Contraception and Abortion

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  Reflect
  Recite
  Review
Which of the following statements are the truth, and which are fiction? Look for the Truth-or-Fiction icons on the pages that follow to find the answers.

1. Ancient Egyptians used crocodile dung as a contraceptive.  
   **T**  **F**

2. There is an oral contraceptive that can be taken the morning after unprotected intercourse.  
   **T**  **F**

3. Douching quickly after unprotected intercourse is a reasonably good contraceptive method.  
   **T**  **F**

4. Sterilization operations can be surgically reversed.  
   **T**  **F**

5. Contraceptives not only prevent conception, they also provide protection against sexually transmitted infections.  
   **T**  **F**

6. Abortions were legal in the newly founded United States.  
   **T**  **F**

7. The D&C is the most widely used abortion method in the United States.  
   **T**  **F**
I was a stifling day in July 1912. Margaret Sanger (1883–1966), a nurse practitioner, was summoned to the house of a woman near death from a botched self-induced abortion. Her husband had called a doctor, and the doctor sent for Sanger. Together, doctor and nurse worked feverishly through the days and nights that followed to stem an infection that had taken hold in the woman. Sanger later commented,

*Never had I worked so fast, never so concentratedly. The sultry days and nights were melted into a torpid inferno. It did not seem possible there could be such heat, and every bit of food, ice, and drugs had to be carried up three flights of stairs. . . .* (Sanger, 1938)

After two interminable weeks, the woman began to recover. Her neighbors, who had feared the worst, came to express their joy. But the woman, who smiled wanly at those who came to see her, appeared more depressed and anxious than would be expected of someone who was recovering from a grave illness. By the end of the third week, when Sanger prepared to leave her patient, the woman, Mrs. Sachs, voiced the fear that was haunting her. Her face registered deep despair as she explained to Sanger that she dreaded becoming pregnant again and facing a choice between attempting another abortion, which she feared might kill her, and bearing a baby whose care it was beyond her means to support. She pleaded for information about contraception but Sanger could offer none. In 1912, it was a crime even for health professionals like Margaret Sanger to dispense information about contraceptives. Abortions, too, were illegal. Sanger tried to comfort her and promised to return to talk again (Reed & Lampe, 2003).

Three months later Sanger received another urgent call. It was Mr. Sachs. His wife was sick again—from the same cause. For a wild moment I thought of sending someone else, but actually, of course, I hurried into my uniform, caught up my bag, and started out. All the way I longed for a subway wreck, an explosion, anything to keep me from having to enter that home again. But nothing happened, even to delay me. I turned into the dingy doorway and climbed the familiar stairs once more. The children were there, young little things.

Mrs. Sachs was in a coma and died within ten minutes. I folded her still hands across her breast, remembering how they had pleaded with me, begging so humbly for the knowledge which was her right. I drew a sheet over her pallid face. Jake was sobbing, running his hands through his hair and pulling it out like an insane person. Over and over again he wailed, "My God! My God! My God!" (Sanger, 1938)

Today, partly because of the work of Margaret Sanger, who went on to become a key advocate for birth control, information about contraceptives is disseminated freely throughout the United States.

Methods of birth control include contraception and abortion. The term *contraception* refers to techniques that prevent conception. The term *abortion* refers to the termination of a pregnancy before the embryo or fetus is capable of surviving outside the womb, as we see later in the chapter.
Contraception

People have been devising means of contraception since they became aware of the relationship between coitus and conception. Ironically, the safest and most effective method of contraception is also the least popular: abstinence. The Bible contains many references to contraceptive techniques, including vaginal sponges and contraceptive concoctions. It also refers to coitus interruptus, or withdrawal. The story of Onan, for example, implies knowledge of the withdrawal method.

Ancient Egyptian methods of birth control included douching with wine and garlic after coitus, and soaking crocodile dung in sour milk and stuffing the mixture deep within the vagina. The dung blocked the passage of many—if not all—sperm through the cervix and also soaked up sperm. The dung may also have done its job through a social mechanism. It may have discouraged all but the most ardent suitors. Truth or Fiction Revisited: It is true that ancient Egyptians used crocodile dung as a contraceptive. (No comment.)

Ancient Greek and Roman women placed absorbent materials within the vagina to absorb semen. The use of sheaths or coverings for the penis has a long history. Sheaths worn over the penis as decorative covers can be traced to ancient Egypt (1350 BCE). Sheaths of linen were first described in European writings in 1564 by the Italian anatomist Fallopius (from whom the name of the fallopian tube is derived). Linen sheaths were used, without success, as a barrier against syphilis. The term condom was not used to describe penile sheaths until the eighteenth century. At that time, sheaths made of animal intestines became popular as a means of preventing sexually transmitted infections and unwanted pregnancies. Among the early advocates of condoms as a method of contraception was the Italian adventurer and writer Giovanni Casanova (1725–1798). We now associate his name with men who are known for their amorous adventures. James Boswell (1740–1795), the biographer of Samuel Johnson, described his use of “armor,” or condoms, in his graphic London Journal. On one occasion, however, he was so enamored with a street prostitute that he neglected to use his armor and contracted gonorrhea. Condoms made of rubber (hence the slang “rubbers”) were introduced shortly after Charles Goodyear invented vulcanization of rubber in 1843. Many other forms of contraception were also used widely in the nineteenth century, including withdrawal, vaginal sponges, and douching.

Contraception in the United States: The Political Battle

As methods of contraception grew more popular in the nineteenth century, opponents waged a battle to make contraception illegal. One powerful opponent of contraception was Anthony Comstock, who served for a time as the secretary of the New York Society for the Suppression of Vice. Comstock lobbied successfully for passage of a federal law in 1873—the Comstock Law—that prohibited the dissemination of birth-control information through the mail on the grounds that it was “obscene and indecent.” Many states passed even more restrictive laws. They outlawed passage of information from one person to another, even from physician to patient.
Consider the resistance that Margaret Sanger met when she challenged the laws restricting information about contraception (Reed & Lampe, 2003). In 1914, she established the National Birth Control League, which published the magazine *The Woman Rebel*. *Rebel* did not publish birth-control information but challenged the view that it was obscene. Nevertheless, charges were brought against Sanger, and she fled to Europe before her trial. During her self-imposed exile, she visited birth-control clinics in the Netherlands. When the charges against her in the United States were dropped in 1916, Sanger returned and established a birth-control clinic in Brooklyn, New York. The clinic was closed by the police, and Sanger was arrested. Released on bail, she reopened the clinic and was thereupon sentenced to 30 days in jail. She successfully appealed the sentence. In 1918, the courts ruled that physicians must be allowed to disseminate information that might aid in the cure and prevention of disease. Dismantling of the Comstock law had begun. With the financial support of a wealthy friend, Katherine Dexter McCormack, Sanger spurred research into the use of hormones as one approach to contraception. In 1960, only six years before Sanger’s death, oral contraception—“the pill”—was finally marketed in the United States. In 1965, the Supreme Court struck down the last impediment to free use of contraception: a law preventing the sale of contraceptives in Connecticut (*Griswold v. Connecticut*, 1965). In 1973, abortion was, in effect, legalized by the Supreme Court in the case of *Roe v. Wade*, permitting women to terminate unwanted pregnancies.

