

# QUITTING SMOKING

Nearly 70% of smokers say they want to quit.



## Quitting:



**20 minutes:** heart and blood pressure decrease



**1 year:** risk of **coronary heart disease** and **heart attack** is reduced



**10 years:**

risk of **dying from lung cancer** is **50% less likely** compared with a current smoker's risk



**2-3 weeks:** **circulation** and **lung functionality** improve



**5 years:**

risk of **mouth, throat, esophagus** and **bladder cancer** are **decreased by half** and risk of **cervical cancer** and **stroke** decline to that of a nonsmoker

**70%**  
of smokers say they want to quit.

**Most smokers who attempt to quit do so "cold turkey" and are not successful.**

**Counseling, medication** and **digital programs** increase a smoker's chance of success.



**Medications and counseling** together can more than **triple** that chance.



# QUITTING SMOKING

## BACKGROUND

Tobacco use, still the leading cause of preventable death and disease in the country, leads to 540,000 deaths in the U.S. each year.<sup>1</sup> **Most smokers — nearly 70 percent — say they want to quit<sup>3</sup>, and recent data show an increasing number of people quitting successfully.** In 2016, 59 percent of adults who ever smoked quit, an increase from 50.8 percent in 2005.<sup>2</sup> Nevertheless, annual quit success rates remain low — at roughly 7 percent — underscoring the highly addictive nature of nicotine, the ineffectiveness of the “cold turkey” approach, or not using available treatments, and the multiple attempts it can take to successfully quit.<sup>3</sup>

Online quitting resources are increasingly important to tobacco users. **In 2017, more than one-third of all smokers looked online for information about quitting smoking, a proportion that has more than doubled over the past 12 years. This translates to 12.4 million smokers who turned to the internet for help quitting in 2017.**<sup>4</sup> Evidence shows that online quit smoking programs help smokers succeed. For example, following the EX Plan by [BecomeAnEX<sup>®</sup>](#), a free digital quit-smoking program developed by Truth Initiative<sup>®</sup> in collaboration with Mayo Clinic, quadruples a smoker’s chance of quitting.<sup>5</sup>

## ADULTS

In 2016, approximately 15.5 percent (37.8 million) of American adults were current smokers, including 13.5 percent of women and 17.5 percent of men.<sup>2</sup> Quit attempts and rates of successfully quitting are similar among men and women. Chances of success increase with each quit attempt.<sup>6</sup>

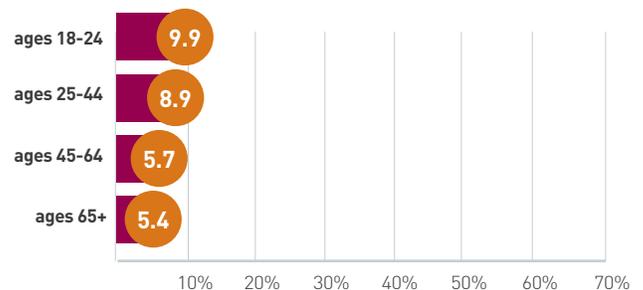
- > In 2015, 66.7 percent of **male smokers** were interested in quitting smoking and 55.3 percent had made a quit attempt in that year. Only **7.2 percent successfully quit.**<sup>3</sup>

### Smokers who made quit attempts in the past year

Smokers who made quit attempts in the past year:



Smokers who successfully quit in the past year:



Source: Centers for Disease Control and Prevention, 2017<sup>3</sup>

Nearly 70% of smokers say they want to quit.

- > In 2015, 69.4 percent of **female smokers** were interested in quitting smoking and 55.6 percent had made a quit attempt that year. Only **7.6 percent successfully quit.**<sup>3</sup>

**Quit attempts and quit rates decrease with age,** possibly because of increased difficulty changing behaviors that have been established over many years, according to data from 2015.<sup>7</sup>

# Quitting and pregnancy

The most recent data on smoking during pregnancy show that in 2012 and 2013 combined, about **15.4 percent of pregnant American women were current smokers**.<sup>8</sup> An analysis from 2011 found that **55 percent of women who smoked during the three months before they became pregnant successfully quit smoking while pregnant**.<sup>8,9</sup> However, 43 percent of postpartum women return to smoking after approximately six months.<sup>10</sup>

**Smoking while pregnant can harm the child and mother.** Quitting smoking increases babies' oxygen intake and lung development, and decreases risk for premature birth, low birth weight and possible miscarriage.<sup>11</sup>

## YOUTH

- > About **5 percent** (5.4 percent) of **teens** in grades eight, 10 and 12 **reported smoking** a cigarette in the past 30 days.<sup>12</sup>
- > More than **half** (54.6 percent) of **high school students** who admitted to smoking cigarettes had **not tried to quit** during the past year.<sup>13</sup>
- > **More female** (52.8 percent) **than male** (39.7 percent) **students had attempted to quit** in the past year.<sup>13</sup>

## DISPARITIES IN QUITTING

**Quitting disparities** exist among certain populations, including in communities with **lower income and education** levels, racial and ethnic **minority groups**, those with **mental health conditions** and the **LGBT** community.

