Intrauterine Device and Adolescents

ABSTRACT: The intrauterine device (IUD) is highly effective and widely used by women throughout the world. Data support the safety of IUDs for most women, including adolescents. This document addresses the major benefits of IUD use in adolescents, a population at particular risk of unintended pregnancy.

Intrauterine devices (IUDs) are used by fewer than 3% of reproductive-aged women in the United States (1). Concerns about pelvic inflammatory disease (PID), sexually transmitted diseases (STDs), infertility, and difficult insertion have limited the use of the IUD in adolescents. Data support the safety of IUDs for most women, including adolescents. The World Health Organization supports the use of intrauterine contraception in women from menarche to age 20 years, stating that the benefits of intrauterine contraception generally outweigh the risks (2).

Importance of Appropriate Contraception

Approximately 29% of ninth graders and 62% of 12th graders have engaged in intercourse (3). Sexual activity and inconsistent contraceptive use contribute to the high rate of adolescent pregnancy in the United States, which exceeds that of other industrialized countries (4, 5). Intrauterine devices offer the long-term, cost-effective, highly reliable, and effective contraception needed by women, especially adolescents (6, 7).

Common Misperceptions

The Intrauterine Device Does Not Increase an Adolescent’s Risk of Pelvic Inflammatory Disease and Sexually Transmitted Diseases

Past experiences with the Dalkon Shield have perpetuated the myth that IUDs cause pelvic infections. The studies that showed a causal relationship between pelvic infection and IUDs were fraught with methodologic errors. Confounding factors included inappropriate comparison groups, overdiagnosis of salpingitis in IUD users, and inability to control for the effects of sexual behavior, leading to an exaggeration of risk estimates (8). Ongoing research continues to demonstrate the safety of modern types of IUDs.

The risk of PID is increased above baseline only at the time of insertion. Among 22,908 IUD users, within the first 20 days of use, the risk of PID was 9.7 per 1,000 woman-years; from 21 days to 8 years, the incidence of PID was 1.4 per 1,000 woman-years, the same as that in the general population (9). Other multicenter randomized controlled trials confirmed these findings (8, 10). The risk of PID with IUD placement is 0–2% when no infection is present at the time of insertion and 0–5% when insertion occurred with a documented infection. The absolute risk of PID is very small in both groups (10). Case reports also have shown that women with positive chlamydia cultures identified at the time of IUD insertion are unlikely to develop PID if the infection is treated with the IUD retained (11, 12).

The levonorgestrel-releasing intrauterine system may lower the risk of PID by thickening cervical mucus and thinning the endometrium (13). Studies have demonstrated the reduced risk of PID using the levonorgestrel-releasing intrauterine system as compared with a copper IUD (14, 15).

Intrauterine Devices Do Not Affect the Fertility of Adolescents

Compared with other methods, infertility was not higher after cessation of IUD use versus cessation of other reversible methods of contraception (8). In a case–control study examining determinants of tubal infertility, the presence of chlamydial antibodies was associated with infertility in both users and
In many states, adolescents have the right to receive confidential contraceptive services without parental permission (26). Confidential IUD insertion may be thwarted by the cost or consent issues. Preinsertion counseling about the IUD is paramount. Goals of counseling include awareness of the long-term nature of the contraceptive, side effects, risks, and benefits. Upon insertion of the IUD, self-examination to confirm the presence of strings should be taught, and condom use for STD prevention should be encouraged. It is important for adolescents using IUDs to be familiar with their anatomy and comfortable with checking for strings.

**Insertion in the Nulliparous Patient**

Discomfort with IUD insertion is common. In one study, 86% of adolescents reported mild to severe pain with insertion (13). Misoprostol may soften a nulliparous cervix before insertion (27). Studies of use of nonsteroidal antiinflammatory drugs for analgesia yielded mixed results but they may be used (28). Less studied methods of analgesia include paracervical blocks or preinsertion narcotics. Little data suggest that IUD insertion is technically more difficult in adolescents.

Prophylactic antibiotics are not necessary for IUD insertion (29). Because adolescents have the highest number of reported cases of chlamydia and coinfection with gonorrhea frequently occurs (30), all adolescents should be screened for gonorrhea and chlamydia before IUD insertion (27, 31). Screening at the time of insertion expedites contraceptive use. Patients with positive test results have no adverse effects if treated promptly (10–12).

**Conclusion**

The IUD is a highly effective method of contraception that is underused in the United States. Because adolescents contribute disproportionately to the epidemic of unintended pregnancy in this country, top tier methods of contraception, including IUDs and implants, should be considered as first-line choices for both nulliparous and parous adolescents. After thorough counseling regarding contraceptive options, health care providers should strongly encourage young women who are appropriate candidates to use this method.

**References**


