

AMERICAN ACADEMY OF PEDIATRICS

Committee on Adolescence

Contraception and Adolescents

ABSTRACT. The risks and negative consequences of adolescent sexual intercourse are of national concern, and promoting sexual abstinence is an important goal of the American Academy of Pediatrics. In previous publications, the American Academy of Pediatrics has addressed important issues of adolescent sexuality, pregnancy, sexually transmitted diseases, and contraception.¹⁻³ The development of new contraceptive technologies mandates a revision of this policy statement, which provides the pediatrician with an updated review of adolescent sexuality and use of contraception by adolescents and presents current guidelines for counseling adolescents on sexual activity and contraceptive methods.

ABBREVIATIONS. STDs, sexually transmitted diseases; IM, intramuscular; IUD, intrauterine device; ECPs, emergency contraceptive pills.

Pediatricians have an important role in adolescent reproductive health care. Because pediatricians have long-term relationships with their patients and families, this continuity of care provides opportunities to promote healthy behavior and to reduce the potential negative consequences of high-risk adolescent sexual activity. Pediatricians have an active role in reducing the risk of unintended pregnancies and sexually transmitted diseases (STDs) in their adolescent patients.

ADOLESCENT SEXUAL BEHAVIOR AND USE OF CONTRACEPTION

An adolescent's decision to initiate or delay sexual activity is complex.⁴⁻¹⁰ Evidence exists that consensual sexual intercourse may serve a variety of psychosocial needs in the adolescent, including mastery of psychosocial development, rebellion, peer group identification and validation, and as a way of coping with frustration and failure.^{4,5} The factors that determine if adolescent sexual activity begins earlier or later are listed in Table 1.⁶⁻¹⁰

During the past 3 decades the level of sexual activity in adolescents in the United States has increased. The majority of US adolescents begin having sexual intercourse by mid- to late adolescence, with an average age of first intercourse between 15 and 17 years.¹¹ The results of the National Youth Risk Behavior Study of the Centers for Disease Control and Prevention disclosed that at least half of all high

school students have had sexual intercourse, with 36.9% of 9th graders and 66.4% of 12th graders reporting coital experience.^{12,13}

There is no evidence that refusal to provide contraception to an adolescent results in abstinence or postponement of sexual activity. In fact, if adolescents perceive obstacles to obtaining contraception and condoms, they are more likely to have negative outcomes to sexual activity.¹⁶ In addition, no evidence exists that provision of information to adolescents about contraception results in increased rates of sexual activity, earlier age of first intercourse, or a greater number of partners. Two school-based controlled studies that demonstrated a delay of onset of sexual intercourse in the intervention group used a comprehensive approach that included a discussion of contraception.¹⁷⁻¹⁹ Availability of contraception is not causally related to sexual experimentation.^{19,20}

An adolescent's decision about whether to use contraception is complex. Although trends have improved, with more adolescents reporting current use of contraception, more use of contraception at first intercourse, and more frequently with continuing sexual intercourse, the consistent use of any contraception remains a challenge for most adolescents. About 35% of female adolescents do not use contraception at the time of first intercourse^{7,21}; the approximate time between an adolescent female becoming sexually active and seeking medical services for contraception is 12 months.^{7,22,23} Approximately half of all adolescent pregnancies occur within the first 6 months after the adolescent becomes sexually active, and one fifth of pregnancies occur within the first month.²⁴

Individual methods of contraception used by adolescents vary according to such factors as race, ethnicity, age, marital status, education, income, and fertility intentions. Trends in methods of contraception used during 1982-1995 show a decrease in pill use among adolescents 15 to 19 years old and increased male condom use.²⁵ Reported male condom use has steadily increased among adolescents since 1970; use tripled between 1982 and 1992.^{15,26-28} The increase in male condom use occurred faster among black and Hispanic adolescents, increasing from 13% in 1982 to 38% in 1995 in the 15- to 19-year-old age group, while their white adolescent counterparts increased their use from 23% in 1992 to 36% in 1995.¹⁴ The most recent Youth Risk Behavior Study data confirmed 58% of sexually active adolescents aged 14 to 17 years used a condom at last intercourse, and 78% of all sexually active adolescents reported use of a reliable method of contraception at last intercourse.