Today, contraceptives are advertised in popular magazines and sold through vending machines in college dormitories. U.S. history is not a one-way road to unrestricted use of birth control, however. Recent Supreme Court decisions have set aside bits and pieces of *Roe v. Wade*, giving the states more discretion over the regulation of abortion and restricting access to abortions for minors. Use of artificial contraception continues to be opposed by many groups, including the Roman Catholic Church. Yet, many individual Catholics, including many priests, are tolerant of artificial contraception.

**Real Students, Real Questions**

**Q** If my druggist refuses to fill my birth-control pills, can I sue?

**A** Cases on suits involving pharmacists who refuse to provide patients with prescribed birth-control pills, Plan B medications, and RU-486 are currently in courts and legislatures around the country. The answer to your question really depends on where you are and what legislation applies. By and large, a pharmacist is more likely to be compelled to supply birth-control pills than abortion pills. There are ways in many states, including California, for pharmacists to “opt out” of supplying abortion pills based on their conscience, or to pass the job to a fellow pharmacist without such objections. Right now the trend is for pharmacists to be fired for refusal to fill certain prescriptions and then to sue to get their jobs back based on the view that their freedom to practice their religion was abridged by their loss of job. Sometimes they succeed; sometimes they don’t. The long and short of it is this: Check with a local attorney.
Methods of Contraception

THERE ARE MANY METHODS OF CONTRACEPTION, including hormonal methods (the pill, the contraceptive patch, and injectable contraceptives), intrauterine devices (IUDs), diaphragms, cervical caps, spermicides, condoms, douching, withdrawal (coitus interruptus), and timing of ovulation (rhythm methods).

Talking with Your Partner about Contraception

When is the right time to discuss contraception? On a first date? When you are invited to meet your partner’s family? When you are lost in amorous embraces? Broaching the topic can be awkward. Not broaching it can be disastrous. Often a man responds to news that his partner is pregnant by saying something like this: “But I thought you were using something!”

Technically speaking, the right time to discuss birth control is anytime that allows your contraceptive to become effective before you engage in coitus. That can mean weeks or months before, if you decide to use a prescription contraceptive such as the birth-control pill, the IUD, the diaphragm, or the cervical cap. Or it can mean a few moments before coitus, if you decide to use a condom and have one ready. Despite the obvious advantage to deciding on contraception before coitus, the issue is often broached, if it is broached at all, only after the partners become sexually intimate. Practically speaking, it is awkward—and perhaps presumptuous!—to discuss contraception when you meet or are on a first date. But at the very least, it is advisable to prepare oneself for the possibility of coitus. The man or woman may bring along a condom. The woman may already be on the pill, have an IUD in place, or a diaphragm.

Talking about contraception helps many couples make the transition from a casual relationship to an intimate one. Talking enables partners to share the responsibility. As a result, the woman is less likely to be resentful that the responsibility rests on her alone.

Yes, it can be awkward or difficult to raise the topic. Couples may not feel that their relationship is secure enough. They might think, “We’ll cross that bridge when we come to it.” Not planning ahead, however, prevents the effective use of contraceptives that require advance planning. Couples who choose to discuss contraception before engaging in coitus may benefit from these communication guidelines:

- **Pick a strategic time and place, private and free of distractions.**
- **Couch your discussion in terms of your feelings about your partner and your relationship.** Talk about your general feelings toward your partner and your general relationship before you narrow in on contraception.
- **Don’t apologize for raising the topic.** You may feel embarrassed talking about sensitive topics such as birth control. But you need not apologize for bringing up the subject. Apologizing suggests that you think you are doing something wrong.
- **Raise the subject in a way that encourages candid discussion.** Use open-ended questions to explore your partner’s attitudes. Say something like “I think our relationship has reached the point where we need to talk about contraception. I know we’re not sleeping together yet, but some forms of contraception require advanced planning. Have you been thinking about it?”
- **Explore options.** Don’t make demands of your partner. In other words, don’t say “Since we may start sleeping together, I think you should go on the pill.” Rather, say something like “I know that many different types of contraceptives are available. Why don’t we discuss which method might be best for us if we become intimate?” Use the opportunity to explore each other’s views about birth control in general and specific techniques in particular.
Oral Contraceptives (“The Pill”)

An oral contraceptive is commonly referred to as a birth-control pill, or simply “the pill.” However, there are many kinds of birth-control pills that vary in the type and dosages of hormones they contain. Birth-control pills fall into two major categories: combination pills and mini-pills. Available only by prescription, birth-control pills are the most popular form of contraception among single women of reproductive age (Frost & Frohwirth, 2005; Planned Parenthood, 2006).

Combination pills (such as Ortho-Novum, Ovcon, and Loestrin) contain a combination of synthetic forms of the hormones estrogen and progesterone (progestin). Most combination pills provide a steady dose of synthetic estrogen and progesterone. Other combination pills, called multiphasic pills, vary the dosage of these hormones across the menstrual cycle to reduce the overall dosages to which the woman is exposed and possible side effects. The mini-pill contains synthetic progesterone (progestin) only.

**HOW THEY WORK**

Women cannot conceive when they are already pregnant because their bodies suppress maturation of egg follicles and ovulation. The combination pill fools the brain into acting as though the woman is already pregnant, so that no additional ova mature or are released. If ovulation does not take place, a woman cannot become pregnant.

In a normal menstrual cycle, low levels of estrogen during and just after the menstrual phase stimulate the pituitary gland to secrete FSH, which in turn stimulates the maturation of ovarian follicles. The estrogen in the combination pill inhibits FSH production, so follicles do not mature. The progesterone (progestin) inhibits the pituitary’s secretion of LH, which would otherwise lead to ovulation. The woman continues to have menstrual periods, but there is no unfertilized ovum to be sloughed off in the menstrual flow.

The combination pill is taken for 21 days of the typical 28-day cycle. Then, for 7 days, the woman either takes no pill at all or an inert placebo pill to maintain the habit of taking a pill a day. The sudden drop in hormone levels causes the endometrium to disintegrate and menstruation to follow 3 or 4 days after the last pill has been taken. Then the cycle is repeated.

The progestin in the combination pill also increases the thickness and acidity of the cervical mucus. The mucus thus becomes a more resistant barrier to sperm and inhibits development of the endometrium. Therefore, even if an egg were somehow to mature and become fertilized in a fallopian tube, sperm would not be likely to survive the passage through the cervix. Even if sperm were somehow to succeed in fertilizing an egg, the failure of the endometrium to develop would mean that the fertilized ovum could not become implanted in the uterus. Progestin may also impede the progress of ova through the fallopian tubes and make it more difficult for sperm to penetrate ova.

The mini-pill contains progestin but no estrogen. Mini-pills are taken daily through the menstrual cycle, even during menstruation. They act in two ways. They thicken the cervical mucus to impede the passage of sperm through the cervix, and they render the inner lining of the uterus less receptive to a fertilized egg. Thus, even if the woman does conceive, the fertilized egg will pass from the body rather than becoming implanted in the uterine wall.

In Chapter 3 we noted that hormonal preparations such as Seasonique and Lybrel provide birth control as well as decrease the number of periods a woman has.

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**CRITICAL THINKING**

Is the use of the mini-pill or of the IUD a method of contraception or of abortion? Does it matter? Explain your views.
**EFFECTIVENESS**  The failure rate of the birth-control pill associated with perfect use is very low—0.5% or less depending on the type of pill. (See Table 12.1 on page 000.) The failure rate increases to 3% in typical use. Failures can occur when women forget to take the pill for two days or more, when they do not use backup methods when they first go on the pill, and when they switch from one brand to another. But forgetting to take the pill for a day or two might allow ovulation—and fertilization.

