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Vaping Significantly Increases Your Risk of COPD

Analysis by Dr. Joseph Mercola | August 06, 2025

STORY AT-A-GLANCE

- Current vapers have 47.3% higher odds of developing COPD, while former vapers face 76.6% increased risk compared to non-vapers
- E-cigarettes release harmful chemicals like aldehydes and acrolein that cause deep lung inflammation, leading to irreversible airway damage and scarring
- Daily vaping increases COPD risk by 3.17 times in adults who never smoked cigarettes, challenging claims that vaping is safe
- Even occasional vaping or experimentation increases COPD risk by 79%, and former vapers maintain elevated risk long after quitting
- Effective methods include regular exercise, Emotional Freedom Techniques (EFT), professional coaching, and tracking consumption patterns to break vaping habits

In the United States, it's estimated that around 14 million adults have chronic obstructive pulmonary disease (COPD). It is characterized by persistent and difficult breathing, ongoing cough, increased mucus production, and severe fatigue.[1]

Left untreated, COPD progressively impairs your lung function, causing permanent damage to airways and significantly reducing your quality of life. In advanced stages, COPD often leads to debilitating respiratory failure and places dangerous strain on the heart, shortening lifespan dramatically.

Smoking has long been considered a major risk factor of COPD, and it can be prevented if you don't engage in this habit at all.[2] Now, vaping (done using e-cigarettes) is widely promoted as a safer alternative to cigarettes. However, research has now linked this habit to higher COPD risk.

Comprehensive Analysis Confirms Vaping's Direct Link to COPD

A study published in npj Primary Care Respiratory Medicine examined data from 17 different studies to determine how vaping contributes to COPD development.[3] The participants, which encompass over 4.3 million adults worldwide, come from various backgrounds, comprising current e-cigarette users, former users, and individuals who had never vaped or smoked.

By examining health records across these groups, the researchers uncovered a disturbing truth — vaping is consistently associated with higher risk of developing COPD, regardless of prior tobacco smoking history.

- **Current vapers showed a dramatically increased risk —** Analysis showed a 47.3% higher risk of developing COPD compared to those who never vaped. Former vapers weren't spared either — their risk soared even higher, reaching a 76.6% increase. Even individuals who experimented with vaping only once or twice faced significantly heightened COPD risk at 79%. These figures reveal vaping's persistent threat to lung health, even after quitting.

- **The risk of COPD increased no matter what the methodology —** The elevated COPD risk remained stable regardless of the procedure the studies used. Both cross-sectional studies, which capture health data at a single point in time, and cohort studies that track individuals over extended periods showed consistent evidence of harm. This means that the observed effects of vaping on COPD are genuine, and not merely due to differences in design or data collection methods.

In fact, the researchers conducted additional sensitivity checks, known as "leave-one-out analysis," to verify the reliability of their findings. They systematically removed each individual study one by one to see if the overall results would change significantly. The outcomes remained unchanged, further solidifying their conclusion that vaping directly contributes to COPD risk.

- **Vaping shares similarities with cigarette smoke exposure —** When you inhale vapor from e-cigarettes, harmful substances such as aldehydes travel deep into your lungs, damaging your lung tissue. Acrolein, another toxic chemical commonly found in vape aerosols, inflames your airways, leading to increased COPD risk.

- **A closer look at the damage in your lungs —** Vaping releases ultrafine particles small enough to reach and penetrate deep into your lung's alveoli, commonly known as the air sacs. Once these tiny particles lodge within the alveoli, they provoke an inflammatory immune response. Chronic inflammation of the lung tissue sets the stage for ongoing irritation, eventual scarring, and narrowing of your airways, which are the hallmark indicators of COPD.

  The inflammation further triggers oxidative stress, which not only irritates your lungs, but also damages critical functions over time, making breathing increasingly difficult. Over months and years, this cumulative damage leads to irreversible COPD, characterized by persistent coughing, shortness of breath, chronic fatigue, and a declining ability to engage in everyday activities.

- **The researchers acknowledge certain limitations —** For instance, some studies lacked detailed information on how frequently participants vaped or the exact substances they used. Without precise dose-response data, it’s difficult to pinpoint exactly how quickly COPD risk escalates with increasing e-cigarette usage. Therefore, the authors emphasize the importance of future long-term research to clarify these finer points.

Vaping Dramatically Boosts COPD Risk in Non-Asthmatic Adults

In a similar study published in the Journal of Public Health, researchers looked at the connection between vaping and COPD among adults who had never been diagnosed with asthma.[4]

Using data from the 2018 Behavioral Risk Factor Surveillance System, the team looked at whether vaping alone, without traditional smoking, significantly increased COPD risks in adults across the U.S. They analyzed data from 177,209 non-asthmatic participants, meaning this condition wasn't a factor influencing the results.

- **The researchers discovered a clear trend —** People who vaped daily had 3.17 times the risk of COPD compared to those who never vaped, even after considering other important factors like age, gender, education, physical activity, and body weight. In other words, if you're someone who's vaping every day and have never smoked tobacco, your risk for COPD is significantly higher than someone who has never touched an e-cigarette.

- **Results are different for people who currently smoke tobacco cigarettes —** Vaping didn't noticeably increase this group's already elevated COPD risk. The researchers theorize that regular smoking already imposes such severe lung damage that additional exposure from vaping doesn't significantly add further measurable harm.

- **Risk doesn't go down for former vapers —** Even if this group had stopped using e-cigarettes, they still faced higher odds of COPD compared to people who never vaped. Although their risk wasn't as dramatically high as current daily vapers, it was still elevated. This means the residual damage from inhaled substances can linger, continuing to affect lung health.