The recommendations in this statement do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

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TABLE 1. Factors Associated With Early and Later Initiation of Sexual Intercourse

Early initiation
Early onset of puberty
Sexual abuse
Absence of a nurturing or supportive parent
Poor academic achievement
Poverty
Participation in other high-risk activities
Mental illness
Later initiation
Emphasis on abstinence
Parental consistency and firmness in discipline
Goal orientation
High academic achievement
Regular attendance at a place of worship

However, use of a contraceptive method during each sexual encounter was inconsistent and sporadic.^{14,15,27}

Adolescents who incorrectly or inconsistently use (are poor users of) contraception include younger adolescents who may be less likely to be involved in a stable, long-term relationship and youth who are involved in casual relationships. In addition, more than one fourth of female adolescents who have had their first intercourse at 14 years or younger report that their participation was involuntary.⁷ Contraception clearly is problematic for these young women. Other factors that contribute to lack of contraceptive use include adolescent developmental issues such as reluctance to acknowledge one's sexual activity, a sense of invincibility (belief that they are immune from the problems or issues surrounding sexual intercourse or pregnancy), and denial of the possibility of pregnancy and misconceptions regarding use or appropriateness of contraception. However, an adolescent's level of knowledge about how to use contraception effectively does not necessarily correlate with consistent use. Some of the reasons given by adolescents for the delay in using contraception are fear that their parents will find out, ambivalence, and the perception that birth control is dangerous.^{5,22}

THE ROLE OF THE PEDIATRICIAN

Pediatricians should be able to encourage abstinence and provide appropriate counseling about sexual behaviors. Counseling should include discussion about the prevention of STDs, education on contraceptive methods, and family planning services for the sexually active patient. When these services are provided in the pediatrician's office, policies and procedures for the provision of such services should be developed.²⁰

Counseling Adolescents About Contraception

Comprehensive health care of adolescents should include a sexual history that should be obtained in a safe, nonthreatening environment through open, honest, and nonjudgmental communication, with assurances of confidentiality.^{3,20} During the preadolescent years the pediatrician can provide anticipatory guidance by discussing puberty and offering health education materials to the youth and family. With the onset of puberty, the patient's history should include information regarding attitudes and knowl-

edge about sexual behavior, degree of involvement in sexual activity, and use of contraception. At the onset of puberty, private, confidential interviews with the adolescent should be part of a health maintenance visit.

Confidentiality and Consent

The primary reason adolescent's hesitate or delay obtaining family planning or contraceptive services is concern about confidentiality.²⁹ It is important for pediatricians to develop office policies that assure confidentiality. State requirements and standards of practice should be reviewed and the development of clear, concise, and standardized office protocols for confidentiality should be developed for staff, patients, and parents.³⁰ These policies should include information regarding when confidentiality must be waived, guidelines for reimbursement for services, medical record access, appointment scheduling, and office policy regarding information disclosure.

Sexual Responsibility

The promotion of healthy and responsible sexual decision-making is one of the goals of counseling adolescents about contraception. Pediatricians can help adolescents identify their own goals for safe and responsible sexual behavior, including abstinence. Issues of health concerns and individual risk assessments may lead to appropriate discussions between the adolescent and pediatrician. Successful counseling requires the pediatrician to be supportive and nonjudgmental. The teaching of responsible sexual decision-making requires effective dialogue, skillful history taking, careful listening, and repeated simple messages that contain essential information.²⁰

Sexual Decision Making

Adolescents should be strongly encouraged to postpone the initiation of sexual intercourse. For patients already engaged in sexual intercourse or who are contemplating having sexual intercourse, a discussion of contraceptive methods and prevention of STDs (including acquired immunodeficiency syndrome/human immunodeficiency virus), is essential. Discussions should address and explore, in a nonjudgmental way, the adolescent's reasons for becoming sexually active and the impact that sexual intercourse may have on relationships with peers, parents, and significant others.

For sexually active adolescents who are using contraception, the role of the caregiver is to support compliance, manage side effects, change the method of contraception as circumstances require, and provide referrals and frequent follow-up with periodic screening for STDs.