- > **Fewer smokers with lower-income quit successfully** (5.6 percent) than those living at or above the poverty line (7.9 percent), despite similar rates of quit attempts. Smokers with low incomes may face more barriers to quit-smoking treatments and use treatments at lower rates.<sup>14</sup>

- > Quit rates for individuals suffering from severe **psychological distress** are approximately half of the general population, showing the **need for more targeted interventions** for those with **mental health problems**.<sup>56</sup>
- > In 2015, **adult smokers with a private health plan had higher rates of successfully quitting** (9.4 percent), compared with those with any other type of insurance coverage. Adult smokers with private insurance also had the **highest rate of quit attempts** in the past year (57.2 percent), compared with those enrolled in federal insurance programs or who are uninsured.<sup>3</sup>
- > Rates of **quit attempts and successfully quitting generally increase as education level rises**, with 50 percent of adult smokers across all education levels attempting to quit, according to data from 2015. Education might help by increasing awareness, access to quit-smoking tools and the affordability of services.<sup>3</sup>
- > A **stronger set of tobacco control policies** — including broader quitting treatment coverage, tax increases, comprehensive marketing restrictions, smoke-free laws, strong graphic health warnings, a higher intensity media campaign and stronger youth access enforcement — **would reduce the smoking rate among the bottom two-fifths of income earners by nearly a quarter in just a few years**. By 2065, smoking rates among the lowest-income groups would drop by almost 45 percent, avoiding more than 1.5 million deaths.<sup>15</sup>

54.6% of high school students who smoke have not tried to quit in the past year.



**Lesbian, gay and bisexual** individuals have higher rates of tobacco use and lower quit attempt rates than the general population.<sup>2,3</sup>

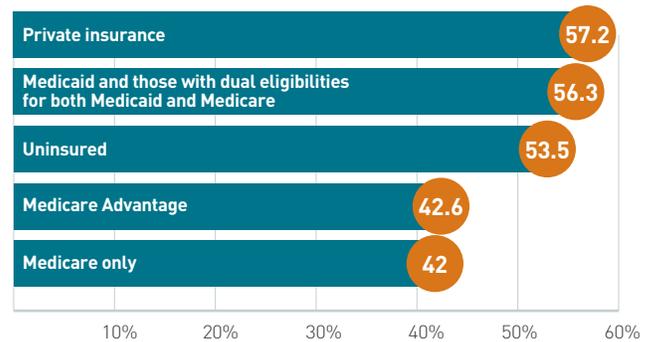
- More than one-fifth (**20.5 percent**) of **lesbian, gay and bisexual adults are current smokers**, compared with **15.3 percent** of **heterosexual adults**, according to the 2016 National Health Interview Survey.<sup>2</sup>
- About two-thirds (**66.7 percent**) of **gay, lesbian and bisexual adult smokers are interested in quitting smoking**, and 48.4 percent attempted to quit in the past year, but both **rates are lower than those who identify as heterosexual**.<sup>16</sup>

Rates of quit attempts and successfully quitting vary by racial and ethnic background. **Among white, black, Hispanic and Asian-Americans, black Americans report the most interest in quitting, but have the lowest success rate.** Asian-Americans have the highest quit rate and rate of success.<sup>3</sup>

Additionally, evidence indicates that adult menthol smokers are less likely than non-menthol smokers to successfully quit smoking. The mint flavoring makes cigarettes easier to smoke and harder to quit.<sup>17,18</sup>

