

The contraceptive pill and HRT may protect against cerebral aneurysm

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Women who develop cerebral aneurysms are less likely to have taken the oral contraceptive pill or hormone replacement therapy, suggesting taking oestrogen could have a protective effect, reveals research published in the *Journal of NeuroInterventional Surgery*.

Cerebral aneurysms, weaknesses in the [blood vessel walls](#) of the brain which cause the vessels to balloon, occur more frequently in women, and it has been suggested that female hormones may play a role in their development. If the cerebral aneurysm ruptures, because the ballooning wall bursts, this can be life threatening and is known as a haemorrhagic stroke.

Oestrogen helps maintain the structure of [blood vessel walls](#) by promoting the division of [endothelial cells](#) within the vessel walls, which is important for repair if the vessels become damaged. However, oestrogen levels drop significantly at the menopause.

Women have been shown to be more likely to develop a cerebral aneurysms after the age of 40 years, and aneurysms are most likely to rupture between the ages of 50 and 59 years.

The authors asked 60 women with cerebral aneurysms about their use of the [oral contraceptive pill](#) and [hormone replacement therapy](#), and this was compared with usage in 4,682 other women drawn from the general public.

Women with cerebral aneurysms were found to have been significantly less likely to have taken [oral contraceptives](#) or [hormone replacement therapy](#). Women with cerebral aneurysms also had an earlier average age of menopause.

Previous studies have shown that use of the [oral contraceptive pill](#) protects against haemorrhagic stroke in later life, while women who start their periods early and/or do not have children are at greater risk.

Current medical management of unruptured cerebral aneurysms is limited and consists mainly of [smoking cessation](#) and [blood pressure control](#). The alternative is a surgical intervention, such as the insertion of a coil or placement of a clip, to try to control the aneurysm, and a lifetime of anxiety.

The authors say that the results of this study may not only provide additional insight into how cerebral aneurysms develop and progress, but more importantly may lead to new therapies for patients, either harbouring an unruptured cerebral aneurysm or at risk of developing one, that address their underlying vascular predisposition towards aneurysms.

Provided by British Medical Journal

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