# Depo-Provera

## Does this Contraceptive Choice Support the Health and Well-Being of Adolescents and Young Women?

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*Depo-Provera approuvé par Santé Canada comme contraceptif en 1997 est une méthode contraceptive très controversée qui est utilisée par les jeunes femmes et les adolescentes. Deux événements récents remettent en question ce choix de contraceptif à cause des effets sur la santé des jeunes filles et leur bien-être.*

Two recent events challenge common beliefs held in the sexual and reproductive health community concerning reproductive choice and health and wellness for adolescents and young women.

The first was a scientific forum, co-sponsored by the Society for Menstrual Cycle Research (SMCR), titled "The Menstrual Cycle is a Vital Sign" held at the New York Academy of Sciences on September 21, 2004. Elizabeth Kissling, Ph.D., a communications professor at Eastern Washington University, board director of SMCR and current chair of the board for Planned Parenthood of the Inland Northwest, began the session with an overview of how menstruation is represented in the media. She was followed by several leading medical experts who presented research-based evidence to demonstrate why the menstrual cycle is a critical indicator of women's overall health.

The main point? When a woman's menstrual cycle does not function within normal parameters, her general health is at risk because multiple body systems are impacted by menstrual dysfunction. At this forum, Dr. Paula Hillard, director of women's health for the College of Medicine at the University of Cincinnati, suggested that menstrual disorders in teenagers should be evaluated for factors that may be interfering with normal maturation of the reproductive system prior to management with medications such as oral contraceptives.

The second event was a "black box" warning[2] issued November 17, 2004 by the U.S. Food and Drug Administration (FDA) concerning Depo-Provera Contraceptive Injection. Depo-Provera, given by injection once every three months, prevents pregnancy by interfering with normal maturation of eggs in the ovaries, altering cervical mucus and suppressing the normal production of estrogen, progesterone and testosterone.

The warning? Long-term use (defined as two years or more) of Depo-Provera is associated with significant bone mineral density loss that may not be reversible. The drug, approved for use in Canada as a contraceptive in 1997, has doubled in use between 1999 and 2003. In 2003 almost 625,000 prescriptions were written for Depo-Provera (Picard). Many, if not the majority, of them were for teenagers and women in their 20s.

How does the sexual and reproductive health community analyze the significance of these two events? Does the research showing how female health is predicated on a fully functioning menstrual cycle raise questions we would rather not examine? When, if ever, should our commitment to reproductive choice defer to the health and wellness of the adolescents and young women we serve?

The menstrual cycle as a vital sign and the use of Depo-Provera as a contraceptive constitute two ends of a continuum. At one end is normal menstruation, a critical indicator of women's overall health. At the other is complete menstrual suppression, or dysfunction, induced by a drug that shuts down normal reproductive endocrine function. Along the continuum is a range of menstrual disorders caused by hormonal imbalances due possibly to diet, exercise, life style, stress, inherent factors or those induced by other hormonal contraceptives such as the pill or patch.

This continuum is a valid topic for discussion because of the often ignored truth that birth control drugs were and are developed to purposely disrupt a healthy functioning system. Hormonal contraception works by disrupting the menstrual cycle to induce temporary infertility. We accept this dysfunction, and the side

effects that can ensue, for the major benefit of pregnancy prevention. But what if there comes a point at which the costs to women's health outweigh the benefits?

It is instructive to first understand what health benefits accrue to women who ovulate and menstruate regularly. In a letter to Dr. Susan Rako, that serves as an introduction to Rako's book *No More Periods?*, Winnifred B. Cutler, president and founder of the Athena Institute for Women's Health in Pennsylvania, provides this summation:

> All sex hormones affect physiological systems, including cardiovascular health, bone metabolism, cognitive functions, sexual response, and sexual attractiveness. The fertile menstrual cycle serves more than just the next generation. A fertile pattern of hormonal secretions promotes general health and well-being. This coordinated pattern is well illustrated in a graceful sequence of fluctuating ebbs and flows of blood-borne hormones secreted by the ovary: estrogens, progesterone, and testosterone. And with this rhythmic cyclic alteration in sex hormones come consequent alterations in psychodynamic events, such as dreaming, energy, and cognition. (13)

The book explores the research on the health impacts of menstruation, documenting the benefits to women's health. The heart protective benefits of normal periods include the depletion of excessive stored iron and a regulatory mechanism for blood pressure. Other benefits include pheromone production to influence sexual attraction to immunologically suitable partners and strong immune function to fight off infection (think STIs) (Rako).

T. S. Wiley, in *Sex, Lies and Menopause,* exhaustively corroborates how "in the hormonal interplay of progesterone and estrogen during the menstrual cycle, nature gives us the prescription for health" (29). The author demonstrates how rhythmic cycling of these two hormones protects young and pre-menopausal women from cancer, heart disease, Alzheimer's, and osteoporosis.