<table>
<thead>
<tr>
<th>Method</th>
<th>Percent (%) of Women Who Have an Unplanned Pregnancy within the First Year of Use</th>
<th>Consistent, Correct Use</th>
<th>Is It Reversible?</th>
<th>Does It Protect Against Sexually Transmitted Infections (STIs)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>85</td>
<td>85</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Spermicides</td>
<td>26</td>
<td>6</td>
<td>yes</td>
<td>no</td>
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<tr>
<td>Rhythm Methods</td>
<td>20</td>
<td></td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Calendar</td>
<td>9</td>
<td></td>
<td></td>
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<tr>
<td>Ovulation Method</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basal Body Temperature</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-Ovulation</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Withdrawal</td>
<td>19透or 4</td>
<td></td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Cervical Cap</td>
<td>20–40透or 10–30</td>
<td></td>
<td>yes</td>
<td>some</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>20透or 6</td>
<td></td>
<td>yes</td>
<td>some</td>
</tr>
<tr>
<td>Condom alone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female condom</td>
<td>21透or 5</td>
<td></td>
<td>yes</td>
<td>(scarce information)</td>
</tr>
<tr>
<td>Male condom</td>
<td>14透or 3</td>
<td></td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>The Pill</td>
<td>3</td>
<td></td>
<td>yes</td>
<td>no, but may reduce the risk of pelvic inflammatory disease.</td>
</tr>
<tr>
<td>Progestin Only</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combined</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IUD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Progestasert</td>
<td>2.0透or 1.5</td>
<td></td>
<td>yes, except if fertility is impaired</td>
<td>no, and may increase the risk of pelvic inflammatory disease.</td>
</tr>
<tr>
<td>ParaGard Copper T 380A</td>
<td>0.8透or 0.6</td>
<td></td>
<td>yes, except if fertility is impaired</td>
<td>no, and may increase the risk of pelvic inflammatory disease.</td>
</tr>
<tr>
<td>Depo-Provera</td>
<td>0.3透or 0.3</td>
<td></td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Injectable Contraceptives</td>
<td>0.3透or 0.3</td>
<td></td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Female Sterilization</td>
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<tr>
<td>Male Sterilization</td>
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</table>

1Accidental pregnancies among typical couples. 2With spermicide.
REVERSIBILITY  Oral contraceptives may temporarily reduce fertility after they are stopped but they are not associated with permanent infertility. Nearly all women begin ovulating regularly within three months of suspending use (Hatcher et al., 2008). When a woman appears not to be ovulating after going off the pill, a drug such as clomiphene is often used to induce ovulation.

ADVANTAGES AND DISADVANTAGES  The great advantage of oral contraception is that when used properly it is nearly 100% effective. Unlike many other forms of contraception, such as the condom or diaphragm, its use does not interfere with sexual spontaneity or diminish sexual sensations. The sex act need not be interrupted, as it would be by use of a condom.

Birth-control pills may also have some healthful side effects. They appear to reduce the risk of pelvic inflammatory disease (PID), benign ovarian cysts, and fibrocystic (benign) breast growths. The pill regularizes menstrual cycles and reduces menstrual cramping and premenstrual discomfort. The pill may also be helpful in the treatment of iron-deficiency anemia and facial acne. The combination pill reduces the risks of ovarian and endometrial cancer, even for a number of years after the woman has stopped taking it (Gnagy et al., 2000; Hatcher et al., 2008).

The pill does have some disadvantages. The pill provides no protection against STIs. Moreover, it may reduce the effectiveness of antibiotics used to treat STIs. Going on the pill requires medical consultation, so a woman must plan to begin using the pill at least several weeks before becoming sexually active or before discontinuing the use of other contraceptives and must incur the expense of medical visits. Marchbanks and her colleagues (2002) compared 4,575 women with breast cancer with 4,682 controls and found no increased risk for breast cancer among women who were using or had used oral contraceptives. Moreover, the pill did not increase the risk of breast cancer in women with a family history of the disorder.

The main drawbacks of birth-control pills are potential side effects and possible health risks. Although a good deal of research suggests that the pill is safe for healthy women, the American College of Obstetricians and Gynecologists (2006) suggest caution among women with medical conditions such as hypertension, diabetes, migraine headaches, fibrocystic breast tissue, uterine fibroids, or elevated cholesterol.

The estrogen in combination pills may produce side effects such as nausea and vomiting, fluid retention (feeling bloated), weight gain, increased vaginal discharge, headaches, tenderness in the breasts, and dizziness. Many of these are temporary. When they persist, women may be switched from one pill to another, perhaps to one with lower doses of hormones. Pregnant women produce high estrogen levels in the corpus luteum and placenta. The combination pill artificially raises levels of estrogen, so it is not surprising that some women who use it have side effects that mimic the early signs of pregnancy, such as weight gain or nausea (“morning sickness”). Weight gain can result from estrogen (through fluid retention) or progestin (through increased appetite and development of muscle). Oral contraceptives may also increase blood pressure in some women, but clinically significant elevations are rare in women using the low-dose pills that are available today (Hatcher et al., 2008). Still, it is wise for women who use the pill to have their blood pressure checked regularly. Women who encounter problems with high blood pressure from taking the pill are usually advised to switch to another form of contraception.
Hormone withdrawal symptoms are experienced by many women when they discontinue the pill (Sulak et al., 2000). These include headaches, pelvic pain, bloating, and breast tenderness.

Many women have avoided using the pill because of the risk of blood clots. The lower dosages of estrogen found in most types of birth-control pills today are associated with much lower risk of blood clots than was the case in the 1960s and 1970s when higher dosages were used (Hatcher et al., 2008). Still, women who are at increased risk for blood clotting, such as women with a history of circulatory problems or stroke, are typically advised not to use the pill.

Women who are considering using the pill need to weigh the benefits and risks with their health-care providers. For the great majority of young, healthy women in their 20s and early 30s, the pill is unlikely to cause blood clots or other cardiovascular problems (Hatcher et al., 2008). Although research has found the pill to be safe for most women who do not smoke and are younger than age 35, pill users may have a slightly higher chance than nonusers of developing blood clots in the veins and lungs, stroke, and heart attack (Rako, 2003).

Some women should not be on the pill at all: women who have had circulatory problems or blood clots, women who have suffered a heart attack or stroke, or women who have a history of coronary disease, breast or uterine cancer, genital bleeding, liver tumors, or sickle cell anemia (because of associated blood-clotting problems). Because of their increased risk of cardiovascular problems, caution should be exercised when the combination pill is used with women over 35 years of age who smoke (Hatcher et al., 2008). Nursing mothers should also avoid using the pill, as the hormones may be passed to the baby in the mother’s milk.

Since the risks of cardiovascular complications generally increase with age, many women over the age of 35 have been encouraged by their gynecologists to use other forms of birth control. However, the American College of Obstetricians and Gynecologists believes that healthy nonsmokers can use the pill safely at least until the age of 45. This number keeps expanding, with many women now being advised to continue using pills to regulate their periods into their 50s.

The pill may also have psychological effects. Some users report depression or irritability. Switching brands or altering doses may help. Evidence is lacking concerning the effects of lower-estrogen pills on sexual desire.

