

# BREATHING *matters*

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## Preventing Nicotine Addiction: Start Early

With *Susanne E. Tanski*  
MD, MPH, FAAP

**Y**ou may not smell cigarettes on your child, but that doesn't mean he or she isn't addicted to nicotine—and isn't using it in the dugout or in class. New forms of vaporized nicotine, dressed up in fruit and candy flavors, and sold at convenience stores and online, are packing a wallop. So, while statistics show fewer teens are smoking cigarettes, recreational nicotine use (vaping, "juuling") is rising in this group.

### NICOTINE AND THE BRAIN

**Why is having youth using nicotine so dangerous?** "Nicotine is a highly addictive, potent psychoactive drug, that is, a chemical that affects the central nervous system, found in tobacco products.

Nicotine is considered a gateway drug, because it affects the developing brain by changing the same dopamine and pleasure pathways that are activated with other addictive substances—including alcohol and opioids," according to pediatrician Susanne Tanski of Children's Hospital at Dartmouth-Hitchcock in Lebanon.

A stimulant, nicotine increases heart rate and blood pressure by triggering a release of dopamine and epinephrine, making users feel alert and more relaxed, boosting mood, and suppressing appetite. With repeated use, users develop a tolerance to the dose, which leads to needing more nicotine. Addicted users need to have nicotine regularly or they suffer from withdrawal characterized by irritability, anxiety, anger, increased appetite, tremors, depression, insomnia and difficulty concentrating. The cycle of nicotine addiction is reinforcement of behavior that restores nicotine and makes the user



*Dr. Tanski is a pediatrician at Children's Hospital at Dartmouth-Hitchcock, Associate Professor of Pediatrics at the Geisel School of Medicine at Dartmouth, Section Chief of General Academic Pediatrics, and Associate Director of the C. Everett Koop Institute. She has a special interest in tobacco control.*



A JUUL is a sleek nicotine delivery device that resembles a thumb drive and is small enough to hide in a teen's hand. It produces "a thick, consistent vapor," and "packs the same amount of nicotine as a pack of cigarettes into a tiny liquid-nicotine cartridge" for "better nicotine blood absorption, for a quicker fix." This enables users to get "nic ripped" faster. (All quotes from commercial website that sells JUUL online.)

feel good and avoids withdrawal. The cigarette, e-cig, vape pen or JUUL (above) is the delivery device; the nicotine provides the "buzz."

Combustible cigarettes are carefully engineered to deliver nicotine quickly and efficiently to the brain to reinforce addiction. Some of the newer electronic nicotine delivery systems (ENDS) deliver nicotine in ways that mimic cigarettes, increasing risk of addiction.

### YOUTH ARE PARTICULARLY VULNERABLE

**Now imagine a teen or pre-teen whose brain is still developing.** "The adolescent brain appears uniquely susceptible to nicotine addiction, with symptoms of dependence appearing within days to weeks of intermittent tobacco use, and well before daily smoking," Dr. Tanski said.

*Preventing Nicotine Addiction* Continued on page 2

**E-cigarettes are the most commonly used tobacco product among youth, surpassing conventional cigarettes in 2014.**

*(U.S. Surgeon General, 2016)*

**E-cigarette use is strongly associated with the use of other tobacco products among youth and young adults.**

*(U.S. Surgeon General, 2016)*

**In 2015, nearly 3 million U.S. middle and high school students surveyed had used e-cigs in the previous 30 days.**

*(CDC)*

**The evidence is insufficient to conclude that ENDS are effective for smoking cessation; many users vape and smoke.**

*(CDC)*

**ENDS aerosol is not harmless "water vapor" and is not as safe as clean air. *(CDC)***



## Educating Youth about E-Cigarettes:

### Free Prevention Program Available

CATCH My Breath is a prevention program for kids 11- to 18-years-old (sixth to twelfth grades) based on best practices to keep them from becoming addicted to nicotine via e-cigs (aka vaping, juuling).

According to a 2016 national survey of middle-school educators:

- 86% do not have e-cigarette curriculum
- 77% are interested in implementing this curriculum
- 74% rated e-cig prevention "high" in terms of a youth health issue

Breathe New Hampshire is collaborating with the CATCH My Breath program to bring this to schools. Contact Kim Coronis, [kcornis@BreatheNH.org](mailto:kcornis@BreatheNH.org) or by calling Breathe NH.

