- Smoking

Study: Switch to non-combustible products lead to better vascular health among smokers

BusinessMirror · 7 May 2021 · B6

SWITCHING from cigarettes to non-combustible alternatives led to early benefits in vascular function among smokers who were covered by a U.K. study. This was based on the results of the randomized clinical study conducted by the University of Dundee for the British Heart Foundation (BHF).

Prof. Jacob George of Cardiovascular Medicine and Therapeutics at University of Dundee recently shared the results of the VESUVIUS Trial during the Virtual E-cigarette Summit: Science, Regulation and Public Health.

The study, supported by good-quality clinical trial data, looked at the acute impact of switching from cigarettes to e-cigarettes, with the results published by the Journal of the American College of Cardiology.

Within a month of switching, improvement was seen with both the electronic cigarette group compared to tobacco cigarettes, Prof. George said.

According to the BHF website, the researchers checked blood vessel function using a test called flow mediated dilation (FMD), which measures how wide a blood vessel can open when blood rushes through it. They also measured the stiffness of blood vessels. Both FMD and blood vessel stiffness provide a measure of blood vessel health and future risk of cardiovascular disease.

"Within 1 month of switching, the groups who swapped to e-cigarettes showed an improvement in their blood vessel health compared with tobacco cigarette smokers. In both groups that had swapped to vaping, FMD increased so that within a month they were about halfway towards achieving the FMD of healthy non-smokers," it said.

BHF also said it didn't seem to matter if participants were vaping e-cigarettes with or without nicotine and women seemed to benefit more than men.

E-cigarettes, along with heated tobacco products (HTPS) and snus are among the non-combustible alternatives to smoking that are considered part of tobacco harm reduction—a public health strategy which aims to provide alternatives to reduce risks caused by smoking cigarettes.

Results of scientific studies show that tar and carcinogens found in tobacco smoke, causes the death and disease associated with smoking, and not nicotine. The combustion of tobacco releases thousands of toxic chemicals.

HTPS are smoke-free devices that heat, instead of burn specially-designed tobacco units to release flavorful nicotinecontaining tobacco vapor. As the tobacco is not burned, the levels of harmful chemicals produced by these products are significantly lower compared to cigarette smoke.

Helen Redmond, adjunct professor at New York University-silver School of Social, earlier said that the introduction of HTPS as better alternatives to combustible tobacco would translate into public health gains.

Prof. George said that while e-cigarettes are not completely safe devices, "we now have good quality evidence from VESUVIUS that they are less harmful than tobacco cigarettes from a vascular health perspective".

Prof. Alan Boobis, emeritus professor of Toxicology at Imperial College London, said in the same virtual summit that electronic cigarettes pose substantially less risks to health than the impact of smoking conventional cigarettes.

"The evidence to date suggests that the risks posed by e-cigarettes to users is substantially less than that posed by conventional cigarettes, but at present the committee was unable to quantify by precisely how much less," he said.

Dr. Jamie Hartmann-boyce, managing editor of Cochrane Tobacco Addiction Group and senior research fellow at University of Oxford, reported on the latest Cochrane review of electronic cigarettes for smoking cessation. Cochrane reviews are accepted as the gold-standard for investigating the evidence of potential harms and benefits of healthcare interventions.

Dr. Boyce said that while the October 2020 update of Cochrane found increased evidence of benefit for e-cigarettes with nicotine when used to quit smoking, many policymakers remain reticent to encourage their use for the purpose, citing uncertainty.

"So the evidence suggests that e-cigarettes are substantially less harmful to health than smoking but not risk free, which is a statement that I think the overwhelming majority of experts would agree with," he said.