

E-CIGARETTES: A GROWING CONCERN

Presentation to City of Milwaukee Public Safety and Health Committee

May 17, 2018

Anneke Mohr, MPH, MSW

City of Milwaukee Tobacco-Free Alliance Coordinator

NOT JUST WATER VAPOR

IT'S **NOT** JUST
"HARMLESS WATER VAPOR"

E-cigarette aerosol contains
at least **10 chemicals** on
California's Prop 65 list of
chemicals known to cause
**cancer, birth defects or other
reproductive harm.**



TOLUENE
ACETALDEHYDE
BENZENE
CADMIUM
FORMALDEHYDE
ISOPRENE
LEAD
NICKEL
NICOTINE
N-NITROSONORNICOTINE



GONIMICZ, M.L., ET AL., LEVELS OF SELECTED CARCINOGENS AND TOXICANTS IN VAPOR FROM ELECTRONIC CIGARETTES, TOB CONTROL, 2014, 23(2), P. 133-9.
WILLIAMS, M., ET AL., METAL AND SILICATE PARTICLES IN CLOUDING NANOPARTICLES ARE PRESENT IN ELECTRONIC CIGARETTE CARTOMIZER FLUID AND AEROSOL,
PLoS ONE, 2013, 8(3), P. E57987.
CALIFORNIA OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT, SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986, CURRENT PROPOSITION 65 LIST,
SCHRIPP, T., ET AL., DOES E-CIGARETTE CONSUMPTION CAUSE PASSIVE VAPING? INDOOR AIR, 2012, 23(1), P. 25-31.

©2014 CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

NATIONAL ACADEMY OF SCIENCES REPORT

EXPOSURE TO E-CIGARETTE AEROSOL

Conclusive evidence that e-cigarette use increases airborne concentrations of particulate matter and nicotine in indoor environments compared with background levels

Conclusive evidence that in addition to nicotine, most e-cigarette products contain and emit numerous potentially toxic substances

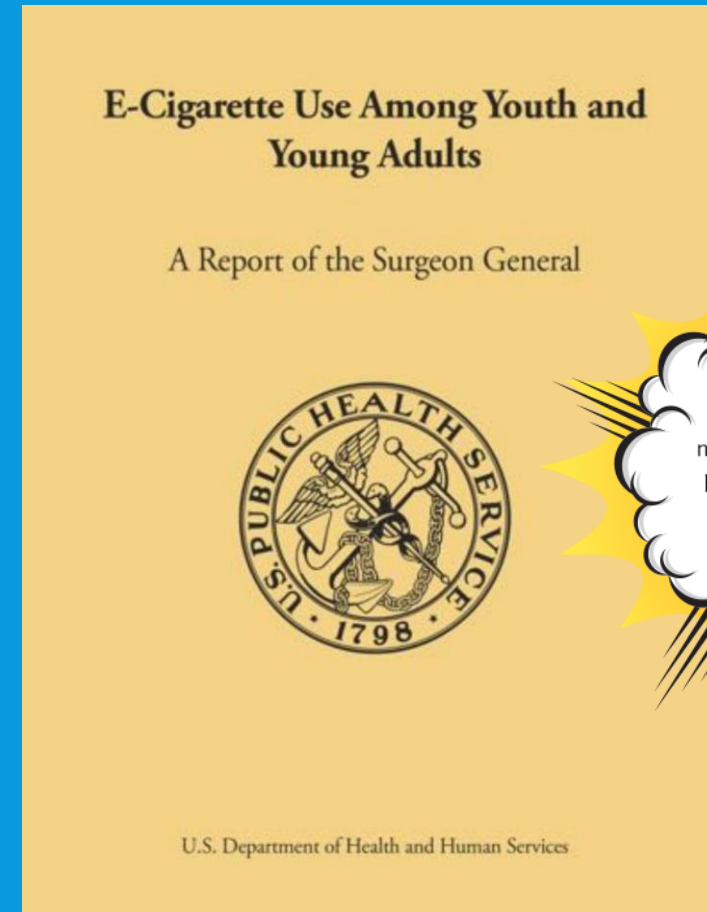
Substantial evidence that e-cigarette aerosol contains metals



US SURGEON GENERAL REPORT

E-CIGARETTE USE AMONG YOUTH AND YOUNG ADULTS

- Flavors in e-cigarettes are one of the main reasons youth use them
- E-cigarette aerosol is not safe
- E-cigarette use is strongly associated with the use of other tobacco products among youth and young adults



E-cigarettes contain nicotine, ultrafine particles, heavy metals, and volatile organic compounds.

MILWAUKEE JOURNAL SENTINEL WATCHDOG REPORT

Exposure to diacetyl and onset of bronchiolitis obliterans

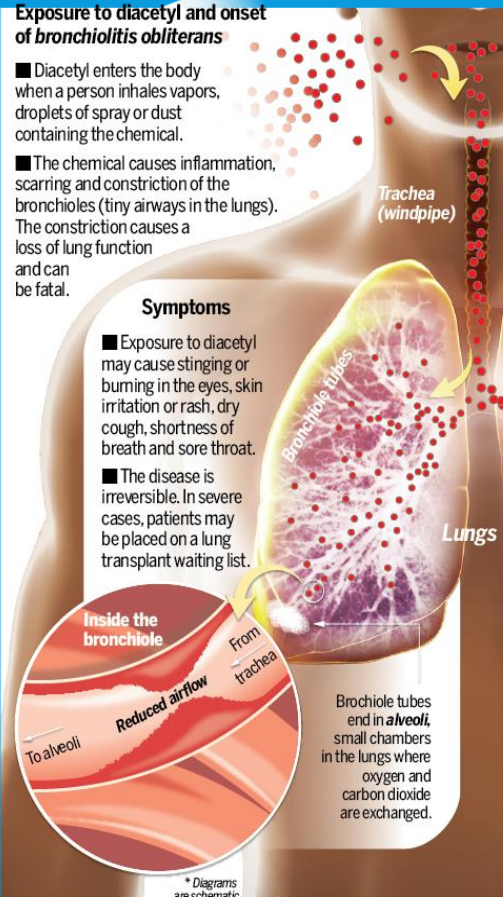
■ Diacetyl enters the body when a person inhales vapors, droplets of spray or dust containing the chemical.