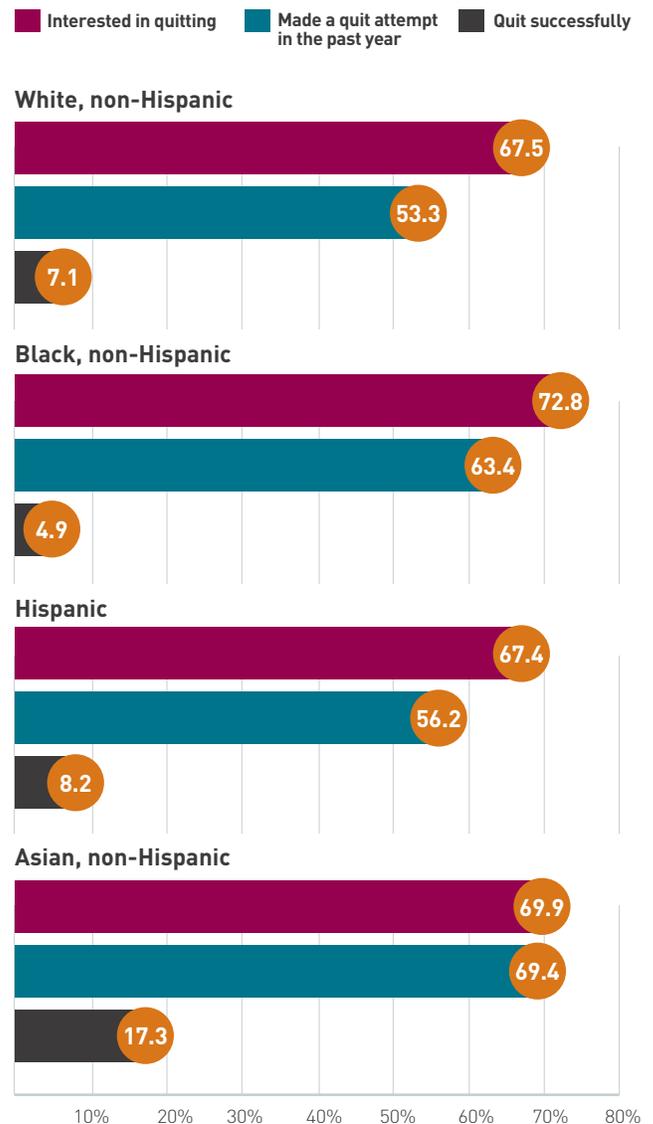
- Certain groups smoke **menthol cigarettes at higher rates**, including **young** people, **women, sexual minorities**, those with **mental illness** and **racial and ethnic minorities**, especially African-Americans.<sup>19</sup>
- Nearly **90 percent** of all **African-American smokers use menthol cigarettes**.<sup>19</sup>
- Research shows that **if menthol cigarettes were banned** nationally, almost 39 percent of all menthol smokers and **44.5 percent of African-American menthol smokers would try to quit**.<sup>20</sup>

### Smokers who made quit attempts in the past year by insurance coverage



Source: Centers for Disease Control and Prevention, 2017<sup>3</sup>

### Quit rates by race and ethnicity in the U.S.



Source: National Health Interview Survey, 2015<sup>5</sup>

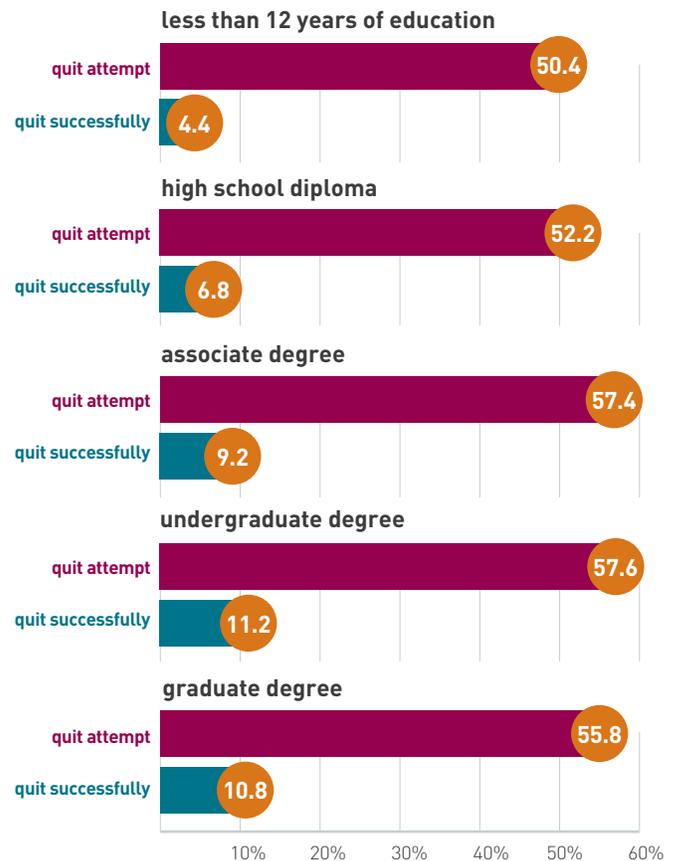
## HEALTH EFFECTS OF QUITTING SMOKING

- > Quitting smoking before age 40 reduces the risk of death associated with continued smoking by 90 percent. Quitting before age 30 avoids more than 97 percent of the risk of death associated with continued smoking.<sup>27</sup>
- > Among smokers who quit at age 65, men gained 1.4 to 2 years of life and women gained 2.7 to 3.4 years.<sup>28</sup> Quitting smoking at age 65 or older reduces a person's risk of dying of a smoking-related disease by nearly 50 percent.<sup>24</sup>
- > Quitting smoking reduces the risk of chronic obstructive pulmonary disease and decreases the risk of lung cancer and other cancers.<sup>24</sup>
- > Smoking increases a patient's chance of complications with surgery.<sup>29</sup> Patients who quit smoking just before surgery see better and faster healing.<sup>30</sup> Even brief periods of abstinence from smoking may improve surgical outcomes.<sup>31,32</sup>
- > A smoker's body has a harder time healing wounds. Smoking also weakens the immune system. Stopping smoking immediately improves the body's ability to heal itself.<sup>33</sup>