Progestin fosters male secondary sex characteristics, so women who take the mini-pill may develop acne, facial hair, thinning of scalp hair, reduction in breast size, vaginal dryness, and missed or shorter periods. Irregular bleeding, or so-called breakthrough bleeding, between menstrual periods is a common side effect of the mini-pill. Irregular bleeding should be brought to the attention of a health professional. Because they can produce vaginal dryness, mini-pills can hinder vaginal lubrication during intercourse, decreasing sexual sensations and rendering sex painful.

Researchers have also examined suspected links between the use of the pill and certain forms of cancer, especially breast cancer, since breast cancer is sensitive to hormonal changes. Results from several large-scale studies show no overall increase in the rates of breast cancer among pill users, but it remains possible that some subgroups of women who use the pill may be at increased risk (Hatcher et al., 2008). The evidence linking use of the pill with cervical cancer is mixed, with some studies showing a link and others showing none (Hatcher et al., 2008).

Women considering the pill are advised to have a thorough medical evaluation to rule out conditions that might make usage unsafe. The evaluation should include a detailed medical and family history, and a physical exam including a Pap smear, assessment of blood pressure, screening for STIs, urinalysis, breast and pelvic exam,
and possibly an EKG (electrocardiogram). Women who begin to use the pill, regardless of their age or risk status, should pay attention to changes in their physical condition, have regular checkups, and promptly report any physical complaints or unusual symptoms to their physicians.

The “Morning-After” Pill

The so-called morning-after pill, or postcoital contraceptive, refers to several types of pills that have high doses of estrogen and progestin. Since they are not taken regularly, they do not prevent ovulation. Instead, they prevent fertilization or prevent the fertilized egg from implanting in the uterus. As of 2009, the morning-after pill, Plan B, became available to women age 17 and older without prescription. But women have to show proof of age and ask the pharmacist for it.

Morning-after pills are most effective when taken within 72 hours after ovulation. Women who wait to see whether they have missed a period are no longer candidates for the morning-after pill.

Morning-after pills have a higher hormone content than most birth-control pills. For this reason, nausea is a common side effect. Nausea is usually mild and passes within a day or two after treatment, but it can be treated with anti-nausea medication.

Truth or Fiction Revisited: The morning-after pill is certainly not recommended as a regular form of birth control. They are one-time forms of emergency protection, which may be most appropriate to use following rape or when regular contraceptive devices fail (for example, if a condom breaks or a diaphragm becomes dislodged). The morning-after pill generally prevents implantation, but if it fails, the fetus may be damaged by exposure to the hormones.

The Contraceptive Patch

The contraceptive patch is another method of delivering estrogen and progestin to prevent ovulation and implantation. The patch is thin and measures about 2 inches by 2 inches. It is worn on the abdomen, buttocks, upper arm, or upper torso. The patch contains a week’s worth of hormones and releases them gradually into the bloodstream.

Like the birth-control pill, when used correctly, the patch is more than 99% effective. Women who use the patch need not think about contraception daily. Also, like the pill, the patch doesn’t interrupt sex. Its side effects and potential hazards are similar to those of the pill.

Injectable Contraceptives

Lunelle and Depo-Provera are injectable hormone preparations available by prescription. Lunelle is similar to the combination pill in that it contains estrogen and progestin. It is injected monthly. Like the mini-pill, Depo-Provera contains progestin only. It prevents pregnancy for 3 months. Injectable have become the second-most popular contraceptive method after the pill, accounting for 18% of users (Frost & Frohwirth, 2005).
Lunelle prevents ovulation; thickens cervical mucus, which prevents the sperm from reaching the egg; and changes the lining of the uterus to prevent implantation. Depo-Provera prevents ovulation. Lunelle, like oral contraceptives, has a failure rate of less than 1% when used properly. According to the American Academy of Family Physicians (2006), Depo-Provera is as effective as female sterilization.

Injectable contraceptives have the advantages of being highly effective, permitting spontaneous sex, and remaining effective without being taken every day. They have side effects similar to those of other types of hormonal contraceptives, including oral contraceptives. These include vaginal bleeding, headaches, tenderness in the breasts, irregular menstrual cycles, weight gain, bloating, nausea, and vomiting. Injectable contraceptives are usually not recommended for women who smoke, have elevated blood pressure, have breast or uterine cancer, have a history of blood clots, have a history of heart attack or stroke, have diabetes, have liver disease, or are allergic to hormones.

The effects of Lunelle and Depo-Provera are reversible, but ovulation may take a few months to return. Neither contraceptive affords protection against STIs.

**Intrauterine Devices (IUDs)**

Camel drivers setting out on long desert journeys once placed round stones in the uteruses of female camels to prevent them from becoming pregnant and lost to service. The stones may have acted as primitive *intrauterine devices* (IUDs). IUDs are small objects of various shapes that are inserted into the uterus. They have been used by humans since ancient Greek times. Today, they are inserted into the uterus by a physician or nurse practitioner and usually left in place for a year or more. Fine plastic threads or strings hang down from the IUD into the vagina, so that the woman can check to see that it remains in place.

Intrauterine devices are used by more than 100 million women around the world (Hatcher et al., 2008). Most of them live in China, where nearly one in three married women uses an IUD during her childbearing years. By contrast, IUDs are used by only about 3% of women in committed relationships in the United States (Hatcher et al., 2008).

IUDs achieved their greatest popularity in the United States in the 1960s and 1970s. Then there was a sharp drop off in their use during the 1980s after use of a popular model, the Dalkon Shield, was linked to a high incidence of pelvic infections and tubal infertility.

There are two IUDs: the Progestasert T, which releases small quantities of progesterone (progestin) daily, and the Copper T 380A (ParaGard), a T-shaped, copper-based device. Because the Progestasert T must be replaced annually, and any insertion carries some risk of infection, health authorities recommend the use of the ParaGard device, which can be used for upward of eight years, unless the woman is allergic to copper (Hatcher et al., 2008).

**HOW THEY WORK** A foreign body, such as the IUD, apparently irritates the uterine lining. This irritation gives rise to mild inflammation and the production of antibodies that may be toxic to sperm or to fertilized ova and/or may prevent fertilized eggs from becoming implanted. Inflammation may also impair proliferation of the endometrium—another impediment to implantation. Progesterin released by the Progestasert T also has effects like the progestin-only mini-pill: It lessens the likelihood of fertilization and implantation. Since action on fertilized ova may be considered an early abortion method, many people who oppose abortion also oppose the IUD.
PORT-AU-PRINCE, Haiti—For all the American and international efforts to fight global poverty, one thing is clear: Those efforts won’t get far as long as women like Nahomie Nercure continue to have 10 children.

Global family-planning efforts have stalled over the last couple of decades, and Nahomie is emblematic both of the lost momentum and of the poverty that results. She is an intelligent 30-year-old woman who wanted only two children, yet now she is eight months pregnant with her 10th.

As we walked through Cité Soleil, the Haitian slum where she lives, her elementary-school-age children ran stark naked around her. The $6-a-month rental shack that they live in—four sleep on the bed, six on the floor beside it—has no food of any kind in it. The family has difficulty paying the fees to keep the children in school.

There’s simply no way to elevate Nahomie’s family, and millions more around the world, unless we help such women have fewer children. And yet family-planning programs have been shorn of resources and glamour for a generation now.