If regular ovulatory menstruation plays such an important part in maintaining overall health then what are the potential repercussions of a drug like Depo-Provera? First, and perhaps most critically, there is significant bone loss that may not be completely reversible. A 1996 study examined bone density among adolescents receiving different forms of hormonal contraception along with that of control subjects. Results showed that "after two years, bone density increased a total of 9.3% in Norplant users and 9.5% in control subjects but decreased a total of 3.1% in Depo-Provera users" (Cromer *et al.* 671). This translates to a net bone loss of about 12 per cent over two years in the Depo-Provera users when compared to the bone density gains measured in the non-Depo subjects.

In a 2003 paper, Barbara Cromer writes:

> There remains substantial concern about the potential compromise of peak bone mass in very young women. As the best treatment for osteoporosis is prevention and one approach to prevention is by optimizing bone mass, we need to make every effort to maximize this process. (354)

Providing Depo-Provera to young women who should be building, not losing bone mass undermines this strategy.

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Other acknowledged and potential side effects of Depo-Provera range from the annoying to the alarming.

Health Canada has received 480 reports of suspected adverse reactions in women taking Depo-Provera since its approval in 1997. These reactions included vaginal and uterine hemorrhage, excessive menstrual bleeding, facial paralysis, memory loss, ectopic pregnancies, suicidal tendencies, depression, nervousness, anxiety and panic reactions (Kirkey A14).

In *No More Periods?* Rako provides a long list of other adverse reactions. Although this drug effectively (99.7 per cent) prevents pregnancy, taking it can be decidedly unpleasant to say the least.

Headaches are the most common side effect. Abdominal distress including pain, nausea, bloating and constipation are common because Depo-Provera loosens the tone of the muscles in the gastrointestinal tract.

Though complete menstrual suppression occurs in many women, bleeding and spotting can precede amenorrhea. Women can experience no bleeding, spotting, unpredictable bleeding, or nonstop bleeding.

One acknowledged outcome of Depo-Provera use is the time delay (three to 18 months or longer) after

the last shot for a full return to fertility. This recovery time can be, for some women, fraught with distressing health problems for which no apparent treatment protocol exists.

Weight gain is extremely common and more extreme in teenagers than adult women. Many women discontinue the drug for this reason.

The depressive effects of Depo-Provera are well known. Severe depression, anxiety, and paranoia have all been reported. Some women experience symptoms while on it, others experience depression after stopping the drug.

Hot flashes, vaginal dryness, and other menopausal symptoms experienced by some women are directly due to the "bottomed-out levels of estrogen and testosterone" (Rako 110) that are also responsible for loss of bone density. Loss of desire for sex and loss of sexual sensitivity are also subsequent to hormonal depletion.

Herein lays the irony of Depo-Provera use by young women. The drug induces the hormonal profile of a menopausal woman and with it the potential to experience the full constellation of symptoms (once thought to be all in women's heads) that can so diminish the quality of life for women in mid-life and beyond.

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These negative side-effects cause many women to stop using the drug, but others tolerate them, often not aware their symptoms are related to their choice of contraceptive. The other irony? Women who tolerate Depo-Provera best are most likely to take it long-term and, therefore, are most at risk for significant and potentially irreversible bone loss.

There may well be some appropriate reasons for using Depo-Provera, such as severe endometriosis, proven contraindication for estrogen-based contraceptives or exceptional life circumstances. But what are some of the main reasons its use by North American adolescents and young women has skyrocketed in the last few years?

*It is convenient:* you don't have to remember to take a pill every day. *It will suppress menstruation:* no more pesky periods. *It is discreet:* your parents won't find out you're on birth control. Good reasons? Or just successful marketing messages?

Considering the many evident and potential ill effects of using this drug, it may be time to reassess the suitability of Depo-Provera as a first choice contraceptive by teenagers or a convenient, discreet method of choice for young women.

In June 2005, the SMCR will host its 16th conference: "Menstruation: The Fifth Vital Sign." If the medical profession adopts the society's position that the menstrual cycle is a vital sign for women, the sexual and reproductive health community may be compelled to rethink how far along the continuum we are prepared to go to prevent unintended pregnancy.

Sexual health care providers and educators must surely consider themselves to be stewards of young women's health. When our commitment to reproductive choice takes precedence over the general health and well-being of the young women we serve, then hard questions must be asked.

If Depo-Provera has such capacity to harm women's current and future health and well-being, and if we must now acknowledge that using the drug for more than two years is not advisable, then the first question becomes: When, if ever, should young women choose Depo-Provera?

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[1]Seehttp://MenstrualCycleVitalSign.com, full proceedings of web cast available on CD.
[2]http://www.fda.gov/bbs/topics/ANSWERS/2004/ANS01325.html

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