## QUIT METHODS

Most smokers who attempt to quit do so without counseling or medications — commonly called the “cold turkey” method — and are not successful.<sup>34-37</sup> Only 3 to 5 percent of people quit for longer than 6 months using the cold turkey approach, according to quit-smoking experts.<sup>38</sup> Many supports exist that can help people quit, including medications and counseling, which together can more than triple a smoker's chance of quitting.<sup>39</sup>

### Adult smoker rates of quit attempts and successes in past year by education level



Source: Centers for Disease Control and Prevention, 2017<sup>3</sup>

Quitting smoking before age 40 reduces the risk of death associated with continued smoking by 90%.

## Long-term and short-term benefits to quitting smoking<sup>21</sup>

### After quitting for:

#### 20 minutes

An individual's heart and blood pressure decrease.<sup>22</sup>

#### 2-3 weeks

Circulation and lung functionality improve.<sup>24</sup>

#### 1 year

The risk of coronary heart disease and heart attack is reduced.<sup>25</sup>

#### 10 years

The risk of mortality from lung cancer is 50% less likely compared with a current smoker's risk. Pancreas and larynx cancer risks are also decreased.<sup>25</sup>

#### 12 hours

The body's carbon monoxide levels return to healthy levels.<sup>23</sup>

#### 1-9 months

Lungs continue to improve and heal, reducing coughing and shortness of breath.<sup>24</sup>

#### 5 years

The risk of mouth, throat, esophagus and bladder cancer are decreased by half. The risk of cervical cancer and stroke decline to that of a nonsmoker.<sup>25</sup>

#### 15 years

The risk of coronary disease equates to that of a nonsmoker's.<sup>26</sup>

- > Based on extensive clinical trials, the Food and Drug Administration has approved these medications for quitting tobacco: **nicotine replacement therapy** (NRT) gum, NRT **inhaler**, NRT **lozenges**, NRT **nasal spray**, NRT **patch**, **varenicline (Chantix)** and **bupropion**.<sup>39</sup> These medications have been demonstrated to **improve quit rates by 50 to 70 percent**.<sup>39</sup>
- > Providing sufficient **training to health care providers in quit-smoking treatments** can more than **double a smoker's odds of successfully quitting**.<sup>39</sup>
- > Social support, such as seeking help from **family and friends** or building **relationships** with other smokers through **online social networks**, is an important factor related to **successful quitting**.<sup>40-42</sup>
- > **Quitting methods that combine counseling and medication are more effective than either alone.** Quitting resources should provide multiple options for smokers to choose the method that works best for them.<sup>39,43</sup>

Quitting methods that combine counseling and medication are more effective than either alone.



## DIGITAL QUIT TOOLS

- **Digital quit tools** — specifically those delivered via the **internet** and **text** message — have the potential to **reduce smoking rates** because of their proven effectiveness, broad reach, scalability and relatively low cost.<sup>45,46</sup>
- **Internet quit-smoking programs** have demonstrated **comparable effectiveness** with evidence-based **telephone** and face-to-face **counseling**.<sup>47,48</sup>
- Research on the **digital quit-smoking program BecomeAnEX** found that smokers who participated in the online community — either actively exchanging messages with others, or even just passively reading comments — were **significantly more likely to quit** than those who did not use the community.<sup>49</sup> Each month, thousands of EX Community members share information and offer each other support through the platform's communication channels, including private messages, blogs, message boards and group discussions.

Research on the digital quit-smoking program BecomeAnEX found that smokers who participated in the online community were significantly more likely to quit than those who did not use the community.

## POLICY

The **Affordable Care Act** requires most health insurance plans, including Medicaid expansion, individual insurance plans, small groups plans and employer-provided plans, to cover preventive services that the U.S. Preventive Services Task



## E-cigarettes as quit tools

Some smokers have turned to e-cigarettes for help with quitting cigarettes. A recent report by the National Academies of Science, Engineering, and Medicine found that current **evidence is limited regarding the effectiveness of e-cigarettes as quitting tools**.<sup>44</sup> Some of this uncertainty is likely driven by the relative newness of the products and the large variation in effective nicotine delivery within the product class. Also, no e-cigarette manufacturer has sought approval for use of a product as a quitting aid, so they are not sold with instructions or indications for quitting.