Nahomie is one of 200 million women worldwide who, according to United Nations estimates, have what demographers call an “unmet need” for safe and effective contraception. That is, they don’t want to get pregnant but don’t use a modern form of family planning.

This “unmet need” results in 70 million to 80 million unwanted pregnancies annually, the United Nations says, along with 19 million abortions and 150,000 maternal deaths.

The push for contraception was at the center of development efforts in the 1960s and 1970s, but then waned. In part, it was tarnished by its own zealotry, including coercion in China and India. Another reason was abortion politics, which led to a cutoff in American financing for the United Nations Population Fund—even though the upshot was more unwanted pregnancies and more abortions.

In addition, family planning turned out to be harder than many enthusiasts had expected, for it requires far more than condoms or the pill. Haiti has family-planning clinics, spending on contraception is fairly high, and women say they want fewer children—yet only one-quarter of Haitian women use contraceptives.

Nahomie’s story helps explain the enigma. She tried injectables, but she says they caused excess bleeding that frightened her. The clinic had little counseling to explain and reassure her, so she stopped after nine months.

A sexually transmitted infection at the time meant that she couldn’t use an IUD just then, and a doctor told her that the pill would be inappropriate because she has vascular problems. Reluctant to return to a clinic that seemed scornful of poor women, she drifted along with nothing.

A couple of babies later, her first husband left her, and her next husband wanted to have children with her, so she acquiesced. A few children later, she began to push back, but in Haiti’s social structure she felt she had to accede to her husband’s whims. “I asked to use condoms,” Nahomie said, “but he refused.” Last fall, shortly after she became pregnant with her 10th child, her husband ran off.

The best way to elevate women, by far, is to educate girls and to give them opportunities to earn income through loans, factory jobs or vocational training. It is sometimes said that the best contraceptive isn’t the pill or the IUD, but education for girls.

Mounting academic evidence underscores what is intuitively obvious in Haiti: unless family planning is more successful in poor countries, they won’t be able to overcome poverty. “There’s no other way,” says Tania Patriota, the representative of the United Nations Population Fund in Haiti. “It’s indispensable.”

The IUD may irritate the muscular layer of the uterine wall, causing contractions that expel it through the vagina. The device is most likely to be expelled during menstruation, so users are advised to check their sanitary napkins or tampons before discarding them. Women who use IUDs are advised to check the string several times a month to ensure that the IUD is in place. Spontaneous expulsions occur in 2 to 10% of users within a year of use (Hatcher et al., 2008). Some family-planning clinics advise women to supplement their use of IUDs with other devices for the first three months, when the risks of a shift in position or expulsion are greatest.

**REVERSIBILITY** IUDs may be removed readily by professionals. Nine out of ten former IUD users who try to become pregnant do so within a year (Hatcher et al., 2008).

**ADVANTAGES AND DISADVANTAGES** The IUD has the advantages of being highly effective, not diminishing sexual spontaneity or sexual sensations, and, once in place, the woman need not do anything more to prevent pregnancy. The small risk of failure is reduced to zero if the couple also use an additional form of birth control, such as the diaphragm or condom.

The IUD also does not interfere with the woman’s normal hormonal production. Users continue to produce pituitary hormones that stimulate ovarian follicles to mature and rupture, thereby releasing mature ova and producing female sex hormones.

A disadvantage is that insertion can be painful. Another disadvantage is side effects. The most common side effects are excessive menstrual cramping, irregular bleeding (spotting) between periods, and heavier than usual menstrual bleeding (Hatcher et al., 2008). These usually occur shortly following insertion and are among the primary reasons women ask to have the device removed. A more serious concern is the possible risk of pelvic inflammatory disease (PID), a serious disease that can become life threatening if left untreated. Women who use the IUD may have an increased risk of PID. The risk of infection is associated more with the insertion of the device (bacteria may enter the woman’s reproductive tract during insertion) than with use of the device itself.

Pelvic inflammatory disease can produce scar tissue that blocks the fallopian tubes, causing infertility. Women with pelvic infections should not use an IUD. Women who have risk factors for PID may also wish to consider the advisability of an IUD. Risk factors include a recent episode of gonorrhea or chlamydia, recurrent episodes of these STIs, sexual contact with multiple partners, or sexual contact with a partner who has had multiple partners.

Another risk is that the IUD may perforate (tear) the uterine or cervical walls, which can cause bleeding, pain, and adhesions. Perforations are not common but can be serious when they occur (Hatcher et al., 2008). IUD users are also at greater risk for ectopic pregnancies, both during and after usage, and for miscarriage. Ectopic pregnancies occur in about 5% of women who become pregnant while using an IUD (Hatcher et al., 2008). The IUD is not recommended for women with a history of ectopic pregnancy. Women who become pregnant while using the IUD stand about a 50–50 chance of miscarriage (Hatcher et al., 2008).

Another drawback to the IUD is its cost. The typical cost of an IUD insertion in a family planning clinic is a few hundred dollars. Potential expulsion of the IUD presents yet another disadvantage. Moreover, the IUD, like the pill, offers no protection against STIs. Finally, like the pill, IUDs place the burden of contraception entirely on the woman.
The Diaphragm

Diaphragms were once used by about one-third of American couples who practiced birth control. When invented in 1882, they were a breakthrough. Their popularity declined only in the 1960s with the advent of the pill and the IUD.

The diaphragm is a shallow cup or dome made of thin latex rubber (see Figure 12.1). The rim is a flexible metal ring covered with rubber. Diaphragms come in different sizes to allow a precise fit.

Diaphragms are available by prescription and must be fitted to the contour of the vagina by a health professional. Several sizes and types of diaphragms may be tried during a fitting. Women practice insertion in a health professional’s office so they can be guided as needed.

HOW IT WORKS The diaphragm is inserted and removed by the woman, much like a tampon. It is akin to a condom in that it forms a barrier against sperm when placed snugly over the cervical opening. Yet it is unreliable as a barrier alone. Thus, the diaphragm should be used in conjunction with a spermicidal cream or jelly. The diaphragm’s main function is to keep the spermicide in place.

HOW IT IS USED The diaphragm should be inserted no more than two hours before coitus, since the spermicides that are used may begin to lose effectiveness beyond this time. Some health professionals, however, suggest that the diaphragm may be inserted up to six hours preceding intercourse. (It seems reasonable to err on the side of caution and assume that there is a two-hour time limit.) The woman or her partner places a tablespoonful of spermicidal cream or jelly on the inside of the cup and spreads it inside the rim. (Cream spread outside the rim might cause the diaphragm to slip.) The woman opens the inner lips of the vagina with one hand and folds the diaphragm with the other by squeezing the ring. She inserts the diaphragm against the cervix, with the inner side facing upward (see Figure 12.2). Her partner can help insert the diaphragm, but the woman is advised to check its placement. Some women prefer a plastic insertion device, but most find it easier to insert the diaphragm without it. The diaphragm should be left in place at least six hours to allow the spermicide to kill sperm remaining in the vagina (Hatcher et al., 2008). It should not be left in place for longer than 24 hours, to guard against toxic shock syndrome (TSS).

After use, the diaphragm should be washed with mild soap and warm water and stored in a dry, cool place. When cared for properly, a diaphragm can last about two years. Women may need to be refitted after pregnancy or a change in weight of about ten pounds or more.