Methods of Contraception

Numerous current reviews and protocols for prescribing and managing contraception are available.^{31,34} The following comments focus on the appropriateness of the various contraceptive methods for adolescents. The pediatrician should emphasize the need for prevention of STDs as well as contraception with each patient.^{20,35}

Abstinence

Abstinence is the most effective means of birth control. Abstinence education generally focuses on delaying the initiation of adolescent sexual activity until adulthood. Many schools have adopted abstinence-dominant or abstinence-only education programs for school sexuality curricula. To date, the evidence regarding the efficacy of such interventions in the reduction of sexual behaviors remains controversial.³⁶ Recent studies have demonstrated the importance of youth, parent, physician, and education partnerships in the prevention of health risk behaviors such as early initiation of sexual intercourse.^{37,38} There is some consensus that abstinence-based education and intervention is most effective when targeted toward younger adolescents and before their becoming sexually active.^{39–41} However, abstinence may be difficult for adolescents. About 26% of adolescent couples trying to abstain from intercourse will become pregnant within 1 year.⁴² Teenage couples who choose to abstain from sexual intercourse should be encouraged and supported by their parents, peers, and society (including the media) and especially by their pediatrician. But they need to know about other contraceptive options BEFORE or IF they decide to have intercourse.

Condoms

The male condom is a mechanical barrier method of contraception. Its effectiveness is enhanced by use of a spermicide. Latex condoms significantly reduce the transmission of STDs and should therefore be used by all sexually active adolescents regardless of whether an additional method of contraception is being used. Adolescents must understand that the use of a condom is not optional and that a new condom must be used each time they have sexual intercourse. They must also be instructed in the correct use of a condom. Adolescents need to understand that no other contraception method provides the same protection from STDs.^{4,27,33,34,43} Male condoms have several other advantages. They allow for males to share in the responsibility for contraception, they are easily accessible and available, they can be obtained without prescription, they are inexpensive, and they can be legally purchased by minors.^{3,33,44,45}

The female condom is also a barrier method of contraception. Available data suggest it may be effective in the prevention of STDs and as effective as the diaphragm in preventing pregnancy. Acceptability in the adolescent population is unknown, but may be limited by the high cost, lack of availability, and the difficulty of insertion.^{20,31,46,47}

Spermicides and Condoms

Spermicides have a relatively high contraceptive failure rate when used alone and must be applied with each act of intercourse to be effective. If used consistently with male condoms, the birth control effectiveness approaches that of oral contraceptives. Spermicides consist of 2 agents: nonoxynol 9 and octoxynol 9, applied intravaginally through a variety of forms (gel, foam suppository, and film). The com-

bination of spermicide and condoms is a very effective means of contraception for adolescents because it provides effective prevention of pregnancy and STDs, is available without a prescription, and is inexpensive.^{7,20,31,44,45}

Oral Contraceptives

Oral contraceptives are reliable and effective for the prevention of pregnancy, are available by prescription, and are the most popular method of contraception among adolescents.²⁵ Currently 3 forms of oral contraceptive pills are available: the fixed-dose combination (each tablet contains the same dose of estrogen and progestin), the phasic dose (the triphasic and biphasic packs containing varying doses of estrogen and progestin), and the mini-pill (progestin only). The newest generation of birth control pills have a low dose of estrogen (20 to 35 μm), and new forms of progestin. The standard 28-day pack of pills (21 days of hormone and 7 days of placebo) continues to be widely and successfully used by adolescents^{2,25,33,43,48} and should be encouraged over the 21-day pack for promoting daily compliance.

Benefits of the use of combination oral contraceptives are listed in Table 2. Breakthrough bleeding is the most common side effect and usually resolves within 3 months. Weight gain, nausea, and headaches are infrequent.^{33,39,43,49–51}

The failure rate of oral contraceptives when used correctly is <1%.⁵⁰ However, the failure rate among adolescents may be as high as 15% because of inconsistent use.^{52,53} One study suggests that adolescents miss an average of 3 pills per month.⁵⁴

Adolescent compliance with oral contraceptive use may be enhanced by appropriate patient education and problem-solving techniques. This includes careful instruction regarding the use of oral contraceptives, anticipatory guidance about side effects and their management, a discussion of correct pill usage (including when the first pill should be taken during the menstrual cycle or what to do if a pill is missed), and frequent follow-up and monitoring.^{34,43,51}

