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Can the COVID vaccine affect the menstrual cycle?

Following the rollout of COVID-19 vaccines across the country, there have been reports of people's periods changing in some way after their jabs. This has understandably caused concern, among young women in particular. So are COVID-19 vaccination and period changes linked, and if so should you be worried?

The most common changes people have reported have included delays to periods, heavier periods than usual and unexpected bleeding, as well as increased fatigue and nausea around the time of their cycle.

Putting the figures into perspective

The 30,000 reports of disruptions to periods after COVID-19 vaccines to the UK's Medicines and Healthcare products Regulatory Agency (MHRA) received since the vaccine programme was introduced in January might sound concerning. But statistics can be misleading. That same statistic means that with over 93 million vaccines given so far in the UK (half to women), 99.97% of women haven't reported any change.

Link or coincidence?

Importantly, reports to the MHRA don't by any means mean that the vaccine actually caused the possible side effect. Irregular, heavier or lighter periods are extremely common and under normal circumstances wouldn't be reported to anyone. The MHRA will be comparing whether the number of people reporting changes is any higher than the number of those in the unvaccinated population who would be expected to experience similar changes.

If there is a link, should people be worried?

The next question to ask is whether a change to periods, if it is due to vaccination, should be a cause for concern. A short term change in the heaviness or regularity of periods almost always settles on its own among those who haven't been vaccinated. The obvious questions are:

- Will any change be temporary or long term?
- Will this have an impact on the effectiveness of my contraception?
- Could it affect my fertility in the longer term?

Can the vaccine affect fertility?

Dr Mountfield says there is no evidence to suggest temporary changes to a person's period after their vaccine will have any impact on their future fertility, or their ability to have children.

Writing for BMJ, Dr Viki Male, a lecturer in reproductive immunology, confirms that, in clinical trials, unintended pregnancies occurred at similar rates in vaccinated and unvaccinated groups.

Elsewhere, Dr. Sarah Hardman, Specialty Doctor SRH, Menopause Lead Chalmers Centre, and Co-Director of the FSRH Clinical Effectiveness Unit also says there is no indication that the effectiveness of hormonal contraception is affected by the COVID-19 vaccine.

RCOG calls for more research to understand why people may have experienced changes in their menstrual cycle after the COVID-19 vaccine. They also highlight that potential side effects on menstruation should not be an afterthought in future medical research.

They say clinical trials should actively seek out this information, as participants are unlikely to report any changes in their period unless someone specifically asks them.

"Information about menstrual cycles and other vaginal bleeding should be solicited in future clinical trials, including trials of COVID-19 vaccines."

How could the vaccine alter people's menstrual cycle?

Dr Jackie Maybin, Senior Clinical Research Fellow and Consultant Gynaecologist said: "It is very difficult to know if these changes are a direct effect of the vaccine itself or are due to wider effects of the pandemic. Menstrual disturbance has also been reported in those experiencing acute COVID-19 and long COVID." In addition, stress is an extremely common cause of disruption to periods, and many people have been going through a very stressful time during the pandemic.

Dr Maybin said the mechanisms causing effects on menstruation are difficult to properly identify, as they may differ from person to person.

"Menstrual disturbance may be due to effects on the part of the brain that controls the reproductive hormones, effects on the ovaries or effects directly on the lining of the womb, which is what is shed during a period."

They also explain the science behind changes in menstruation following vaccination.

"In times of stress, the internal reproductive system is designed to temporarily downregulate to prevent pregnancy and conserve energy. This effect may explain some of the changes in menstruation, with COVID-19 or with vaccination."

Dr Maybin suggests that inflammation as a result of the COVID-19 vaccine (which is designed to help the immune system protect against infection in the future) could affect the ovaries in the short term. As this might alter their hormone production over one or two cycles, people might have irregular or heavier bleeding while on their period.

The inflammation may also temporarily alter how the womb lining breaks down and sheds, causing a heavier period.

The Royal College of Obstetricians and Gynaecologists (RCOG) says that any changes in menstruation following a vaccine are likely to be a result of an immune response to vaccination, rather than a specific component of the vaccine itself.

When will your period go back to normal?

Dr Maybin stresses that if there is an effect from the vaccine, it should only lead to temporary changes that revert back to normal spontaneously within a short space of time.

"It is important to emphasise that any effects of the vaccine are likely to be short-lived and much less severe than those associated with COVID-19 infection," they reassure.

Dr Jo Mountfield, Vice President of the RCOG, understands that any changes to periods following a COVID-19 vaccine can be concerning.

Therefore, they encourage anyone who experiences heavy bleeding that is unusual for them, especially after the menopause, to speak to a healthcare professional.

Real-life stories

29-year-old *Kelly had her first Pfizer dose on May 7, after which her period was very light for four days before her flow increased for a further five days. Following her second dose on June 18, her period was nine days late. In the three months since then, her periods have either been late compared to normal for her or very light.

Becky, 21, had her first Pfizer dose on 24th February whilst on her period.

"My periods since the second jab in May have been irregular and have been anywhere between a 22 to 28-day cycle. Prior to this, my cycle was 28-30 days on average. They have also varied in how heavy they are and sometimes the blood was a different consistency to usual," she explained.

To put this into perspective, while the average menstrual cycle is 28 days, a cycle between 24 and 35 days is common and considered normal.

Should you still get the COVID-19 vaccine if you're worried about changes to your period?

RCOG assures that those who are called for their vaccine shouldn't be deterred from attending.

They say it is especially important to get vaccinated if you are planning a pregnancy, as those who are pregnant are more at risk of becoming seriously ill from COVID-19.

*names changed

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