EFFECTIVENESS If used consistently and correctly, the failure rate of the diaphragm is estimated at 6% during a year of use. (See Table 12.1 on page 363.) In typical use, however, the failure rate is believed to be three times as high—18%. Some women become pregnant because they do not use the diaphragm during every coital experience. Others may insert it too early or not leave it in long enough. The diaphragm may not fit well, or it may slip—especially if the couple is acrobatic. A diaphragm may develop tiny holes or cracks. Women are advised to inspect the diaphragm for signs of wear and consult their health professionals when in doubt. Effectiveness also is seriously compromised when the diaphragm is not used along with a correctly applied spermicide.

REVERSIBILITY The effects of the diaphragm are fully reversible. In order to become pregnant, the woman simply stops using it. The diaphragm has not been shown to influence subsequent fertility.
ADVANTAGES AND DISADVANTAGES When used correctly, the diaphragm is a safe and effective means of birth control and does not alter the woman’s hormone production or reproductive cycle. The diaphragm can be used as needed, whereas the pill must be used daily and the IUD remains in place whether or not the woman engages in coitus. Another advantage is the virtual absence of side effects. The few women who are allergic to the rubber in the diaphragm can switch to a plastic model.

The major disadvantage is the high failure rate of typical users. Nearly 1 in 5 typical users (18%), who also uses a spermicide, becomes pregnant during a year of use (Hatcher et al., 2008). Another disadvantage is the need to insert the diaphragm prior to intercourse, which the couple may find disruptive. The woman’s partner may find the taste of the spermicide unpleasant during oral sex. The pressure exerted by the diaphragm against the vaginal and cervical walls may also irritate the urinary tract and cause urinary or vaginal infections. Switching to a different size diaphragm or one with a different type of rim may alleviate this problem. About 1 woman or man in 20 may develop allergies to the particular spermicide that is used, which can lead to irritation of the genitals. This problem may be alleviated by switching to another brand.

Spermicides

Spermicides are agents that kill sperm. They coat the cervical opening, blocking the passage of sperm and killing sperm by chemical action. They come as jellies and creams, suppositories, aerosol foam, and a contraceptive film. Spermicides should be left in place in the vagina (no douching) for several hours after coitus (Hatcher et al., 2008).

Spermicidal jellies and creams come in tubes with plastic applicators that introduce the spermicide into the vagina (see Figure 12.3 on page 372). Spermicidal foam is a fluffy white cream with the consistency of shaving cream. It is contained in a pressurized can and is introduced with a plastic applicator in much the same way as spermicidal jellies and creams.

Vaginal suppositories are inserted into the upper vagina, near the cervix, where they release spermicide as they dissolve. Unlike spermicidal jellies, creams, and foam, which become effective immediately when applied, suppositories must be inserted no less than 10 to 15 minutes before coitus so that they have sufficient time to dissolve (Hatcher et al., 2008).

Spermicidal film consists of thin, 2-inch-square sheets that are saturated with spermicide. When placed in the vagina, they dissolve into a gel and release the spermicide. The spermicidal film should be inserted at least five minutes before intercourse to allow it time to melt and for the spermicide to be dispersed. It remains effective for upwards of one hour. One disadvantage of the film that some users have noted is a tendency for it to adhere to the fingertips, which makes it difficult to insert correctly.

In typical use, the yearly failure rate of spermicides used alone is 21% (Hatcher et al., 2008). When used correctly and consistently, the failure rate is estimated to...
drop to about 6%. Spermicides are more effective when combined with other forms of contraception, such as the condom or diaphragm.

The major advantages of spermicides are that they do not alter the woman’s natural biological processes and are applied only as needed. Spermicides have not been linked with any changes in reproductive potential. So couples who wish to become pregnant simply stop using them. They do not require a doctor’s prescription or a fitting, and can be bought in virtually any drugstore.

The major disadvantage is the high failure rate among typical users. Foam often fails when the can is not shaken enough, when too little is used, when it is not applied deeply enough within the vagina near the cervix, or when it is used after coitus has begun.

Spermicides are generally free of side effects but sometimes irritate the vagina or penis. Irritation is sometimes alleviated by changing brands. Partners may find the taste of spermicides unpleasant.

It was once thought that spermicides that contain nonoxynol-9 might afford protection against STIs such as HIV/AIDS, genital herpes, trichomoniasis (“trich”), syphilis, and chlamydia. Yet an experiment in Africa found that nonoxynol-9 provided no protection against STIs (Roddy et al., 1998). In a study of the effectiveness of the spermicide as a means of preventing HIV infection among African and Thai prostitutes, the group using nonoxynol-9 actually had a significantly higher rate of HIV infection (15%) than the group using the placebo (10%) (Stephenson, 2000). Commentators suggest that local irritation caused by nonoxynol-9 might have made the vaginal tract an easier port of entry for HIV (e.g., Weiss et al., 2008).

The Contraceptive Sponge

The contraceptive sponge is a soft, disposable device. Unlike the diaphragm, the sponge does not need to be fitted. Like the diaphragm, it provides a barrier that holds a spermicide, but the spermicide is built in. The sponge can also be inserted into the vagina several hours before coitus and has the additional advantage of absorbing sperm. It is odorless and tasteless, and users found it less drippy than the diaphragm. On the negative side, about 1 user in 20 (male and female) is mildly irritated by the spermicide. There is also a remote chance of toxic shock syndrome (TSS): 1 case arose for every 4 million days of use.

The Cervical Cap

The cervical cap, like the diaphragm, is a dome-shaped cup. It comes in different sizes and must be fitted by a health professional. It is smaller than the diaphragm—about the size of a thimble—and is meant to fit snugly over the cervical opening.
Like the diaphragm, the cap is intended to be used with a spermicide applied inside it. When inserting it, the woman (or her partner) fills the cap about a third full of spermicide. Then, squeezing the edges together, she inserts the cap high in the vagina, so that it presses firmly against the cervix. The woman can test the fit by running a finger around the cap to ensure that the cervical opening is covered. It should be left in place for at least 8 hours after intercourse. The cap provides continuous protection for about 48 hours without the need for additional spermicide. To reduce the risk of toxic shock syndrome, the cap should not be left in place longer than 48 hours. Like the diaphragm, the cervical cap forms a barrier and also holds spermicide in place. It prevents sperm from passing into the uterus and fallopian tubes and kills sperm by chemical action. The cap should be cleaned after use and checked for wear and tear. When cared for properly, it can last upward of three years.

The failure rate in typical use is estimated to be high, ranging from 18% in women who have not borne children to 36% in women who have (Hatcher et al., 2008). Failures may be attributed, at least in part, to the cap becoming dislodged and to changes in the cervix during the menstrual cycle, which can cause the cap to cover the cervix less snugly.

Similar to the diaphragm, the cap is a mechanical device that does not affect the woman’s hormonal production or reproductive cycle. The cap may be especially suited to women who cannot support a diaphragm because of lack of vaginal muscle tone. Because of concern that the cap may irritate cervical tissue, however, users are advised to have regular Pap tests.

Some women find the cervical cap uncomfortable. It can also become dislodged during sex or lose its fit as the cervix changes over the menstrual cycle. Side effects include urinary tract infections and sensitivities to the rubber or spermicide. Other disadvantages include the expense and inconvenience of being fitted by a health professional. Moreover, some women are shaped so that the cap does not remain in place. For these reasons, and because they may be difficult to obtain, cervical caps are not very popular in the United States.

