# Smoke-Free Colusa County Monthly

Colusa County Tobacco
Prevention Coalition

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All about Electronic Cigarettes!

# E-Cigarettes and Popcorn Lung

The flavoring chemical diacetyl has been linked to an irreversible lung disease called bronchiolitis obliterans, also known as "popcorn lung." Diacetyl was originally used as a flavoring component for food products such as popcorn, caramel, and dairy products.1 Diacetyl was on the Generally Recognized As Safe (GRAS) list, which applied only to ingested products.2 The potential hazards of inhalation, however, were not very well known at the time.2 In May of 2000, microwave

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an irreversible loss of pulmonary function and the only cure is a lung transplant.<sup>2</sup> Investigations later demonstrated the link between diacetyl inhalation and popcorn lung. Several popcorn companies have

The heating, vaporization, and inhalation pathway of these flavoring compounds through e-cigarettes has significant similarities to the pathways experienced by workers at the microwave popcorn facilities

popcorn-processing plant workers started getting diagnosed with bronchiolitis obliterans. This disease causes stopped using this chemical since the original cases were diagnosed. However, diacetyl is now a popular \*Colusa County Tobacco Prevention Coalition

The Tobacco Prevention Coalition aims to improve the health of Colusa County residents through education and promotion of a tobaccofree lifestyle.

> Smoke-Free Air Everywhere



chemical flavoring to use in electronic cigarette liquid, also known as "e-juice." E-cigarette popularity is rising at rapid rates among youth in our country. There are more than 7,000 e-cigarette flavors being marketed today, which often come in youthappealing flavors.<sup>2</sup> The

Harvard School of Public
Health detected diacetyl in 75% of tested e-juice liquids and at least one of three similar flavoring chemicals (diacetyl, 2,3-pentanedione, or acetoin) in 92% of tested e-juice liquids.<sup>2</sup> The long term effects of e-juice aerosol inhalation have not yet been studied.

However, the heating, vaporization, and inhalation pathway of these flavoring compounds has significant similarities to the pathways experienced by workers at the microwave popcorn facilities.<sup>2</sup>

# **Tobacco Marketing: Then and Now**

Much like traditional cigarette advertisements in the 1920's and 1930's, the increasing number of e-cigarette advertisements produced today is correlating with an increase in e-cigarette use

Cigarettes have been around since the 9th century but gained international popularity in the 1800's as global exploration began.<sup>3</sup> Cigarettes became widespread by the 20th century and new technology made cigarette production easier. Once cigarette production became easier, the

approvals of cigarettes in their advertisements.<sup>3</sup> In the years that followed, tobacco companies ran ad campaigns that targeted people of all ages, genders, and cultural backgrounds. The increase in tobacco advertising worked: smoking became more and more common. In 1965, 42% of adults in the United States

1970's, cigarette packages were required to carry a health warning and cigarette advertisements were banned from broadcast media. Today in Colusa County, the current adult smoking rate is 16.6% (compared to the California average of 12.7%).<sup>5</sup> While this dramatic decrease is significant, tobacco companies

Unlike traditional cigarettes, there are no current regulations to ban e-cigarettes from broadcast media and the long-term health effects of e-cigarette use are not yet known

tobacco industries started to expand their cigarette marketing and advertising tactics.<sup>3</sup> By the 1920's and 1930's, tobacco companies were referencing doctors' were smoking.<sup>4</sup> Smoking rates started dropping after the Surgeon General published the first report in 1964 that described the harmful effects of smoking. By the early

are now using the same marketing tactics they used decades ago to advertise electronic cigarettes to youth in our community. Nearly 23% of Colusa County youth use

tobacco products. This rate is almost 10% higher than the California average youth use rate of 13.8%.6 These rates include the use of electronic cigarettes, which are defined by California law as tobacco products.7 The popularity of e-cigarettes has skyrocketed since their introduction into the United States in 2007. Money spent on e-cigarette advertisements increased by 1,600% from 2011 to 2014.8

More than 18 million U.S. middle and high school students were exposed to ecigarette advertisements in 2014 and nearly 2 in 5 saw e-cigarette advertisements online. Much like traditional cigarette ads, the increase in e-cigarette marketing has correlated with an increase of e-cigarette use. High school aged youth e-cigarette use rates jumped from 4.5% to 13.4% between 2013 and

2014.9 Unlike traditional cigarettes, however, there are no current regulations to ban e-cigarettes from broadcast media and the long-term health effects of e-cigarette use are not yet known.

- Editorial Staff. "Popcorn Lung: A Dangerous Risk of Flavored E-Cigarettes." American Lung Association, 7 July 2016, <a href="https://www.lung.org/about-us/blog/2016/07/popcorn-lung-risk-ecigs.html">www.lung.org/about-us/blog/2016/07/popcorn-lung-risk-ecigs.html</a>.
- 2. Allen, Joseph G., et al. "Flavoring Chemicals in E-Cigarettes: Diacetyl, 2,3-Pentanedione, and Acetoin in a Sample of 51 Products, Including Fruit, Candy-, and Cocktail-Flavored E-Cigarettes." Environmental Health Perspectives, vol. 124, no. 6, June 2016, doi:10.1289/ehp.1510185.
- 3. "Tobacco." *Tobacco | Tobacco Prevention Toolkit | Stanford Medicine*, Stanford School of Medicine, med.stanford.edu/tobaccopreventiontoolkit/TobaccoUnit1.html.
- 4. "Trends in Current Cigarette Smoking Among High School Students and Adults, United States, 1965–2014." Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 30 Mar. 2016, www.cdc.gov/tobacco/data\_statistics/tables/trends/cig\_smoking/.
- 5. California Health Survey, 2012-2014
- 6. California Student Tobacco Survey, 2016
- 7. "SB-1400 Tobacco." California Legislative Information, leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\_id.
- 8. "E-Cigarette Ads and Youth." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 5 Jan. 2016, <a href="https://www.cdc.gov/vitalsigns/ecigarette-ads/index.html">www.cdc.gov/vitalsigns/ecigarette-ads/index.html</a>.
- 9. "E-Cigarette Use Triples among Middle and High School Students in Just One Year." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 16 Apr. 2015, www.cdc.gov/media/releases/2015/p0416-e-cigarette-use.html.

#### **Upcoming Events**

- October 10<sup>th</sup>; 3:30 p.m. 5:00 p.m.: Colusa County Advocates Against Tobacco youth coalition meeting Invite students you know from Colusa High School to advocate for a healthier Colusa County! This meeting will involve recruitment preparations for the 2017-2018 school year. Last year's activities included attending leadership conferences and youth summits, presenting on live television and to Colusa City Council, and having a ton of fun! Snacks and water provided.
- October 26<sup>th</sup>; 12:00 p.m. 2:00 p.m.: Colusa County Tobacco Prevention Coalition meeting – Join Colusa County community members aiming to improve the health of Colusa County residents through education and promotion of a tobacco-free lifestyle. Lunch provided.

For more information or to R.S.V.P to any of the above events, please contact the Colusa County Tobacco Education Program at <a href="mailto:TEP@ColusaDHHS.org">TEP@ColusaDHHS.org</a> or 530-458-0380.

#### Resources

Interested in a meeting or community presentation to learn more about secondhand smoke, thirdhand smoke, tobacco marketing towards youth, or the Colusa County Tobacco Education Program? Contact us directly to schedule an appointment:

Colusa County Tobacco Education Program

Contact: Amanda Pitts, Project Director

Phone: (530) 458-0380

http://www.countyofcolusa.org/tobaccoeducation

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Interested in quitting smoking?