Although there is limited research currently supporting e-cigarette use for quitting, a **smoker who switches completely to e-cigarettes from combustible cigarettes will substantially reduce exposure to toxic chemicals and health risk**.<sup>36</sup> There is also some evidence that more frequent e-cigarette use may increase an individual's likelihood to quit.<sup>44</sup> However, concurrent use — also called dual or poly use — of e-cigarettes and combustible tobacco is the most common e-cigarette use pattern among all age groups. Dual use can minimize harms only if such use is of limited duration and not on a long-term basis, leading to the timely quitting of all combustible product use.<sup>44</sup>

So that consumers know which products might help them completely switch from combustible products or quit altogether, **the FDA must fully regulate e-cigarettes and develop a properly incentivized pathway for products to be approved as quitting methods**.

Force recommends.<sup>50</sup> **Health insurance plans are in compliance with this requirement if they cover the following without cost-sharing:**

- **Screening for tobacco use**
- At least two quit attempts per year, including **coverage** for:
  - » **Four quitting counseling sessions** of at least 10 minutes each, including telephone, group and individual counseling without prior authorization
  - » All **seven FDA-approved quitting medications** (including both prescription and over-the-counter medications) for a **90-day treatment regimen** when prescribed by a health care provider without prior authorization<sup>51</sup>
- Traditional **Medicaid** covers **quitting counseling and medications with no cost-sharing for pregnant women**. For all other Medicaid enrollees, quitting medications are no longer excludable from coverage. Cost-sharing and coverage of counseling vary by state and plan.<sup>52</sup>
- **Medicare covers NRT nasal spray, NRT inhaler, bupropion and varenicline only**. Part D plans can cover other quitting medications. Medicare also covers two counseling attempts each year with four sessions of counseling in each attempt. Cost-sharing depends on whether a Medicare enrollee has been diagnosed with an illness that is caused or complicated by smoking.<sup>53</sup>
- **TRICARE**, the health care program for **military** services members and their families, covers quitting **counseling** from TRICARE-authorized providers in the U.S.<sup>54</sup> TRICARE also covers all **seven FDA-approved quitting medications** (including both prescription and over-the-counter medications) when prescribed by a TRICARE-authorized provider.

The Affordable Care Act requires most health insurance plans, including Medicaid expansion, individual insurance plans, small groups plans and employer-provided plans, to cover preventive services that the U.S. Preventive Services Task Force recommends.





## ACTION NEEDED: QUITTING TOBACCO

**Evidence-based quit treatments lower smoking rates and save lives and money.** Research demonstrates the effectiveness of asking about tobacco use, referring smokers to treatment and delivering direct quitting methods by a broad range of health care providers. A large body of **research** on quit-smoking treatments confirms that a **combination of behavioral counseling, medication and social support is the most effective way to treat this deadly addiction.** We also know that longer duration and comprehensive services and interventions are more successful in helping people quit. As a result, these services, which are relatively inexpensive, provide a strong **return on investment.**

- › **All health care providers should inquire about every patients' tobacco use status and recommend quitting medications and counseling.** Providers can use the five "a's" (ask, advise, assess, assist and arrange) to help current smokers create a plan to quit, prepare to quit and stay tobacco-free.
- › **Quitting treatments offered to smokers must be comprehensive.** All health care plans should cover all seven FDA-approved medications as well as individual and group counseling delivered in person, online or by phone with no cost-sharing for plan enrollees.
- › Given that it takes most smokers multiple attempts to quit before successfully quitting for one year or longer<sup>6</sup>, **all health plans should refrain from placing limits on the number of quit attempts covered.**
- › Because smokers are turning to e-cigarettes for help quitting, the **FDA must fully regulate e-cigarettes**

**so that consumers know which products might help them completely switch from combustible products or quit altogether.** The agency's Center for Tobacco Products must implement, as soon as possible, a **full review of all e-cigarette products.** At the same time, the agency's Center for Drug Evaluation and Research must develop a properly incentivized pathway for e-cigarettes and other products to be approved as quitting drugs.

- › **Implementation of tobacco control policies** (i.e., restricting the sale of flavored tobacco products, smoke-free housing, smoke-free workplaces and increasing excise taxes on tobacco products) **should include making quit-smoking treatments available** for those affected by such policies.
- › **States should fully fund comprehensive tobacco control programs that produce meaningful outcomes, including funding quitting resources.** In fiscal year 2018, states brought in \$27.5 billion from the 1998 tobacco settlement and tobacco taxes, but spent less than 3 percent of that on programs to curb tobacco use.<sup>55</sup>
- › **State governments, employers and health insurers should expand access to online quitting resources.** Online interventions have demonstrated effectiveness, and the internet is often the first place that many smokers turn for health information.<sup>50</sup> Data from the Health Information National Trends Survey indicate that more than 12 million American smokers searched online for quitting information in 2017.<sup>4</sup>

# Interested in quitting smoking?

Truth Initiative has helped hundreds of thousands of people on their journeys to become tobacco-free.