- **The duration and frequency of vaping influence COPD risk —** People who reported vaping regularly, especially daily, consistently showed higher COPD risk compared to those who vaped infrequently or experimented only a few times. This clear, dose-response relationship lays out the implications to your health — regular and frequent vaping dramatically compounds the risk of developing COPD.

- **How vaping harms your lungs even if you've never smoked —** Similar to the npj Primary Care Respiratory Medicine study, the researchers noted that inhaling harmful substances like acrolein damages your lungs. Moreover, toxic metals and volatile organic compounds contribute to worsening lung function.

The researchers emphasized that the link between vaping and COPD in adults who never smoked cigarettes is a growing public health concern. Because vaping has been widely marketed as a safer alternative to traditional tobacco cigarettes, many consumers — especially younger adults — underestimate its dangers. Ultimately, this study challenges those assumptions head-on.

Having Trouble Quitting Vaping? Try These Tips

Quitting vaping is challenging, especially when you've already developed a habit. But the research clearly shows vaping damages your lungs, even if you've never smoked cigarettes. If you use e-cigarettes, even occasionally, I urge you to quit immediately. Here are my five recommendations to help you:

1. **Rewire your cravings through exercise —** One of the most straightforward lifestyle changes you can implement right away is getting regular exercise. According to a study published in Tobacco Use Insights, moving your body inspires you to stay healthy. More importantly, it's used as a replacement habit for smoking, which self-perpetuates in a healthy manner:[5]

> *"Improved mood can help prevent relapse by making it easier to cope with stress and other triggers associated with smoking. Moreover, quitting smoking can lead to weight gain in some individuals due to changes in metabolism and increased appetite. Exercise can help counteract weight gain and promote a healthier lifestyle, which can further support smoking cessation efforts.*
>
> *In addition, regular exercise can help build self-efficacy, or the belief in one's ability to succeed in quitting smoking can support the maintenance of long-term abstinence."*

When it comes to exercising, I recommend you start with walking because it cannot be overdone. In my **interview with Dr. James O'Keefe**, he noted that vigorous exercise, especially for extended periods, eventually impacts your health as if you were following a sedentary lifestyle. That said, his findings show that an average of 10,000 steps a day will benefit your health.

2. **Try the Emotional Freedom Techniques (EFT) —** This is another tool I recommend to help curb your cravings. It uses a combination of acupressure points (based on the same meridians used in acupuncture) as well as voicing positive affirmations to restore balance between your body and mind.

3. **Combine both for best results —** In a study published in Scientific Reports, researchers selected 41 adult smokers to help them quit using brain stimulation.[6] Specifically, they were broken down into four groups — gentle electrical brain stimulation, aerobic exercises, a combination of the two, and a placebo.

   Each participant underwent five sessions that only lasted less than an hour each, and the researchers noted that the combined group (brain stimulation with exercise) had cravings drop by 50.4%. This is much more than the 9% reduction in cravings from groups who only used one method. Moreover, the combined group also smoked less and felt more motivated to quit.

   So, what's the key takeaway here? The participants experienced big changes in their cravings without huge time investments, which can put off people who want to quit but aren't mentally prepared yet. That said, I recommend blocking off an hour of your day, five days in a row, for a bike ride or a walk outside to stimulate your mind and body. These short, daily commitments will eventually build toward your goal of quitting vaping.

4. **Get external help —** If you've done everything in your power to quit vaping but it's not enough, consider asking for help from professionals. Through a quitline, 508 young adults (aged 18 to 24 years old) were offered two coaching calls to help them stop vaping.[7]

After analysis was completed, the researchers noted that coaching was "successful at helping young adults quit vaping, with almost half abstinent after 3 months."[8]

5. **Track your consumption —** Grab a notebook and start keeping track of your smoking habits. Note how many times you're vaping each day, how intense your cravings feel, and what your mood is like.

   Writing things down makes you more aware of your habits, and that awareness gives you more power to steer yourself in a healthier direction. You'll start noticing patterns, like certain times or situations that trigger you, so you can plan and respond differently next time.

Frequently Asked Questions (FAQs) About COPD and Vaping

Q: How does vaping affect your risk of developing COPD, even if you've never smoked?

A: Daily vaping increases your risk of COPD by 3.17 times even if you've never touched a traditional cigarette. Studies show that inhaling vape aerosols exposes your lungs to toxic chemicals like acrolein and ultrafine particles that trigger inflammation, tissue damage, and long-term scarring in the airways.

Q: Is the risk of COPD still high if I used to vape but quit?

A: Yes. Even former vapers had a 76.6% higher risk of developing COPD compared to people who never vaped. The damage from vaping doesn't disappear after quitting, which means the longer you've used e-cigarettes, the more residual harm remains in your lungs.

Q: What kind of damage does vaping cause in the lungs?

A: Vaping introduces harmful compounds like aldehydes and volatile organic compounds deep into your lungs. These trigger inflammation and oxidative stress in the alveoli, the small air sacs responsible for oxygen exchange. Over time, this leads to chronic scarring, narrowed airways, and progressive breathing difficulty — the hallmarks of COPD.

Q: Can short-term changes in behavior help reduce vaping cravings?

A: Yes. A study showed that combining aerobic exercise with brief brain stimulation sessions reduced cravings by 50.4% in just five short sessions. Even simple changes like walking daily or using Emotional Freedom Techniques (EFT) can rewire your brain's response to cravings and build momentum toward total quitting.

Q: What are the most effective first steps I can take to quit vaping?

A: Start with small, consistent actions. Track your vape use and cravings in a notebook and commit to daily movement (like walking). You can also reach out for professional support, as coaching calls through quitlines helped young adults stop vaping within three months. The key is routine, support, and conscious awareness of your habits.

Sources and References

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