

Press Release

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FOR IMMEDIATE RELEASE

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SAFE Glen Cove Coalition: NIDA Researchers Say Addiction to Nicotine in Tobacco Remains the Most Deadly Substance Use Disorder

According to researchers at the National Institute on Drug Abuse (NIDA), nicotine addiction is resulting in more than 480,000 deaths each year from tobacco-related diseases including lung cancer. Lung cancer is the most common cause of cancer death, but it is also one of the most preventable.

In the United States, smoking continues to decline in most groups. In 2021, just 12% of people were current smokers, down from 21% in 2005. But with one in five deaths each year attributable to smoking, more research and prevention interventions are required to reduce the impact of preventable cancers, including those caused by tobacco. As part of the 2023 State of the Union, the Biden-Harris Administration committed to expand smoking cessation services for Americans who want to access them. Developing new tools for smoking cessation and expanding access to and utilization of evidence-based interventions for nicotine addiction are central to this goal including that access to them is equitable.

Safe and effective pharmacotherapies and behavioral treatments already exist to help people quit smoking. Nicotine replacement therapies are available in several forms, including patches and over-the-counter gum that can ease nicotine craving without cancer-causing smoke. Varenicline and bupropion are prescription medications that can reduce nicotine cravings and withdrawal, and behavioral treatments like contingency management have been found to be effective at helping people quit. Combining behavioral treatments and pharmacotherapies may be most effective. And several promising new treatment approaches are also being studied and developed with NIDA funding.

For example, NIDA is working with Antidote Therapeutics, Inc. to complete preclinical studies of a human monoclonal antibody that binds to nicotine in the blood to prevent it from interacting with nicotinic receptors in the brain. Previous animal studies found that it reduced brain levels of nicotine and nicotine-induced increases in blood pressure.

Current NIDA research projects also include studies of noninvasive brain stimulation (transcranial magnetic stimulation, TMS) for tobacco cessation; a trial of the safety and efficacy of an infusion of the dissociative drug ketamine for tobacco use disorder; a multi-site randomized controlled

trial of the psychedelic drug psilocybin for tobacco use disorder; and trials of compounds with novel mechanisms of action in the brain, including a compound that interacts with a type of glutamate receptor (mGlu2) to reduce nicotine's reinforcing effects.

NIDA researchers are also conducting studies that could help identify individuals who would most benefit from targeted prevention interventions. They include studies of genetic factors underlying risk for nicotine addiction and other co-morbid mental health disorders, and studies to identify the role of vaping in combustible tobacco initiation. Research is also ongoing to assess how social determinants of health influence risk for smoking behaviors and nicotine addiction.

NIDA is prioritizing research addressing smoking-related health disparities and ways to promote quitting in diverse populations. These include a study of a Quitline texting program to promote smoking cessation among African Americans, a contingency management smoking-cessation intervention for pregnant women from ethnic minority groups, and TMS to promote smoking cessation in people with schizophrenia.

Smoking and its health consequences are most prevalent in American Indian/Alaskan Native (AI/AN) people, so NIDA is funding several projects focused on smoking cessation in AI/AN communities, including a family-based program that uses financial incentives to promote smoking cessation. A culturally tailored intervention called All Nations Breath of Life respects the sacredness of tobacco in AI/AN cultures as a way of discouraging recreational use, and NIDA is supporting research to adapt this intervention to being delivered via telephone.

Research is also needed to develop smoking cessation therapies for youth, since nicotine replacement therapies and bupropion are not approved for people under 18 and varenicline has not been approved for people under 16. The National Cancer Institute and NIDA have issued a funding opportunity announcement for initial studies that could lead to the design and development of behavioral smoking interventions for adolescents between 14 and 20 years old.

The science of whether vaping nicotine in e-cigarettes is effective in helping people quit smoking cigarettes is still evolving. A recent Cochrane review of 78 studies (with over 22,000 participants) found these devices to be more effective than nicotine replacement therapies in promoting quitting. A previous meta-analysis of real-world observational studies concluded that the use of e-cigarettes was not associated with smoking cessation, but results may have been affected by participants' intention to quit.

The National Institutes of Health, in partnership with the FDA Center for Tobacco Products, is currently funding several projects studying whether e-cigarettes are effective as potential harm reduction tools. NIDA is supporting studies to understand the effects on the body of exposure to e-cigarette vapor, including its effects on the lungs compared to standard cigarettes, and studies to measure other health indicators associated with switching from cigarettes to e-cigarettes, among other topics.

Recently, the White House convened a Forum on Smoking Cessation, consisting of a diverse group of leaders from government, advocacy groups, and medicine who are well positioned to expand access to evidence-based smoking cessation interventions for all groups who could benefit from them.

NIDA research will continue to be an important part of this objective, including by identifying ways to advance the reach of existing treatments for smoking cessation and developing new approaches to help people end or reduce their use of tobacco products.

NIDA is a component of the National Institutes of Health, U.S. Department of Health and Human Services. NIDA supports most of the world's research on the health aspects of drug use and addiction. The Institute carries out a large variety of programs to inform policy, improve practice, and advance addiction science. For more information about NIDA and its programs, visit www.nida.nih.gov.

SAFE, Inc. is the only alcohol and substance abuse prevention, intervention, and education agency in the City of Glen Cove. Its Coalition is concerned about tobacco use and vaping, seeking to educate and update the community regarding its negative consequences in collaboration with Carol Meschkow, Manager- Tobacco Action Coalition of Long Island. To learn more about the SAFE Glen Cove Coalition please follow us on [ww.facebook.com/safeglencovecoalition](https://www.facebook.com/safeglencovecoalition) or visit the Vaping Facts and Myths Page of SAFE's website to learn more about how tobacco use and vaping is detrimental to your health www.safeglencove.org.