## **BecomeAnEX**

A free, digital quit-smoking program developed by Truth Initiative in collaboration with Mayo Clinic.

## **EX® Program**

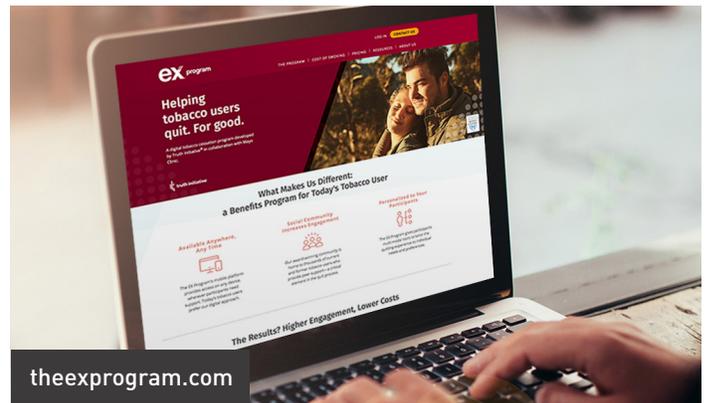
An enterprise quit-smoking program designed for employers, health plans and health systems by Truth Initiative in collaboration with Mayo Clinic.

## **This is Quitting**

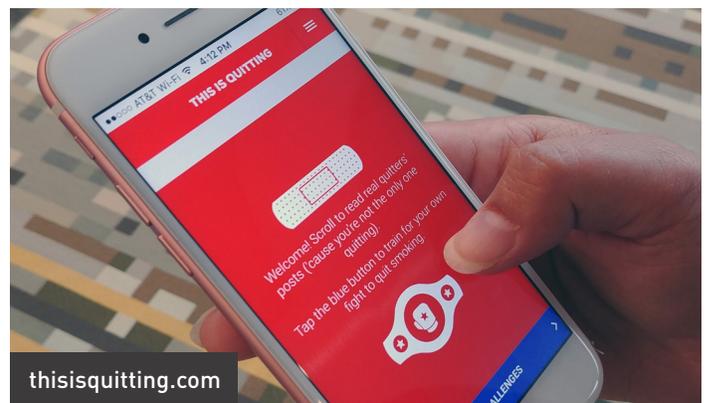
A quit-smoking mobile app with companion text messaging for young adults.



