inhaled into the lungs remain entirely unknown and a substantial potential health risk,” he said.

Dr Sarah White, Director of Quit, noted that the potential for particles to lodge deep in the lungs, a risk identified by NICNAS, could explain health effects being highlighted by respiratory specialists in the prestigious British Medical Journal earlier this week.

“The authors reviewed all published literature on respiratory disease and basically said that e-cigarettes are not conclusively less harmful than regular cigarettes when it comes to respiratory disease. That’s a pretty frightening conclusion when contrasted with the current enthusiastic marketing of e-cigarettes,” Dr White said.

Both Quit and the PHAA recommend the NICNAS report influence any future policy considerations linked to the control of e cigarettes by state and national government agencies.

The NICNAS report is available here.

ENDS

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