Oral contraceptives are best for adolescent females who desire regular menses and are organized and motivated to take a pill every day; additionally, a condom must be used in conjunction with oral contraceptives to give protection against STDs. Ideally, adolescents should receive a complete gynecological examination by the pediatrician before taking oral

TABLE 2. Benefits of Oral Contraceptives

Protection against
Ovarian and endometrial cancer
Ectopic pregnancy
Ovarian cysts
Iron deficiency anemia
Benign breast disease
Possible decreased risks of bacterial STDs progressing to pelvic inflammatory disease
Therapy for dysmenorrhea
Other noncontraceptive uses:
Regulation of menses
Treatment of dysfunctional uterine bleeding
Decreased risk of osteoporosis
Treatment of acne

contraceptives. In some circumstances (such as when a patient shows anxiety), the pelvic examination may be deferred and oral contraceptives prescribed if the patient is healthy, not pregnant, and has no contraindications to taking the pills. Therefore, oral contraceptives can be prescribed by the pediatrician and the adolescent can be referred for an examination and Papanicolaou smear within the next 3 months.

Medroxyprogesterone Acetate Injection (DEPO-PROVERA)

Medroxyprogesterone acetate is a long-acting progestin given every 12 weeks as a single 150-mg intramuscular (IM) dose. For adolescents, this contraceptive method has many benefits, including effective pregnancy prevention, convenience (requires no daily drug regimen, no need for planning before intercourse), lack of estrogen-related side effects, and protection against endometrial cancer and iron deficiency anemia. The major disadvantages of this contraceptive method for adolescents are menstrual cycle irregularities (present for nearly all patients originally), the need for IM administration, and the side effects (weight gain, headaches, bloating, depression, and mood changes). Medroxyprogesterone acetate is also associated with a delayed return to fertility and possibly a reversible osteopenia.^{34,43,44,55,56}

This contraceptive method may be safely recommended for adolescents who have chronic illnesses (ie, seizures, sickle cell disease), are lactating, or are at risk for complications with estrogen. Medroxyprogesterone acetate injection is the best type of contraception for adolescents who do not remember to take daily medication. Pediatricians need to be sure to discuss the potential side effects and to ensure that the patient is not pregnant at the time of each injection. Condoms must be used in conjunction with medroxyprogesterone acetate for protection from STDs.

Levonorgestrel Implants (Norplant System)

Levonorgestrel implants are a highly effective long-acting progestin contraceptive that provides pregnancy prevention for up to 5 years. It requires insertion and removal of subcutaneous Silastic capsules by a trained health care professional.^{34,43}

For some adolescents levonorgestrel implants have proven to be a long-term effective method of contraception.^{43,56-60} This contraception may be indicated in adolescents who desire long-term spacing between births, want an extended length of protection, have a history of problems with oral contraceptives, or are already mothers.^{33,34,56,61} The major disadvantages for use in the adolescent population include high initial cost, the potential side effects (breakthrough bleeding, headaches), and the need to have an experienced health care professional remove the implant.

Adolescents using subdermal implants have experiences similar to adults, particularly when appropriate counseling is provided.⁶¹ They have the same concerns or problems but may be more likely to have the implants removed than would an adult.^{62,63} Al-

though most pediatricians do not insert or remove the implants, they should be aware of the resources in the community that can serve as referral sources for their patients. Condoms must be used in conjunction with levonorgestrel implants for protection from STDs.

Intrauterine Devices (IUDs)

When used appropriately, IUDs are safe, effective methods of contraception. IUDs should be reserved for adolescent females who cannot use other contraceptive methods and whose sexual behavior does not put them at risk for STDs. Some controversy exists as to whether IUDs are an appropriate method of contraception for adolescents.³⁵ Condoms must be used in conjunction with IUDs for protection against STDs.

Diaphragm and Cervical Cap

The diaphragm and cervical cap are effective barrier methods of contraception that require use of spermicides and condoms. These contraceptive methods have limited usefulness in adolescents as they require a prescription, a visit with a health care professional for a fitting, and a motivated adolescent who is comfortable and skilled with insertion. Consistent, correct use is critical.