BecomeAnEX.org



theexprogram.com



thisisquitting.com

## REFERENCES

- 1 Carter BD, Abnet CC, Feskanich D, et al. Smoking and Mortality — Beyond Established Causes. *New England Journal of Medicine*. 2015;372(7):631-640.
- 2 Jamal A PE, Gentzke AS, Homa DM, Babb SD, King BA, Neff LJ. Current Cigarette Smoking Among Adults — United States, 2016. *MMWR Morb Mortal Wkly Rep* 2018;67(53-59).
- 3 Babb S, Malarcher A, Schauer G, Asman K, Jamal A. Quitting Smoking Among Adults - United States, 2000-2015. *MMWR Morb Mortal Wkly Rep*. 2017;65(52):1457-1464.
- 4 Graham AL, Amato MS. Twelve million smokers look online for quit smoking help annually: Health Information National Trends Survey (HINTS) data, 2005-2017. *Nicotine Tob Res*. 2018.
- 5 Graham AL, Papandonatos GD, Cha S, Erar B, Amato MS. Improving Adherence to Smoking Cessation Treatment: Smoking Outcomes in a Web-based Randomized Trial. *Annals of Behavioral Medicine*. 2018;52(4):331-341.
- 6 Chaiton M, Diemert L, Cohen JE, et al. Estimating the number of quit attempts it takes to quit smoking successfully in a longitudinal cohort of smokers. *BMJ open*. 2016;6(6):e011045.
- 7 American Cancer Society. Why People Start Smoking and Why It's Hard to Stop. 2015; <https://www.cancer.org/cancer/cancer-causes/tobacco-and-cancer/why-people-start-using-tobacco.html>.
- 8 National Center for Chronic Disease Prevention and Health Promotion. Tobacco Use and Pregnancy. *Reproductive Health*; <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/tobaccousepregnancy/index.htm>.
- 9 CDC PRAMStat Data for 2011. United States Department of Health and Human Services; 2015.
- 10 Jones M, Lewis S, Parrott S, Wormall S, Coleman T. Re-starting smoking in the postpartum period after receiving a smoking cessation intervention: a systematic review. *Addiction (Abingdon, England)*. 2016;111(6):981-990.
- 11 National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*. Atlanta (GA): Centers for Disease Control and Prevention (US); 2014. 9, Reproductive Outcomes. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK294307/>
- 12 Miech RA, Schulenberg JE, Johnson LD, Bachman JG, O'Malley PM, Patrick ME. National Adolescent Drug Trends in 2017: Findings Released. Monitoring the Future. 2017.
- 13 Kann L, McManus T, Harris WA, et al. Youth Risk Behavior Surveillance - United States, 2015. *Morbidity and mortality weekly report. Surveillance summaries (Washington, D.C. : 2002)*. 2016;65(6):1-174.
- 14 Hammett PJ, Fu SS, Burgess DJ, et al. Treatment barriers among younger and older socioeconomically disadvantaged smokers. *The American journal of managed care*. 2017;23(9):e295-e302.
- 15 U.S. National Cancer Institute. *A Socioecological Approach to Addressing Tobacco-Related Health Disparities*. Bethesda, MD: National Institutes of Health, National Cancer Institute,;2017.
- 16 Babb S, Malarcher A, Schauer G, Asman K, Jamal A. Quitting Smoking Among Adults - United States, 2000-2015. *MMWR: Morbidity & Mortality Weekly Report*. 2017;65(52):1457-1464.
- 17 Tobacco Products Scientific Advisory Committee. *Menthol Cigarettes and Public Health: Review of the Scientific Evidence and Recommendations*. Rockville, MD: Center for Tobacco Products, Food and Drug Administration;2011.
- 18 Stahre M, Okuyemi KS, Joseph AM, Fu SS. Racial/ethnic differences in menthol cigarette smoking, population quit ratios and utilization of evidence-based tobacco cessation treatments. *Addiction (Abingdon, England)*. 2010;105:75-83.
- 19 Giovino GA, Villanti AC, Mowery PD, et al. Differential trends in cigarette smoking in the USA: is menthol slowing progress? *Tobacco control*. 2015;24(1):28-37.
- 20 Pearson JL, Abrams DB, Niaura RS, Richardson A, Vallone DM. A ban on menthol cigarettes: impact on public opinion and smokers' intention to quit. *Am J Public Health*. 2012;102(11):e107-114.
- 21 Benefits of Quitting Smoking Over Time. 2017; <https://www.cancer.org/healthy/stay-away-from-tobacco/benefits-of- quitting-smoking-over-time.html>.
- 22 Mahmud A, Feely J. Effect of smoking on arterial stiffness and pulse pressure amplification. *Hypertension (Dallas, Tex.: 1979)*. 2003;41(1):183-187.
- 23 United States Department of Health and Human Services. *The health consequences of smoking: nicotine addiction: A report of the Surgeon General*. Rockville: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, Center for Health Promotion and education, Office on Smoking and Health;1988.
- 24 United States Department of Health and Human Services. *The Health Benefits of Smoking Cessation: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention; September 1990.
- 25 U. S. Department of Health and Human Services. *How tobacco smoke causes disease: The biology and behavioral basis for smoking-attributable disease: A report of the Surgeon General*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health;2010.
- 26 World Health Organization. Tobacco Control: Reversal of Risk After Quitting Smoking. *IARC Handbooks of Cancer Prevention*. 2007;11:11.
- 27 Pirie K, Peto R, Reeves GK, Green J, Beral V, Million Women Study C. The 21st century hazards of smoking and benefits of stopping: a prospective study of one million women in the UK. *Lancet*. 2013;381(9861):133-141.

