



Community Health Alert:

DANGEROUS METALS FOUND IN POPULAR DISPOSABLE E-CIGARETTES

TMI STAFF

Disposable e-cigarettes (also called “dPODs”) like ELF Bar, Esco Bar, and Flum Pebbles have become extremely popular among teenagers and young adults. While marketed as a safer alternative to cigarettes, recent research reveals alarming levels of toxic metals in these products, posing serious health risks.

KEY FINDINGS:

Metal emissions increase with use.



In ELF Bar Flavored e-cigarettes, the amount of chromium and nickel in the vapor rises dramatically as the device is used. Chromium starts very low but can increase nearly 500 times after 1,500 puffs, while nickel starts a little higher and can increase more than 500 times over the same number of puffs. In other words, the longer someone uses the device, the more of these potentially harmful metals they inhale.



Lead and other metals are present in high concentrations.

Esco Bar devices showed extremely high levels of lead, copper, nickel, and zinc in both e-liquids and aerosols. These metals come from non-heating components like leaded bronze sheaths and battery connectors.



Antimony

Another toxic element was elevated in Flum Pebble and Esco Bar aerosols, while ELF Bar generally had low levels. Other metals like cadmium, tin, arsenic, and bismuth were detected in smaller amounts, but were still higher in Esco Bar products.



WHY THIS MATTERS

Inhalation of these metals can damage the nervous system, lungs, heart, and kidneys. Children and adolescents are especially vulnerable to lead exposure, which can impair brain development.

Reactive metals like iron, chromium, and nickel can cause inflammation and increase the risk of respiratory diseases, including asthma, lung fibrosis, and cancer.

Over time, repeated use leads to cumulative exposure. Studies show that metal and metalloid concentrations in disposable e-cigarettes can be up to 4 orders of magnitude higher than older e-cigarette models, making them far more hazardous.



WHAT YOU SHOULD KNOW



- *Even new devices contain metals in e-liquids before they are used.*
- *As devices age and are puffed more, metal concentrations in the aerosols increase, especially in devices with degraded coils or leaded components.*
- *Flavored or nicotine-free products are not safer; toxic metals are still present.*

TAKE ACTION.

- *Avoid using disposable e-cigarettes, particularly for adolescents and young adults.*
- *Educate friends, family, and students about the hidden dangers of metals in e-cigarette aerosols.*

Protecting our youth from preventable exposure to toxic metals is urgent. The popularity of disposable e-cigarettes masks a hidden health crisis, one that can have long-term consequences for the nervous system, lungs, and heart.

READ THE STUDY