Do birth control pills cause brain aneurysms? [1]

Alice,

Sadly, today I found out that a friend of my family has just passed away. The cause of her sudden death was a brain aneurysm. I have been researching brain aneurysms and have found out that oral contraceptives are thought to sometimes cause them. I am 19 and I am taking birth control, and now I am very worried. Can you give me some statistics about brain aneurysms linked to oral contraceptives? Thank you.

Answer

Dear Reader,

The sudden loss of a loved one can raise all sorts of scary questions, but rest assured that medical research has shown no relationship between brain aneurysms and oral contraceptives. Perhaps you're thinking about blood clots, which are similar to brain aneurysms and can possibly lead to stroke. Oral contraceptives have been associated with an increased risk of blood clots, although for otherwise healthy people assigned female at birth, this increased risk is still incredibly small. People with blood clots may experience swelling, pain, tenderness, redness of the skin, irregular heartbeat, anxiety, coughing up blood, very low blood pressure, or fainting. However, others may show or experience no signs or symptoms at all. Combined oral contraceptives, genetic clotting disorders, smoking, those 60 or older, prolonged inactivity, surgery, and cancer are risk factors of blood clots. Altogether, a closer look at the science behind aneurysms, as well as birth control and blood clots, may ease some of your distress.

To address your initial concern, most people with a brain aneurysm don't experience a ruptured brain aneurysm, and the use of hormonal birth control isn't associated with either a ruptured or unruptured brain aneurysm. A brain aneurysm is a bulge in an artery that supplies blood to the brain. This stressed section of the artery can rupture, leading to bleeding in the brain—a potentially debilitating or life threatening condition. Symptoms of an unruptured brain aneurysm may include shaky walking, speech impairment, double vision, facial numbness, and drooping or enlargement of only one eye. Brain aneurysms are more common in adults than in children and more common in those assigned female at birth than those assigned male at birth. Certain risk factors develop over time, such as aging, cigarette smoking, high blood pressure, illicit drug use, and heavy alcohol use. Others are inherited, including:

- Inherited connective tissue disorders
- Polycystic kidney disease
- Abnormally narrow aorta (the largest artery in the body)
- Cerebral arteriovenous malformation [2]
- Family history of brain aneurism

_List from Mayo Clinic [3]._

While there hasn't been research to connect brain aneurysms and birth control, some research has connected an increased risk of blood clots with the use of combination hormonal contraception. Moving forward, it may help to keep in perspective the risk of blood clotting associated with birth control. Many birth control pills are considered combination hormonal contraception (CHC) methods - birth control methods that contain both estrogen and progestin. Other research indicates that both the patch [4] and vaginal ring, which are also CHCs, have a higher risk of blood clots than most pills. One study found that those using the vaginal ring were 1.9 times more likely to have a blood clot and those using the patch were 2.3 times more likely to experience a blood clot [5] than people taking combination birth control pills. Increasing estrogen levels in the body also increases risk of blood clots. In addition, some studies suggest that the progestin hormones drospirenone and desogestrel may have the same effect. Scientists are still learning about the risk of progestin. It's key to keep in mind that although blood clots are generally rare, they may occur in healthy people, even those not taking CHCs. Research estimates that between one and five of every 10,000 people assigned female at birth (who aren't pregnant and not using CHCs) will experience a blood clot in any given year.

The good news is that there are multiple contraception methods that don't contain estrogen and aren't associated with a higher risk of blood clots. These methods include the birth control implant [6] and intrauterine devices [7] (IUDs). The birth control shot [8], progestin-only pills, condoms [9], diaphragms [10], and emergency contraception [11] don't contain estrogen. While this risk is relatively small, it's best for patients who are concerned about their risk of blood clots to see a health care provider and discuss their contraceptive options. Additionally, you can learn more about these contraceptive options in the Contraception [12] section of the Go Ask Alice! Sexual & Reproductive Health [13] archives.

Take care,

Alice!

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