■ The chemical causes inflammation, scarring and constriction of the bronchioles (tiny airways in the lungs). The constriction causes a loss of lung function and can be fatal.

Symptoms

■ Exposure to diacetyl may cause stinging or burning in the eyes, skin irritation or rash, dry cough, shortness of breath and sore throat.

■ The disease is irreversible. In severe cases, patients may be placed on a lung transplant waiting list.



Brochiole tubes end in **alveoli**, small chambers in the lungs where oxygen and carbon dioxide are exchanged.

* Diagrams are schematic

LAB TESTS FIND HARMFUL CHEMICALS IN E-JUICE



MIKE DE SISTI

Scott Reid, a professor and chair of Marquette University's chemistry department, found diacetyl and another lung-destroying chemical in five e-liquid samples bought from vape shops around Milwaukee. To view photo galleries, go to

WATCHDOG REPORTS | GASPING FOR ACTION | WATCHDOG UPDATE

Cases tie e-cigarettes to lung injuries, pneumonia



Two recent cases are among the first to highlight severe lung injuries physicians say are related to the use of e-cigarettes and other vaping devices. Credit: Associated Press

By Raquel Rutledge of the Journal Sentinel

Oct. 29, 2015

A 31-year-old West Virginia woman with no prior lung disease contracted what doctors say is a rare form of pneumonia after inhaling vapor from electronic cigarettes.

The woman had been vaping for about three months before being admitted to a hospital this year with a chronic cough. Soon after, she went into respiratory failure and was put on a ventilator, according to the doctors who treated her.

NOT APPROVED TO HELP PEOPLE QUIT

FDA-approved methods to help people quit

Nicotine patch

Nicotine gum

Nicotine lozenge

Nicotine inhaler

Nicotine nasal spray

Varenicline (Chantix)

Bupropion SR (Zyban)

Note: E-cigarettes are NOT an approved cessation device

Source: <https://www.fda.gov/ForConsumers/ConsumerUpdates/ucm198176.htm>



Kristy had smoker's cough and severe shortness of breath. She tried using e-cigarettes to cut down on her smoking. She thought cutting down would make her feel better, but it didn't. She kept smoking cigarettes until her lung collapsed.

Even smoking a few cigarettes a day is dangerous.

You can quit smoking.

CALL 1-800-QUIT-NOW.



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention
CDC.gov/tips

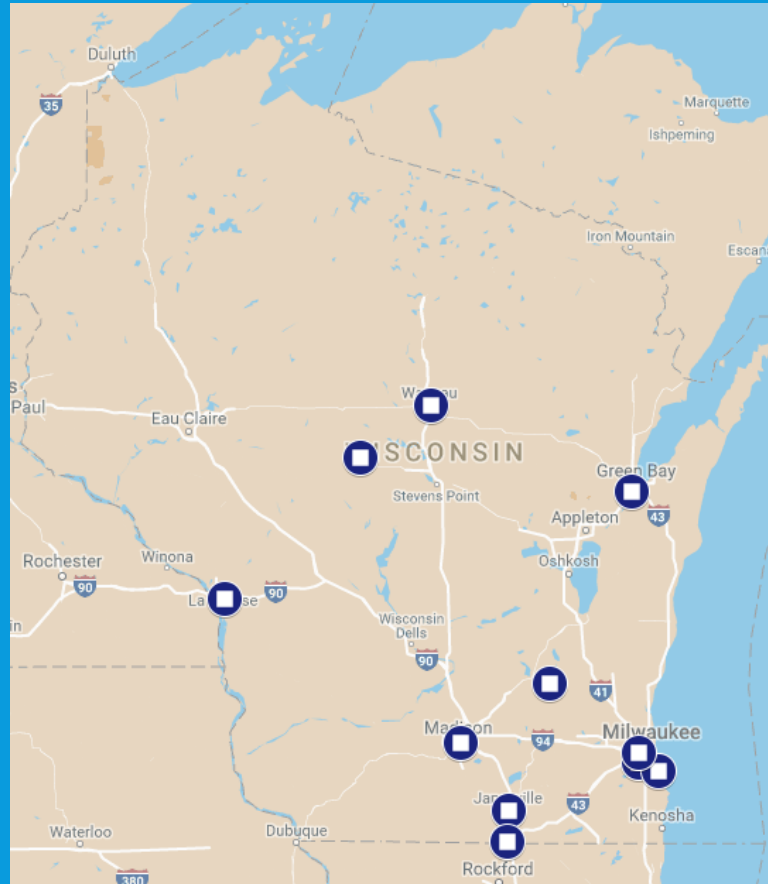
#CDCTips



E-CIGARETTE INCLUSION IN SMOKE-FREE AIR LAWS IN WI

11 cities in Wisconsin include e-cigarettes in their smoke-free air law.

- Madison
- Ashwaubenon
- Greenfield
- Janesville
- Juneau
- Marshfield
- Onalaska
- South Milwaukee
- Wausau
- West Allis
- Beloit Township



A NATIONAL TREND

