Intrauterine Devices and Other Forms of Contraception: Thinking Outside the Pack

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KEYWORDS

• Contraception • Intrauterine devices • Subcutaneous implants • Barrier methods
• Emergency contraception

KEY POINTS

- Intrauterine, subdermal, injectable, patch, and ring contraceptive methods are as effective or more effective than combined oral contraceptive pills.
- Intrauterine devices and subdermal implants are highly effective, long-acting, reversible contraception options that are preferred for women of all ages, including adolescents, nulliparous women, and women with multiple sexual partners.
- Explaining pregnancy rates for typical use versus perfect use is important when discussing contraception with patients.
- Patients should be advised of all side effects, including impacts on sexual desire and the risk of acquiring a sexually transmitted infection, for all hormonal and nonhormonal contraceptive methods.
- Emergency contraception is available, safe, and effective for up to 120 hours after an unprotected sexual encounter in nonpregnant women.

INTRODUCTION

At present about half of all pregnancies are unplanned or ill timed.[1] Half of unintended pregnancies are caused by contraceptive failure because of incorrect or inconsistent use.[2] Highly effective contraception is important for reducing the unintended pregnancy rate in the United States and has been listed as a top priority by the Centers for Disease Control (CDC) as a winnable battle to reduce the teen pregnancy rate.[3]

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Most women discuss contraception with their primary care provider and inquire about the convenience of the contraceptive method, the amount of time or effort needed to use the method, side effects, return to fertility after cessation, potential noncontraceptive benefits, and the impact on sexual function.

This article discusses options for contraception other than oral contraceptive pills, including new recommendations that expand the use of the highly effective intrauterine devices (IUDs). **Table 1** and **Fig. 1** summarize the methods grouped into 5 categories: long-acting, reversible contraception (LARC; IUD, implant), sterilization, other nonoral hormonal contraception (injection, ring, patch), barrier methods (condoms, diaphragm, cervical cap), and other methods (withdrawal and fertility-based awareness). It provides details on their efficacy, time to efficacy, and return to fertility. After a brief discussion of the impact of contraception on sexuality, it closes with information on emergency contraceptive options for women who have unprotected intercourse and do not desire a pregnancy.

LONG-ACTING REVERSIBLE CONTRACEPTIVE: INTRAUTERINE DEVICES AND SUBDERMAL IMPLANTS

Women who use combined oral contraceptives (COCs), the patch, and the ring have a 20-fold increased risk of method failure compared with women who use long-acting reversible contraceptives (LARCs).[4] Moreover, in one study, women less than 21 years of age who used COCs had almost twice the rate of unintended pregnancy of older women using the same method.[4] Despite these high failure rates with COCs and low failure rates with IUDs, less than 10% of women in the United States use an IUD or implant.[4,5] The Contraceptive Choice project showed that, in the absence of knowledge, financial, or logistical barriers, women chose LARC methods more than any other contraceptive method.[6] Addressing these barriers could increase rates of use for these highly effective methods.

Two IUDs and 1 subdermal implant are available: the copper T280A IUD (Paragard), the levonorgestrel (LNG) IUD (Mirena), and the etonogestrel subdermal implant (Nexplanon, formerly Implanon) (**Table 2**). An additional low-dose LNG IUD (Skyla) was US Food and Drug Administration (FDA) approved in 2013 for prevention of pregnancy for 3 years, but because of limited data and clinical evaluations it is not discussed in this article.[7]

- The T-shaped copper IUD is made of polyethylene and has 380 copper coils wrapped around the stem and arms.[8] This method is useful for women who cannot or do not want hormonal methods.
- The LNG-IUD, also T shaped, releases a small amount of progesterone locally to the intrauterine tissue, causing atrophy.[9]
- The etonogestrel subdermal implant is about the size of a matchstick. Inserted in the groove between the biceps and the triceps muscle on the underside of the upper arm, the implant provides a controlled release of progestin, inhibiting ovulation.[8]

Table 2 lists the duration of efficacy, mechanism of action, approximate cost, timing to initiate, contraindications, and common adverse side effects for each of these long-acting reversible methods.

The American Congress of Obstetricians and Gynecologists (ACOG) recommends encouraging LARC use for most women, including nulliparous women; those with a history of sexually transmitted infections, pelvic inflammatory disease (PID), or ectopic pregnancy; and adolescents to reduce unplanned pregnancies.[8] Typical use pregnancy rates for the implant are the lowest of the LARCs, at 0.05 per 100 women in