- 28 Taylor DH, Jr., Hasselblad V, Henley SJ, Thun MJ, Sloan FA. Benefits of smoking cessation for longevity. *Am J Public Health*. 2002;92(6):990-996.
- 29 Bortorff JL, Seaton CL, Lamont S. Patients' awareness of the surgical risks of smoking: Implications for supporting smoking cessation. *Canadian family physician Medecin de famille canadien*. 2015;61(12):e562-569.
- 30 Thomsen T, Villebro N, Moller AM. Interventions for preoperative smoking cessation. *The Cochrane database of systematic reviews*. 2014(3):Cd002294.
- 31 Theadom A, Cropley M. Effects of preoperative smoking cessation on the incidence and risk of intraoperative and postoperative complications in adult smokers: a systematic review. *Tobacco control*. 2006;15(5):352-358.
- 32 Warner DO. Perioperative abstinence from cigarettes: physiologic and clinical consequences. *Anesthesiology*. 2006;104(2):356-367.
- 33 Silverstein P. Smoking and wound healing. *The American Journal of Medicine*. 1992;93(1):S22-S24.
- 34 Curry SJ, Sporer AK, Pugach O, Campbell RT, Emery S. Use of tobacco cessation treatments among young adult smokers: 2005 National Health Interview Survey. *Am J Public Health*. 2007;97(8):1464-1469.
- 35 Cokkinides VE, Ward E, Jemal A, Thun MJ. Under-use of smoking-cessation treatments: results from the National Health Interview Survey, 2000. *American journal of preventive medicine*. 2005;28(1):119-122.
- 36 Ryan KK, Garrett-Mayer E, Alberg AJ, Cartmell KB, Carpenter MJ. Predictors of cessation pharmacotherapy use among black and non-Hispanic white smokers. *Nicotine Tob Res*. 2011;13(8):646-652.
- 37 Hung WT, Dunlop SM, Perez D, Cotter T. Use and perceived helpfulness of smoking cessation methods: results from a population survey of recent quitters. *BMC public health*. 2011;11:592.
- 38 Hughes J, Keely J, Naud S. Shape of the relapse curve and long-term abstinence among untreated smokers. *Addiction (Abingdon, England)*. 2004;99(1):29-38.
- 39 Fiore M, United States. Tobacco Use and Dependence Guideline Panel. *Treating tobacco use and dependence: 2008 update*. 2008 update ed. Rockville, Md.: U.S. Dept. of Health and Human Services, Public Health Service; 2008.
- 40 Burns RJ, Rothman AJ, Fu SS, Lindgren B, Joseph AM. The relation between social support and smoking cessation: revisiting an established measure to improve prediction. *Annals of behavioral medicine : a publication of the Society of Behavioral Medicine*. 2014;47(3):369-375.
- 41 Mermelstein R, Cohen S, Lichtenstein E, Baer JS, Kamarck T. Social support and smoking cessation and maintenance. *Journal of consulting and clinical psychology*. 1986;54(4):447-453.
- 42 Christakis NA, Fowler JH. The collective dynamics of smoking in a large social network. *The New England journal of medicine*. 2008;358(21):2249-2258.
- 43 Graham AL, Papandonatos GD, Cha S, Erar B, Amato MS. Improving Adherence to Smoking Cessation Treatment: Smoking Outcomes in a Web-based Randomized Trial. *Annals of Behavioral Medicine*. 2018;52(4):331-341.
- 44 National Academies of Sciences, Engineering, and Medicine. *Public Health Consequences of E-Cigarettes*. Washington, DC: The National Academies Press; 2018.
- 45 Abrams DB, Graham AL, Levy DT, Mabry PL, Orleans CT. Boosting population quits through evidence-based cessation treatment and policy. *American journal of preventive medicine*. 2010;38(3 Suppl):S351-363.
- 46 Graham AL, Chang Y, Fang Y, et al. Cost-effectiveness of internet and telephone treatment for smoking cessation: an economic evaluation of The iQUITT Study. *Tobacco control*. 2013;22(6):e11.
- 47 Taylor GM. J., Dalili MN, Semwal M, Civljak M, Sheikh A, Car J. Internet-based interventions for smoking cessation. *Cochrane Database of Systematic Reviews* 2017, Issue 9. Art. No.: CD007078. DOI: 10.1002/14651858.CD007078.pub5
- 48 Graham AL, Carpenter KM, Cha S, et al. Systematic review and meta-analysis of Internet interventions for smoking cessation among adults. *Substance abuse and rehabilitation*. 2016;7:55-69.
- 49 Graham AL, Zhao K, Papandonatos GD, et al. A prospective examination of online social network dynamics and smoking cessation. *PloS one*. 2017;12(8):e0183655.
- 50 US Preventative Service Task Force. Recommendations for Primary Care Practice. 2017; <https://www.uspreventiveservicestaskforce.org/Page/Name/recommendations/>.
- 51 US Department of Health and Human Services, US Department of Labor, US Treasury. FAQs About Affordable Care Act implementation [Part XIX]. 2014; <https://www.dol.gov/sites/default/files/ebsa/about-ebsa/our-activities/resource-center/faqs/aca-part-xix.pdf>.
- 52 Jarmon L. Tobacco Cessation Benefits in Medicaid-Improving Utilization and Quality. <https://www.medicaid.gov/medicaid/benefits/downloads/tobacco-webinar-july-9.pdf>.
- 53 DeLapp V. Does Medicare Cover Smoking Cessation Treatments? 2016; <https://medicare.com/coverage/does-medicare-cover-smoking-cessation-treatment/>.
- 54 Tricare. About Us <https://tricare.mil/About>.
- 55 A State-by-State Look at the 1998 Tobacco Settlement 19 Years Later. 2017; <https://www.tobaccofreekids.org/what-we-do/us/statereport/>.
- 56 Joanna M Streck, Andrea H Weinberger, Lauren R Pacek, Misato Gbedemah, Renee D Goodwin; Cigarette smoking quit rates among persons with serious psychological distress in the United States from 2008–2016: Are mental health disparities in cigarette use increasing?, *Nicotine & Tobacco Research*, nty227, <https://doi.org/10.1093/ntr/nty227>



**INSPIRING  
TOBACCO-FREE  
LIVES**

900 G Street, NW  
Fourth Floor  
Washington, DC 20001  
202.454.5555

[truthinitiative.org](http://truthinitiative.org)

 /truthinitiative

 @truthinitiative