### Preventing Nicotine Addiction

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"This is biology and not a lack of self-control. If a teen makes it through the vulnerable period when their brain is changing so rapidly without being exposed to nicotine or other drugs, there is convincing evidence to suggest they will not become addicted."

Nationwide, data from the National Youth Risk Behavior Survey found that 44.9% of high school students had tried an e-cigarette, and 24.9% had "used" in the past 30 days. Rates of using in the past 30 days were similar among NH high schools: 25% overall, ranging from 17.6% of 9th graders to 32.4% of 12th graders. Multiple studies have found that youth that try vaping even once have a markedly increased risk of going on to smoke cigarettes.

### **SPEEDY DELIVERY**

The latest in ENDS is the JUUL. Resembling a thumb drive or memory stick (with a battery chargeable in any USB port), the sleek device produces "a thick, consistent vapor," and "packs the same amount of nicotine as a pack of cigarettes into a tiny liquid-nicotine cartridge" for "better nicotine blood absorption, for a quicker fix." This enables users to get "nic ripped" faster. (All quotes from commercial website that sells JUUL online.)

JUULs are activated by drawing vapor through the device, similar to the use of a cigarette, to get the battery-heated e-juice (containing nicotine) vapors and the nicotine buzz.

Teachers report kids using JUULs in class, hidden in the palms of their hands, with vapor blown into long sleeves. A starter kit of a battery, charger and four pods of e-juice (flavored liquid nicotine salts) costs about \$50. One pod contains the nicotine equivalent of 200 puffs on a cigarette, or an entire pack.

Because nicotine is so dangerous to youth and teens, Breathe NH and Dr. Tanski, representing the Dartmouth-Hitchcock Medical Center, have testified in Concord in support of SB 545, a bill which would raise the age of sales and possession of tobacco products to 21. ☺

**Too young to start? *Never!***

**A charitable bequest is...**  
a gift through your will or trust that helps protect lung health for future generations.



Placing Breathe New Hampshire in your will or trust helps ensure the organization will continue to advance its important mission to eliminate lung disease and improve the quality of life for those living with lung disease for years to come.

There are many benefits to giving through your will or trust:

- It's quick, easy, and we can provide sample language
- Your gift can be any size, you can give a fixed dollar amount or a percentage of your estate
- You don't lose access to assets you may need during your lifetime and changes can be made at any time.
- You can make a gift in honor of a loved one



To receive a free copy of *How to Make a Will That Works* email Cindy at [crybczyk@BreatheNH.org](mailto:crybczyk@BreatheNH.org)

# NIGHT OF THANKS HONORS VOLUNTEERS

Breathe New Hampshire thanked and honored its volunteers on November 2, at the Manchester Country Club in Bedford.

Louise Hobden of Litchfield received the Donald L. Frost Outstanding Volunteer of the Year Award. Named after the late Donald Frost, this award is given out to a volunteer who has the strength of character and dedication to Breathe NH and the Granite State that was exemplified by him.

Frost's widow Shirley Frost gave the award to Hobden, a volunteer since 2013 and an ambassador for Breathe NH who shares the benefits of pulmonary rehabilitation wherever she goes.

The Robert B. Kerr Award is awarded to someone who has consistently demonstrated a selfless professional or personal commitment to furthering lung health and is the organization's highest honor. It's named after founder Dr. Robert Brown Kerr who led the organization from 1916 to 1966.

Pulmonologist Arthur Robins MD of North Andover, Massachusetts received the Kerr Award for his 40 years of work. He has volunteered with Breathe NH since 1984, when he was at the VA Medical Center in Manchester. Since then he's been at VA Boston Healthcare. A longtime board member, he is also past board chair. Fellow board member Albee Budnitz MD of Nashua presented the Kerr Award to Dr. Robins.



