Medical Xpress

Heavier smoking linked to skyrocketing health risks

August 7 2020, by Candy Gibson

Credit: Unsplash/CC0 Public Domain

Each cigarette smoked a day by heavier smokers increases the risk of contracting some diseases by more than 30 percent, according to a new international study published today.

The Australian Center for Precision Health based at the University of South Australia led the study, which links heavier smoking with 28 separate health conditions, revealing a 17-fold increase in emphysema, 8-fold increase in atherosclerosis (clogged arteries) and a 6.5-fold higher incidence of lung cancer.

The findings, published in EClinicalMedicine, analyzed hospital data and mortality statistics from more than 152,483 ever smokers in the UK Biobank to look how heavier smoking affects disease risks. Ever smokers are people who have smoked in the past.

Chief investigator, UniSA Professor Elina Hypponen, says the risk of suffering respiratory diseases, cancers and cardiovascular diseases increased with each cigarette smoked per day.

The links between heavier smoking and emphysema, heart disease, pneumonia and respiratory cancers were particularly high, but the researchers also found associations with many other respiratory diseases, renal failure, septicaemia, eye disorders, and complications of surgery or medical procedures.

"Tobacco smoking is the leading preventable cause of death worldwide and smokers typically die 10 years earlier than non-smokers," Professor Hypponen says.

"Despite a global decline in smoking over the last 20 years, an estimated 20 percent of the world's population aged over 15 years are still smoking tobacco."

In the US alone, smokers number 40 million, with 16 million of those living with a disease caused by smoking. This costs their economy more than $300 billion per annum," Prof Hypponen says.

The most recent statistics from Australia show that about 13.8 percent of its adult population (2.6 million people) are daily smokers. Despite a 10 percent reduction since1995, smoking is estimated to kill 19,000 Australians a year, accounting for nine percent of the total burden of disease and $137 billion in annual medical costs.

Several known smoking outcomes, including stroke, were not identified in the study, which only counted cases above 200 for each health condition.

"We only looked at how heavier smoking further affects diseases risks in a group of people who are all at least past smokers, so compared to never smokers, the health effects are going to be even more notable. Other factors, including when people start smoking or how long they have smoked, may also affect the health consequences arising from smoking," Professor Hypponen says.

"In the past 20 years, the proportion of people smoking a pack or more per day has decreased in countries such as the US and Australia, while there has been an increase in those smoking less than 10 cigarettes per day. While this reflects progress, our study shows that each additional cigarette smoked matters, notably increasing the risks of cancer, respiratory, circulatory and many other diseases."

"Mendelian randomization case-control PheWAS in UK Biobank shows evidence of causality for smoking intensity in 28 distinct clinical conditions" is published in EClinicalMedicine.

More information: Catherine King et al. Mendelian randomization case-control PheWAS in UK Biobank shows evidence of causality for smoking intensity in 28 distinct clinical conditions, *EClinicalMedicine* (2020). DOI: 10.1016/j.eclinm.2020.100488

Provided by University of South Australia