

# Aneurysms don't occur earlier in second generation

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People whose parents or aunts and uncles have had a brain aneurysm are more likely to have one themselves, indicating that genetic risk factors passed down by generation are responsible. Prior studies had suggested that aneurysm ruptures affect the offspring or second generation as much as 20 years younger than older generations. This suggests that a genetic risk factor is accumulating with each generation and that aggressive screening should be performed. But a new study shows that may not be the case, and the aneurysms actually may happen at an older age. The study was published in the February 24, 2009, print issue of *Neurology*.

The study involved 26 clinical centers in the United States, Canada, New Zealand, and Australia. Researchers identified 429 families with at least one case of a ruptured brain aneurysm. A brain aneurysm is a weak or thin spot in a blood vessel that can rupture, causing bleeding into the brain, or hemorrhage.

The researchers then evaluated all siblings in two generations of each family, for a total of 1,641 people. Of the 429 families, 54, or 12.5 percent, had cases of ruptured aneurysms in two generations of the family—either parent and child or aunt/uncle and niece/nephew.

Instead of occurring earlier, once the length of follow-up was accounted for, the study found that ruptured aneurysms tended to occur on average slightly later in life. Ruptured aneurysms were identified in the second generation 50 percent less often than the older generation of the family

but the study suggests that the second generation will "catch up" in the number of aneurysm ruptures as that generation gets older.

"This finding is contrary to previous studies, which have suggested that 'genetic anticipation' occurs in brain aneurysms, meaning that subsequent generations are affected at an earlier age," said study author Daniel Woo, MD, with the University of Cincinnati in Ohio and member of the American Academy of Neurology. "Our study accounted for a similar length of follow-up in both generations, which may explain the differing result and that the risk in subsequent generations is increased over their entire life, not just at a younger age. The finding also suggests that we should be looking for all types of genetic risks, not just those that accumulate over generations, which are a very small group of risk factors."

Source: American Academy of Neurology

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