



## **New Research: Depo Provera and STD Risk**

*A recent study compared rates of chlamydia and gonorrhea infection among women choosing Depo Provera or oral contraceptives with those not using hormonal contraception at two clinics in Baltimore, Maryland.<sup>1</sup> A total of 819 women participated in the four-year study, which was conducted at two sites – an inner-city facility with a largely minority clientele and a suburban clinic serving primarily white, college-educated women. Participants were interviewed, given physical exams, and tested for chlamydia and gonorrhea at three, six, and twelve months after enrollment. Women who chose to enroll in the study received standard contraceptive counseling, which includes information on protection against both pregnancy and STDs.*

### **What was the purpose of the Baltimore study?**

The study sought to determine whether there is a connection between using hormonal contraceptives and acquiring bacterial sexually transmitted infections (STDs). Researchers explored whether women using the quarterly progesterone shot Depo Provera or daily oral contraceptive pills containing estrogen and progestin were more likely than women choosing not to use a hormonal contraceptive to contract chlamydia or gonorrhea, two of the most common, curable bacterial STDs. Researchers were also interested in finding out whether any increased rates of chlamydia or gonorrhea among hormonal contraceptive users could be explained by cervical ectopy – a condition that occurs when the thinner, glandular layer of cells typically found inside the cervical canal appear on the outside of the cervix, possibly making it more susceptible to infection.

### **What did the study find?**

Women who chose Depo Provera for their method of contraception had higher rates of chlamydia and gonorrhea over the course of a year, when compared to those who did not use a hormonal birth control method. The findings suggest that women who chose to use Depo Provera experienced a three-fold increase in the risk of acquiring these two STDs. Researchers did not find a statistically significant increase in the risk of infection among women using the Pill, although the study did not rule out the possibility that such a connection might exist. The study also found that rates of cervical ectopy were not different among Depo Provera users when compared to non-hormonal contraception users.

### **Does this study show that Depo Provera causes chlamydia or gonorrhea?**

No. No method of contraception – including Depo Provera – causes these infections, which cannot occur unless specific types of bacteria are present. Although researchers in this study found higher rates of infection among women using Depo Provera, they could not confirm a direct link – or “cause and effect” relationship – between the two. In fact, researchers do not yet know *why* these women were more likely to contract chlamydia or gonorrhea.

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<sup>1</sup> Morrison, Charles S et al., “Hormonal Contraceptive Use, Cervical Ectopy, and the Acquisition of Cervical Infections,” *Sexually Transmitted Diseases*, September 2004 Vol. 31, No. 9, p. 561-567.

**Are there other factors that could account for the higher rates of STDs among women using Depo Provera?**

Yes. The study authors found that there were other, independent risk factors associated with chlamydia or gonorrhea infection, including younger age, being of a nonwhite ethnicity, obtaining services at the inner-city facility, and having multiple sex partners. The authors also note that women with cervical ectopy could have an independent risk of becoming infected. While researchers found higher rates of infection among Depo Provera users even after they accounted for these factors, it is still possible this association could be explained by some other factor or characteristic not measured in the study.

**Isn't a study that reports a 3-fold increase in the risk of acquiring an STD a cause for concern?**

Ultimately, a woman's risk of infection is based on her exposure to the STD in question. A woman who is in a mutually faithful, monogamous relationship with an uninfected partner is not at increased risk if she uses Depo Provera. There is also little chance of infection for a woman who relies on Depo Provera to prevent pregnancy, but also uses condoms consistently and correctly. In other words, this study is an important reminder that if a woman chooses a contraceptive other than condoms as her primary means of preventing pregnancy, she needs to honestly evaluate her STD risk and assess how best to protect herself against infection.

**Should women at risk for STDs stop using Depo Provera?**

Not necessarily. Depo Provera is still an important option for many women who need reliable, long-term birth control that leaves little room for mistakes or accidents to happen (such as missing a Pill). However, women at risk for STDs who use Depo Provera and other hormonal contraceptives to prevent pregnancy should consider other ways to reduce their exposure to these infections – such as using condoms correctly and consistently and limiting the number of their sexual partners. Women who are not able to take these measures – or do not have access to STD screening and treatment – may want to consider choosing a contraceptive method that is not associated with increased rates of infection.

**Should health care providers restrict Depo Provera use to women who are not at risk for STDs?**

No. The findings of this study do not justify preventing a woman from choosing this safe, highly effective contraceptive method if she determines it is her best option to prevent pregnancy. Health care providers should be sure to remind women that Depo Provera – like any contraceptive method other than condoms – does not protect against STDs. And a woman who is sexually active – but not in a monogamous relationship with an uninfected partner – should continue to be educated about the importance of using condoms, getting tested and treated for STDs, and limiting the number of partners to reduce her risk of infection, regardless of which birth control method she is using.

**What were the strengths of the Baltimore study?**

This was a prospective study, designed specifically to evaluate the association between hormonal contraception and cervical infection over a one-year follow up period. Only women initiating use of Depo Provera or oral contraceptives (rather than existing users) were eligible to participate, and researchers enrolled large numbers from a diverse population seeking reproductive health services. The study also used careful measures to gauge contraceptive use –

monthly self-reports compared against clinic records – and highly sensitive tests for infection as well as cervical ectopy.

**What were the limitations of this study?**

Researchers noted that ethical and practical considerations prevented them from using a randomized, case-control design, which is considered the research “gold standard.” The women enrolled in the study came to the clinics seeking birth control – usually with a particular method in mind. Evidence shows women who are given their first choice in birth control method are more likely to use it. Participants were allowed to choose their contraceptive method, rather than being randomly assigned one of the three methods being studied. Because the women who chose Depo Provera may differ from women who chose the alternate methods, other characteristics – as yet unidentified – may place Depo Provera users at a higher risk of contracting chlamydia or gonorrhea.