

Impact of Birth Control Pills on Reproductive Health and Menstrual Cycle

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ABOUT THE STUDY

In Vitro Fertilization (IVF) has transformed the field of reproductive medicine, offering hope to couples facing infertility challenges. One key aspect of the IVF process is the practical use of birth control pills, commonly known as oral contraceptives, to improve the chances of a successful pregnancy. IVF is a fertility treatment that involves fertilizing an egg with sperm outside the body, in a laboratory. The resulting embryo is then implanted in the uterus to establish a pregnancy. The success of IVF depends on various factors, including the quality of the eggs, sperm, and the woman's overall reproductive health. To improve these factors, fertility specialists often incorporate birth control pills into the treatment plan.

Purpose of birth control pills in IVF

The use of birth control pills in the IVF process does not aim to prevent pregnancy. Instead, their purpose is to regulate and coordinate the menstrual cycle of the woman undergoing IVF. By doing so, fertility specialists can better control and manipulate the timing of various stages in the IVF cycle, leading to improved outcomes. These pills destroy the natural hormonal fluctuations in the menstrual cycle. The suppression of the natural cycle helps prevent the premature release of eggs and allows for a more predictable response to fertility medications.

Ovarian suppression: One of the key goals during the initial phases of IVF is to prevent the spontaneous release of eggs from the ovaries. Birth control pills help suppress ovulation, ensuring that the ovaries remain inactive and that eggs are not released prematurely. IVF involves multiple steps, including ovarian stimulation, egg retrieval, fertilization, and embryo transfer. By using birth control pills to prevent the natural menstrual cycle, fertility specialists can normalise and plan these treatment cycles more effectively. This regulation allows for better control over the timing of each phase of the IVF process.

Menstrual Cycle Synchronization

The process often begins with the administration of birth

control pills. These pills contain hormones that help regulate and suppress the natural menstrual cycle. So, they create a controlled and expected starting point for the IVF treatment. Once the menstrual cycle is suppressed and coordinated among multiple patients or within a specific time, the fertility clinic can plan and coordinate various stages of the IVF process more effectively. After this phase, the next step in IVF is often ovarian stimulation. During this phase, fertility medications are administered to stimulate the ovaries to produce multiple eggs. Synchronizing menstrual cycles helps confirm that patient's start the ovarian stimulation phase simultaneously, allowing the medical team to monitor and control the process more efficiently. Following ovarian stimulation, eggs are retrieved and fertilized to create embryos. Synchronized menstrual cycles allow for better planning of these critical stages. Once embryos are ready for transfer, the timing is coordinated with the recipients' or the gestational carrier's menstrual cycle for embryo transfer. It improves the efficiency of IVF treatments by reducing the possibility of development fights and allowing for better coordination of the various procedures involved. Once ovarian suppression is achieved, the next step is ovarian stimulation. Fertility medications are administered to stimulate the ovaries to produce multiple eggs. The use of birth control pills helps regulate the timing of this stimulation phase, allowing fertility specialists to improve the number and quality of eggs retrieved during the succeeding procedures.

Individual response

Individuals may have different sensitivities to the hormones present in birth control pills. Some may experience side effects such as breast inflammation, mood changes, or nausea, while others may tolerate the hormones well. Pre-existing health conditions can influence how a person responds to birth control pills. For example, women with certain medical conditions, such as hypertension or a history of blood clots, may need a different type of contraceptive or an alternative formulation. Genetic variations can impact how the body metabolizes and responds to hormones. Some individuals may metabolize hormones more

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efficiently, while others may show side effects. Genetic factors can also influence the risk of developing conditions like blood clots in response to hormonal contraceptives. Lifestyle factors such as diet, exercise, and stress can also influence how an individual responds to birth control pills. For example, interactions with certain medications or changes in daily habits can affect the effectiveness of the contraceptive.

CONCLUSION

The use of birth control pills in IVF features the accuracy and complexity of Assisted Reproductive Technologies (ART). From

being a method of contraception, birth control pills play a vital role in improving the various stages of the IVF process. By carefully regulating the menstrual cycle, coordinating multiple participants, and facilitating controlled ovarian stimulation, birth control pills contribute to the overall success of IVF treatments. As the field of reproductive medicine continues to advance, ongoing research and technological innovations will likely refine and improve the role of birth control pills in IVF. Couples considering IVF should consult with experienced fertility specialists to develop personalized treatment plans that address their unique needs and circumstances, ensuring the best possible chances of a successful and healthy pregnancy.