Tobacco Use and Addiction

Tobacco use – primarily cigarette smoking – is the leading preventable cause of disease and death in the United States.\(^1\) Tobacco contains nicotine, which is a chemical compound that leads to tobacco addiction.\(^2\) Nicotine produces pleasing physical and mood-altering effects in the brain.\(^3,4\) It is not the nicotine itself that causes disease and death; it is the many other chemicals, some carcinogens, that are used in cigarettes and other forms of tobacco.\(^4\) Tobacco use can affect the heart, secretion and effect of hormones, and the gastrointestinal system.\(^2,3\) It increases the risk of cancer (including mouth, lung, liver, and stomach cancer), and lung diseases such as chronic obstructive pulmonary disease (COPD), chronic bronchitis, and emphysema.\(^5\) In 2018, more than 34 million adults in the U.S. smoked cigarettes and every day, almost 2,500 young people under the age of 18 try their first cigarette.\(^6,7\)

## TODAY

480,000 people in the U.S. die each year as a result of effects from cigarette smoking.\(^1\)

42,000 people in the U.S. die each year from secondhand smoke.\(^8\)

58 million nonsmokers are exposed to secondhand smoke.\(^1\)

Research Delivers Solutions

There are many tools that can help people quit smoking, including counseling and the use of products, such as the nicotine patch, nicotine gum, bupropion, and varenicline, that lessen tobacco cravings.\(^10\)

Bupropion is a drug prescribed for smoking cessation and predates varenicline. Bupropion has been approved as an antidepressant by the FDA since 1985.\(^11\) Smokers are more likely to have a history of major depression than non-smokers.\(^12\) This led researchers in 1997, to conduct a clinical trial which showed that bupropion was also an effective drug for smoking cessation.\(^13\)

Varenicline is a key drug which lessens tobacco cravings and was discovered in 2005 by Pfizer Pharmaceuticals.\(^14\) Researchers discovered varenicline by making modifications to the chemical structure of a known natural inhibitor of the nicotine receptor.\(^15\) Varenicline works by limiting tobacco cravings and withdrawal symptoms and is now commonly used to help smokers quit smoking.\(^14,15\)

Another possible product is the exploratory compound cytisine. A study in the New England Journal of Medicine in 2014 concluded that cytisine in combination with brief behavioral support was superior to currently available nicotine-replacement therapy for quitting smoking, but users reported higher frequency of nausea, vomiting, and sleep disorders.\(^16\) Cytisine is currently in phase III clinical trials in the United States.\(^17\)

### COST

| $300 Billion: |
| $300 billion: the annual total cost of smoking-related illnesses in the U.S.\(^1\) |

| $170 Billion: |
| $170 billion of the overall $300 billion is spent on direct treatment of smoking-related disease in the U.S.\(^1\) |

The U.S. spends about 5 cents of each health dollar on research to prevent, cure and treat disease and disability. Do you think that this is too much, the right amount or not enough?

Source: A ResearchAmerica poll of U.S. adults conducted in partnership with Zogby Analytics in January 2020
Then. Now. Imagine.

THEN
In 1964, the Surgeon General of the United States issued the first report on smoking and health which concluded that cigarette smoking causes lung and laryngeal cancer.8

NOW
Thanks to research, we know that nicotine is the addictive agent in tobacco.9 This knowledge led to the development of nicotine replacement therapies to help people quit smoking.

IMAGINE
A world without tobacco addiction.

Percent Cigarette Use Among Adult Population By State (2017)25

25. “Map of Cigarette Use Among Adults | STATE System” CRC. 2019

Research!America 241 18th St S, Arlington, VA 22202 | 703-739-2577
www.researchamerica.org | info@researchamerica.org

The Albert and Mary Lasker Foundation is a founding partner in this series of fact sheets. www.laskerfoundation.org