Rhythm and Other Periodic Abstinence Methods

Rhythm and other methods of periodic abstinence require sophistication, awareness of fertility, motivation, and timing of intercourse that may be too complicated for most adolescents. However, pediatricians should be prepared to teach adolescents about the menstrual cycle and the times of increased fertility as an educational tool. The rhythm method provides little or no protection against STDs.

Withdrawal

Withdrawal, which involves the male partner's attempt to withdraw the penis before ejaculation, is still widely used by adolescents in sexual relationships. Adolescents should receive counseling that discusses the high failure rate of withdrawal for pregnancy prevention. In addition, counseling should stress that this method provides little or no protection against STDs.

Emergency Contraceptive Pills (ECPs)

There are many prescribed methods of emergency postcoital contraception. The most commonly prescribed method consists of 2 doses of combined estrogen and progestin contraceptive pills taken within 72 hours of unprotected intercourse followed by 2 pills 12 hours later.⁶⁴ For this method of ECPs, the dose depends on the oral contraceptive agent used (Table 3). The US Food and Drug Administration has indicated that the use of ECPs is safe and effective. Nausea is a likely side effect that may be relieved by the use of antiemetics. Pediatricians should inform adolescents that ECP is available in cases of emergency but should not be considered a substitute for ongoing contraception.

The ECP has an efficacy of approximately 75% in

TABLE 3. Emergency Contraception Choices

	Tablets Within 72 Hours	Tablets 12 Hours Later
Ovral	2	2
Lo/Ovral; Nordette; Levlen	4	4
Triphasil or Tri-Levlen (yellow tablets only)	4	4

the prevention of conception.⁶⁴ It is contraindicated in adolescents who are unable to use oral contraceptives and if more than 72 hours have transpired since intercourse. A pregnancy test should be done before administration of the pills and 3 weeks after administration to detect any treatment failures.

Compliance and Follow-up

Frequent follow-up is important to maximize compliance for all methods of contraception, to promote and reinforce healthy decision-making, and to screen periodically for risk-taking behaviors and STDs. Follow-up visits should include: periodic reassessment for contraception method, STD surveillance, and cervical cytology (Papanicolaou smear). The timing and frequency of reassessment will vary depending on the contraceptive method. In general, adolescents should have an annual Papanicolaou smear and a screen for STDs every 6 months, and a quarterly contraceptive reassessment to discuss issues such as utilization, compliance, and complications. Each adolescent should receive ongoing support, personal guidance, and reinforcement to enhance effective and consistent contraceptive use; parental support (if possible); and couples counseling or the opportunity for couples interaction with the health care professional. In addition, condom use needs to be advised and reinforced at every visit.

Special Considerations

The issue of contraception in adolescents with chronic illness or disability is often forgotten. An estimated 10% to 20% of children and adolescents experience a disability or chronic illness by age 20 years.⁶⁵ Pediatricians should be aware that extensive information regarding contraception choices and decisions for adolescents with chronic illness or disability are available in references and texts on adolescent medicine.

RECOMMENDATIONS

1. Pediatricians should encourage and promote sexual abstinence to their adolescent patients at every appropriate opportunity.
2. Pediatricians should be prepared to provide non-judgmental education and preventive counseling about sexuality to their adolescent patients.
3. Pediatricians need to counsel their sexually active patients about the consequences of sexual activity, including pregnancy and STDs.
4. Pediatricians may wish to provide basic contraceptive services for their patients in their offices, providing an environment that is conducive to trust and confidentiality, or they may wish to refer their patients to another appropriate site for these

services while still maintaining primary care of the adolescent.

5. Pediatricians who wish to provide basic contraceptive services for their patients should update their skills and information about adolescent sexuality and gynecology. This may require specific training.
6. Pediatricians should be aware that it is acceptable to prescribe oral contraceptives up to 3 months before the first pelvic examination.
7. Pediatricians who offer contraceptive services to adolescents should provide appropriate follow-up to ensure compliance. Time needs to be allocated for counseling, education, problem solving, and periodic reassessment of the adolescent's contraceptive needs.

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