

Health Promotion Weekly

01.30.2024

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SHOCKING STUDY FINDS:

E-cigarettes can be a safe alternative for pregnant women



BACKGROUND

Could e-cigarettes, often frowned upon, actually be the unforeseen hero for these mothers-to-be? An innovative study titled “Electronic cigarettes versus nicotine patches for smoking cessation in pregnancy: a randomized controlled trial” comes as a glimmer of hope in an era where public health issues like smoking during pregnancy are in dire need of creative solutions. This study daringly explores whether electronic cigarettes can be a secret weapon used to help women who are addicted to smoking, quit smoking safely and efficiently. To emphasize the gravity and prevalence of this issue, the Centers for Disease Control stated that “One in every five babies born to mothers who smoke during pregnancy has low birth weight. (2020)”. The motivation behind this research was the concerning data that associated smoking during pregnancy with severe health risks such as premature delivery, low birth weight, and other serious complications at birth.

Published on May 16, 2022, this study recruited 1,140 women, all over the age of 18 and all between 12 to 24 weeks pregnant. Their ethnicity, employment status, educational level, etc., although important factors used for analysis later on, were not a part of the criteria used to select who would be invited to participate in the study. What mattered most was that they were heavy smokers who couldn't survive without at least 10 cigarettes every day and they desired to stop smoking. This study truly put to the test the strength of both their willpower and the effectiveness of these smoking-substitute products, a feat not many other studies currently dared to do.

Once participants turned in a consent form, initial questionnaire, and a saliva sample, they were randomly placed into the e-cigarette study group (n=571) or the nicotine replacement treatment (NRT) patches study group (n=569). Participants were allowed to alter their products based on what group they were assigned. Those in the e-cigarette group could adjust the strength and flavor of the e-cigarette liquid, while those in the NRT patches group could change the strength of the patches and the type of products they used (i.e. nicotine chewing gum, inhalator, and mouth spray). Six checkpoints were administered via phone calls throughout the trial. After participants had given birth and provided saliva samples and carbon monoxide readings, they were compensated with 20 pounds.

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FINDINGS

The study found that e-cigarettes were more effective than nicotine patches in helping pregnant women stop smoking (6.8% versus 3.6%). Additionally, low birthweight in newborns was less frequent in those who utilized e-cigarettes compared to nicotine patches (14.8% versus 9.6%). Nicotine in late pregnancy did not seem to contribute to any adverse reactions in prenatal growth and had more bearable effects on mothers compared to nicotine replacement therapies. The results of this study found that utilizing e-cigarettes can be beneficial in all abstinence outcomes.



According to the US Surgeon General's report on "E-Cigarette Use Among Youth and Young Adults," the effects of e-cigarette toxicants indicate the use of ENDS (electronic nicotine delivery systems) is a fetal risk factor (2016). However, this study brought to life the positive benefits of using e-cigarettes rather than reverting to nicotine replacement therapies and the ease of not having to worry about serious birth complications.

Due to the use of cigarettes being such a significant risk for pregnant women and fetuses, researchers recognized the need for a study focused on replacement therapies rather than cessation. Research is still limited surrounding possible health consequences for pregnant women since parameters often vary widely concerning nicotine exposure during pregnancy. Previous trials and research were unable to identify if e-cigarettes and other nicotine replacement therapies were more effective, further emphasizing the need for improved studies. However, this study successfully identified that e-cigarettes are the safer alternative for pregnant women.

FUTURE

Some implications of the study were that it was difficult to get the saliva samples from the women, especially those who were still smoking while pregnant or had just given birth. This study also occurred during COVID-19, which significantly decreased the rate of sample return during the lockdown period. Additionally, there was an outbreak of lung disease in e-cigarette users (eventually traced to vitamin E acetate) in 2019, causing many to switch to regular cigarettes.

From an ethical standpoint, the participants were known by the researchers and were contacted about the study, which can create bias and also make the participants feel like they are being criticized over being smokers while pregnant.

This study was funded by the National Institute of Health Research, Health Technology Programme, but the funder had no role in the conduct or design of the study or had a say in if the study were to be published or not.

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