The Condom

Condoms are also called “rubbers,” “safes,” prophylactics (because latex condoms protect against STIs), and “skins” (referring to those that are made from lamb intestines). Condoms lost popularity with the advent of the pill and the IUD. They are less effective than either of them, may disrupt sexual spontaneity, and can lessen sexual sensations because they prevent contact between the penis and the vaginal wall. Condoms have regained popularity, however, because latex condoms can help prevent the spread of HIV/AIDS and other STIs and, to a lesser extent, because of concerns about side effects of the pill and the IUD. The current popularity of condoms has been spurred by the increased assertiveness of women. By using a condom, the man assumes much of the responsibility for contraception. Condoms are the only contraceptive device worn by men, and the only readily reversible method of contraception that is available to men. Condoms are inexpensive and can be obtained without prescription from pharmacies, family-planning clinics, and vending machines.

Some condoms are made of latex rubber. Thinner, more expensive condoms (“skins”) are made from the intestinal membranes of lambs. The latter allow greater sexual sensation but only latex condoms are effective against HIV. Condoms made of animal intestines have pores large enough to permit HIV and other viruses, such as the one that causes hepatitis B, to slip through (Hatcher et al., 2008). A few

Prophylactic An agent that protects against disease.
condoms are made from other materials, such as plastic (polyurethane). Questions remain about the effectiveness of polyurethane condoms. Some condoms have plain ends. Others have nipples or reservoirs (see Figure 12.4) that catch semen and may help prevent the condom from bursting during ejaculation.

**HOW THEY WORK**  A condom serves as a barrier, preventing the passage of sperm and disease-carrying microorganisms.

**HOW THEY ARE USED**  The condom is rolled onto the penis once erection is achieved and before contact between the penis and the vagina (see Figure 12.5). If the condom is not used until moments before the point of ejaculation, sperm-carrying fluid from the Cowper’s glands or from preorgasmic spasms may already have passed into the vagina. Nor does the condom afford protection against STIs if it is fitted after penetration.

Between 1 and 2% of condoms break or fall off during intercourse or when withdrawing the penis afterward (Hatcher et al., 2008). Condoms also sometimes slip down the shaft of the penis without falling off. To use a condom most effectively and to help prevent it from either breaking or falling off, a couple should observe the following guidelines (which are adapted from the Centers for Disease Control pamphlet, Condoms and Sexually Transmitted Diseases . . . Especially AIDS [HHS Publication FDA 90-4329] as well as other sources):

- Use a condom each and every time you have intercourse.
- Handle the condom carefully, making sure not to damage it with your fingernail, teeth, or sharp objects.
- Place the condom on the erect penis before it touches the vulva.
- Uncircumcised men should pull back the foreskin before putting on the condom.
- If you use a spermicide, place some inside the tip of the condom before placing the condom on the penis. (The couple may apply additional spermicide inside the vagina to provide extra protection.)
- Do not pull the condom tightly against the tip of the penis.
- For a condom without a reservoir tip, leave a small empty space—at a half-inch—at the tip for semen, but do not allow air to get trapped at the tip.
- Unroll the condom all the way to the bottom of the penis.
- Ensure that adequate vaginal lubrication during intercourse is present, using lubricants if necessary. But use only water-based lubricants such as contraceptive jelly or K-Y jelly. Never use oil-based lubricants that can weaken the latex material, such as petroleum jelly (Vaseline), cold cream, baby oil or lotion, mineral oil, massage oil, vegetable oil, Crisco, hand or body lotions, and most skin creams.
- If the condom breaks during intercourse, withdraw the penis immediately and use a spermicide.
- After ejaculation, carefully withdraw the penis while it remains erect.
- Hold the rim of the condom against the base of the penis as the condom is withdrawn to prevent slippage.
- Check the removed condom for tears or cracks. If any are found, use a spermicide.
Since condoms can be eroded by exposure to body heat or other sources of heat, they should not be kept for any length of time in a pocket or the glove compartment of a car. Here are other things you should never do with a condom:

- Avoid tearing or puncturing the condom by opening the package carefully.
- Do not test a condom by inflating it or stretching it.
- Do not use a condom after its expiration date.
- Do not use condoms that are sticky, gummy, discolored, brittle, or appear otherwise damaged.
- Do not use a condom if the sealed packet containing the condom is damaged, cracked, or brittle.
- Do not open the sealed packet until you are ready to use the condom.
- Use a condom only once.
- If you want to carry a condom with you, place it in a loose jacket pocket or purse, not in your pants pocket or in a wallet in your pants pocket, where it might be exposed to body heat.
- Do not buy condoms from vending machines that are exposed to heat or direct sunlight.

**EFFECTIVENESS** In typical use, the failure rate of the male condom is estimated at 12%. (See Table 12.1 on page 363.) In other words, 12 women out of 100 whose partners rely on condoms alone can expect to become pregnant during a year of use. The rate drops dramatically if the condom is used with a spermicide (Hatcher et al., 2008). The effectiveness of a condom and spermicide combined rivals that of the pill when used correctly.

**REVERSIBILITY** The condom is simply a mechanical barrier to sperm and does not compromise fertility. Therefore, a couple who wish to conceive a child simply discontinue its use.

**ADVANTAGES AND DISADVANTAGES** Condoms have the advantage of being readily available. They can be purchased without prescription. They require no fitting and can remain in sealed packages until needed. They are readily discarded after use. The combination of condoms and spermicides increases effectiveness. Some condoms contain a spermicide as a lubricant. When in doubt, ask a pharmacist.

Condoms do not affect production of hormones, ova, or sperm. Women whose partners use condoms ovulate normally. Men who use them produce sperm and ejaculate normally. With all these advantages, why are condoms not more popular?

One reason is that it may render sex less spontaneous. The couple must interrupt lovemaking to apply the condom. Condoms also lessen sexual sensations, especially for the man. Latex condoms do so more than animal membrane sheaths. Condoms also sometimes slip or tear, allowing sperm to leak through.

On the other hand, condoms are almost entirely free of side effects. They offer protection against STIs that is unparalleled among contraceptive devices. They can be used without prior medical consultation. Both partners can share putting on the condom, which makes it an erotic part of their lovemaking. The use of textured or ultrathin condoms may increase sensitivity, especially for the male. Sex in the age of HIV/AIDS has given condoms a new respectability, even a certain trendiness. Advertisers now also target women in their ads, suggesting that women, like men, can come prepared with condoms.
It is tempting to claim that the condom has a perfect safety record and no side effects. Let us settle for “close to perfect.” Some people have allergic reactions to the spermicides with which some lubricated condoms are coated or that the woman may apply. Some people are allergic to latex.

Women have a right to insist that their male sex partners wear latex condoms if their partners are not latex-sensitive. STIs such as gonorrhea and chlamydia (see Chapter 16) do more damage to a woman’s reproductive tract than to a man’s. Condoms can help protect women from vaginitis, pelvic inflammatory disease (PID), infections that can harm a fetus or cause infertility, and HIV (Crosby et al., 2005).

**Douching**

Many couples believe that if a woman douches shortly after coitus, she will not become pregnant. Women who douche for contraceptive purposes often use syringes to flush the vagina with water or a spermicidal agent. **Truth or Fiction Revisited:** Douching is ineffective, however, because large numbers of sperm move beyond the range of the douche seconds after ejaculation. In addition, squirting a liquid into the vagina may even propel sperm toward the uterus. Regular douching may also alter the natural chemistry of the vagina, increasing the risk of vaginal infection. In short, douching is a “nonmethod” of contraception.

