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## **Quit smoking at age 60: Lower risk for heart attack and stroke within the first five years**

**Smokers increase their risk of heart attack and stroke with every cigarette they smoke. Furthermore, smokers who die from heart disease are, on average, five and a half years younger than non-smokers who die from it. Conversely, those who quit smoking, even past the age of 60, have a considerably decreased risk after only a few years. Scientists from the German Cancer Research Center (DKFZ) have now published their results from an analysis of data pooled from more than half a million individuals across Europe and the US.**

In the most comprehensive study ever on the impact of smoking on cardiovascular disease in older people, epidemiologist Dr. Ute Mons from the German Cancer Research Center (Deutsches Krebsforschungszentrum, DKFZ) analyzed 25 individual studies, compiling data from over half a million individuals age 60 and older.

Twice as many smokers die from cardiovascular disease than life-long non-smokers do. The increase in risk depends on the number of cigarettes that a person has smoked in his or her lifetime. After one quits smoking, this risk continues to decrease. On average, the risk for former smokers is only 1.3 times that of people who have never smoked in their lives.

Within the first five years after smoking one's last cigarette, the risk already decreases measurably. Even those who quit smoking past age 60 still benefit from the decreased risk of developing cardiovascular disease. However, the more time that has passed since one has quit, the more considerable the decrease in a former smoker's risk of dying from heart attack or stroke.

Since people often find it difficult to determine the relevance of relative risks, Mons and her colleagues also used an alternative method to assess the results of their meta-analysis: They calculated the number of years by which smoking accelerates death from heart disease. They found that the age of smokers who die from cardiovascular disease is, on average, five and a half years younger than people who have never smoked in their lives. By contrast, the age for former smokers drops to just over two years younger than life-long non-smokers.

"Therefore, it is never too late to stop smoking. Even people in the highest age group still gain considerable health benefits from it," says study head Prof. Hermann Brenner. "Many heart attacks and strokes, with all of their serious consequences, could be prevented this way."

Ute Mons, Aysel Müezziner, Carolin Gellert, Ben Schöttker, Christian C. Abnet, Martin Bobak, Lisette de Groot, Neal D. Freedman, Eugène Jansen, Frank Kee, Daan Kromhout, Kari Kuulasmaa, Tiina Laatikainen, Mark G. O'Doherty, Bas Bueno-de-Mesquita, Philippos Orfanos, Annette Peters, Yvonne T. van der Schouw, Tom Wilsgaard, Alicja Wolk, Antonia Trichopoulou, Paolo Boffetta and Hermann Brenner, on behalf of the CHANCES consortium: Impact of smoking and smoking cessation on cardiovascular events and mortality among older adults – Meta-analysis of individual participant data from prospective cohort studies of the CHANCES consortium. *British Medical Journal* 2015, DOI: 10.1136/bmj.h1551

The German Cancer Research Center (Deutsches Krebsforschungszentrum, DKFZ) with its more than 3,000 employees is the largest biomedical research institute in Germany. At DKFZ, more than 1,000 scientists investigate how cancer develops, identify cancer risk factors and endeavor to find new strategies to prevent people from getting

cancer. They develop novel approaches to make tumor diagnosis more precise and treatment of cancer patients more successful. The staff of the Cancer Information Service (KID) offers information about the widespread disease of cancer for patients, their families, and the general public. Jointly with Heidelberg University Hospital, DKFZ has established the National Center for Tumor Diseases (NCT) Heidelberg, where promising approaches from cancer research are translated into the clinic. In the German Consortium for Translational Cancer Research (DKTK), one of six German Centers for Health Research, DKFZ maintains translational centers at seven university partnering sites. Combining excellent university hospitals with high-profile research at a Helmholtz Center is an important contribution to improving the chances of cancer patients. DKFZ is a member of the Helmholtz Association of National Research Centers, with ninety percent of its funding coming from the German Federal Ministry of Education and Research and the remaining ten percent from the State of Baden-Württemberg.

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