

Smokers more than double their risk of burst aneurysm

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Smoking more than 20 cigarettes a day doubles the risk of a potentially fatal brain bleed as a result of a burst aneurysm, finds research published online in the *Journal of Neurology Neurosurgery and Psychiatry*.

If a smoker quits, the risk diminishes over time, but it still persists suggests the study.

An aneurysm is a bulge in a weakened artery, which, if it bursts causes blood to leak into the brain. The chances of surviving a ruptured aneurysm are only about 50% and those who do survive often live with disability for the rest of their life.

The researchers base their findings on 426 cases of brain bleeds (subarachnoid haemorrhage), drawn from 33 hospitals across Korea between 2002 and 2004, and a comparison group of 426 people, matched for age and sex, who had not sustained a [haemorrhage](#).

Detailed information on lifestyle, medical history and smoking habits were obtained from all participants whose average age was 50.

The number of smokers was greater in the brain bleed group, as were the proportions of those with a family history of stroke and [high blood pressure](#).

Just under 38% of those who had had a brain bleed were current smokers, compared with one in four (just over 24%) of those in the comparison group.

After taking account of influential factors, such as [salt intake](#), working hours, weight and family history of diabetes, smokers were almost three times as likely to have a brain bleed as non-smokers.

The impact of smoking was cumulative: the longer and more heavily a person had smoked, the

greater was their risk of a brain bleed.

[Quitting smoking](#) cut the risk of a ruptured aneurysm by 59% after five or more years—bringing it down to the level of non-smokers. But this was not the case among [heavy smokers](#).

Those who had smoked 20 or more cigarettes a day were still more than twice as likely to have a [ruptured aneurysm](#) as those who had never smoked.

The authors point out that previous long term research has indicated that the risk of an aneurysm in former smokers disappears after 10 to 15 years. But these studies either included only one gender and/or included too few people to draw firm conclusions.

In the short term, smoking thickens blood and drives up blood pressure, both of which can increase the risk of a brain bleed. These effects can be reversed by stopping smoking.

But smoking also induces permanent changes in the structure of artery walls, say the authors. These changes may be greater in heavy smokers, they say.

More information: Impact of smoking cessation on the risk of subarachnoid haemorrhage: a nationwide multicentre case control study Online First [doi 10.1136/jnnp-2012-302538](https://doi.org/10.1136/jnnp-2012-302538)

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