From left, Board Chair Lynn Friedel with Louise Hobden and Shirley Frost



From left, Lynn Friedel, Dr. Robins, Dr. Budnitz and President/CEO Daniel Fortin



## We Care for Kids with Asthma

Do you know one in ten American children have asthma, and that New Hampshire has one of the highest rates of asthma in the country? (Centers for Disease Control and Prevention)

Asthma Care for Kids™ can help! Breathe New Hampshire's Asthma Care for Kids program is helping childcare providers, teachers, parents, and coaches to better understand asthma. This workshop is an "Asthma 101" presentation for adults who live or work with children or young people with this serious lung disease. Contact Breathe NH to schedule a workshop in your community or school.

## ENHANCING COPD MANAGEMENT IN PRIMARY CARE

This past November, Breathe NH offered its first continuing medical education (CME) course. One-hundred sixty physicians, nurse practitioners, nurses, pharmacists, and respiratory, occupational and physical therapists attended. Bartolome R. Celli, MD from Brigham and Women's Hospital and Harvard Medical School was the keynote speaker. For more, see [BreatheNH.org](http://BreatheNH.org).



## Your Ticket to the Best Values in New England!

Give the gift of family time at New England's favorite attractions with the 2018 Breathe New Hampshire Fun Pass.



For only \$35, you get coupons to more than 100 family attractions worth \$2,000! Enjoy Story Land, York's Wild Kingdom, Legoland Discovery Center Boston, Edaville Family Theme Park, a dozen ski attractions, and many more.

Go to [www.BreatheNH.org/funpass-2018attractions-discounts](http://www.BreatheNH.org/funpass-2018attractions-discounts) to see how much you can save. Call 603-669-2411 or go online to order. Free first class shipping!

Proceeds support our critical mission of preventing lung disease and improving the quality of life for those with lung disease.

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## SAVE THESE DATES

Thursday, March 15 | Legislative Breakfast, State House  
March 11-17 | Team Orange Kickoff, Pulmonary Rehab Week  
Thursday, September 6 | Eager Breather's Fresh Air Day Cruise  
Monday, September 24 | Fairways for Airways Golf Classic

**TEAM ORANGE 2018** People with COPD are encouraged to exercise and log their minutes over 12 weeks on pulmonary rehab or nursing home teams. Prizes awarded. Presenting Sponsor Southern NH Health. Breathe, move, live!

## VEHICLE OUT OF BREATH?

Your driveway clunker can help Breathe NH and might add up to a tax deduction for you! Free pick-up at your convenience, even if it doesn't run. Call 800-835-8647 or go online: [BreatheNH.org/vehicle-donation](http://BreatheNH.org/vehicle-donation)

# BREATHE NH OPPORTUNITIES *To Take Action*

To take action or for more information, contact Policy & Program Manager Kim Coronis at 603-669-2411 or [kcoronis@BreatheNH.org](mailto:kcoronis@BreatheNH.org).



## 2018 LEGISLATIVE ISSUES

These are some of the bills Breathe NH is tracking this legislative session:

**SB 545** – increasing age for sales/possession of tobacco products

**HB 1812** – regulating certain vaping products

**HB 1811** – relative to the NH health protection program

**LSR 18-2956** – reforming NH Medicaid and Premium Assistance Program

**HB 1662-LOCAL** – requiring radon air testing on all new residential construction

**HB 656-FN-A-LOCAL** – relative to legalization/regulation of marijuana

## LEGISLATIVE BREAKFAST

Join us for our annual breakfast for legislators:

**Thursday, March 15, 2018, 8-9:30 a.m.**

**State House Cafeteria, 107 N. Main St., Concord**

Meet your elected officials and urge them to support policies impacting lung health. Free breathing test offered along with a continental breakfast. RSVP to Kim Coronis.

## MAKE YOUR VOICE COUNT!

The Breathe Action Team is committed to advancing policies that improve the lives of people affected by lung disease, and protect the air we breathe. Add your voice by joining the Breathe Action Team. Contact Kim Coronis.

## BAG THE BUTTS™!

According to the World Health Organization, cigarette butts are the world's greatest environmental litter problem. Through Bag the Butts, groups of volunteers clean up cigarette butts and litter in parks, schools and playgrounds. We provide toolkits with everything you need for a successful event.

In April, Breathe NH will host a clean-up event in Manchester!

Businesses and community organizations are encouraged to participate. Sponsorship opportunities are available. To become a Bag the Butts partner or to host an event, contact Kim Coronis.