**The Withdrawal Method**

Withdrawal means that the man removes his penis from the vagina before ejaculating. Withdrawal—also referred to as *coitus interruptus*—has a first-year failure rate among typical users of about 20% (Hatcher et al., 2008). There are several reasons for these failures. The man may not withdraw in time. Even if the penis is withdrawn just before ejaculation, some ejaculate may still fall on the vaginal lips, and sperm may find their way to the fallopian tubes. Sperm may also be present in the pre-ejaculatory secretions of fluid from the Cowper’s glands. Because of its unreliability and high failure rate, withdrawal is not a viable method of contraception.

**Fertility Awareness Methods**

There are several fertility awareness methods, which are also referred to as *rhythm methods*. They all rely on awareness of the occurrence of the fertile segments of the woman’s menstrual cycle. You will also hear them referred to as *natural birth control* or *natural family planning*. Each of them aims to avoid coitus on days when conception is likely. Fertility awareness methods are used by a small minority of women, more so by women in committed relationships. Since the rhythm method does not employ artificial devices, it is acceptable to the Roman Catholic Church.

**HOW THEY WORK** A number of rhythm methods are used to predict the likelihood of conception. They are the mirror images of the methods that couples use to increase their chances of conceiving (see Chapter 11). Methods for enhancing the chances of conception seek to predict time of ovulation so the couple can arrange to have sperm present in the woman’s reproductive tract at about that time. As methods of *birth control*, rhythm methods predict ovulation so that the couple can abstain from coitus when the woman is fertile.
THE CALENDAR METHOD  The calendar method assumes that ovulation occurs 14 days prior to menstruation. The couple abstains from intercourse during the period that begins 3 days prior to day 13 (because sperm are unlikely to survive for more than 72 hours in the female reproductive tract) and ends 2 days after day 15 (because an unfertilized ovum is unlikely to remain receptive to fertilization for longer than 48 hours). The period of abstention thus covers days 10 to 17 of the woman’s cycle.

When a woman has regular 28-day cycles, predicting the period of abstention is relatively straightforward. Women with irregular cycles are generally advised to chart their cycles for 10 to 12 months to determine their shortest and longest cycles. The first day of menstruation counts as day 1 of the cycle. The last day of the cycle is the day preceding the onset of menstruation.

Consider a woman whose cycles vary from 23 to 33 days. In theory she will ovulate 14 days before menstruation begins. (To be safe she should assume that ovulation will take place anywhere from 13 to 15 days before her period.) Applying the rule of “three days before” and “two days after,” she should avoid coitus from day 5 of her cycle, which corresponds to 3 days before her earliest expected ovulation (computed by subtracting 15 days from the 23 days of her shortest cycle and then subtracting 3 days), through day 22, which corresponds to 2 days after her latest expected ovulation (computed by subtracting 13 days from the 33 days of her longest cycle and then adding 2 days). Another way of determining this period of abstention would be to subtract 18 days from the woman’s shortest cycle to determine the start of the “unsafe” period and 11 days from her longest cycle to determine the last “unsafe” day. The woman in the example has irregular cycles. She thus faces an 18-day abstention period each month—quite a burden for a sexually active couple.

Most women who follow the calendar method need to abstain from coitus for at least 10 days during the middle of each cycle. Moreover, the calendar method cannot ensure that the woman’s longest or shortest menstrual cycles will occur during the 10- to 12-month period of baseline tracking. Some women, too, have such irregular cycles that the range of “unsafe” days cannot be predicted reliably even if baseline tracking is extended.

THE BASAL BODY TEMPERATURE (BBT) METHOD  In the basal body temperature (BBT) method, the woman tracks her body temperature upon awakening each morning to detect the small changes that occur directly before and after ovulation. A woman’s basal body temperature sometimes dips slightly just before ovulation and then tends to rise between 0.4 and 0.8 degree Fahrenheit just before, during, and after ovulation. It remains elevated until the onset of menstruation. (The rise in temperature is caused by the increased production of progesterone by the corpus luteum during the luteal phase of the cycle.) Thermometers that provide finely graded readings, such as electronic thermometers, are best suited for determining minor changes. A major problem with the BBT method is that it does not indicate the several unsafe preovulatory days during which sperm deposited in the vagina may remain viable. Rather, the BBT method indicates when a woman has ovulated. Thus, many women use the calendar method to predict the number of “safe” days prior to ovulation and the BBT method to determine the number of “unsafe” days after. A woman would avoid coitus during the “unsafe” preovulatory period (as determined by the calendar method) and then for three days when her temperature rises and remains elevated. A drawback of the BBT method is that changes in body temperature may also result from factors unrelated to ovulation, such as infections.
sleeplessness, or stress. So, some women triple-check themselves by also tracking their cervical mucus.

**THE CERVICAL MUCUS (OVULATION) METHOD** The ovulation method tracks changes in the viscosity of the cervical mucus. Following menstruation, the vagina feels rather dry. There is also little or no discharge from the cervix. These dry days are relatively safe. Then a mucous discharge appears in the vagina that is first thick and sticky, and white or cloudy in color. Coitus (or unprotected coitus) should be avoided at the first sign of any mucous. As the cycle progresses, the mucus discharge thins and clears, becoming slippery or stringy, like raw egg white. These are the peak days. This mucus discharge, called the ovulatory mucus, may be accompanied by a feeling of vaginal lubrication or wetness. Ovulation takes place about a day after the last peak day (about four days after this ovulatory mucus first appears). Then the mucus becomes cloudy and tacky once more. Intercourse may resume four days following the last peak day. However, many women have difficulty detecting changes in the mucus discharge. Such changes may also result from infections, certain medications, or contraceptive creams, jellies, or foam. Sexual arousal may also induce changes in viscosity.

**OVULATION-PREDICTION KITS** Predicting ovulation is more accurate with an ovulation-prediction kit. Kits allow women to test their urine regularly for the presence of luteinizing hormone (LH). LH levels surge about 12 to 24 hours prior to ovulation. Kits can be used to help couples conceive or avoid pregnancy. Ovulation kits can be costly, however.

**EFFECTIVENESS** The estimated first-year failure rate of rhythm methods is 20%, which reminds us of the joke: “What do you call people who use the rhythm method? Parents!” Fewer failures occur when these methods are applied conscientiously, when a combination of rhythm methods is used, and when the woman’s cycles are regular. Restricting coitus to the postovulatory period can reduce the pregnancy rate to 1% (Hatcher et al., 2008). The trick is to determine when ovulation occurs.

**ADVANTAGES AND DISADVANTAGES** Because they are a natural form of birth control, rhythm methods appeal to many people who, for religious or other reasons, prefer not to use artificial means. Since no devices or chemicals are used, there are no side effects. Nor do they cause loss of sensation, as condoms do. Nor is there disruption of sex, as with condoms, diaphragms, or foam—although sex could be said to be quite “disrupted” during the period of abstention. Rhythm methods are inexpensive, except for ovulation-prediction kits. Both partners may share the responsibility for rhythm methods. The man, for example, can take his partner’s temperature or assist with charting. All rhythm methods are fully reversible. Rhythm methods may be unsuitable for women with irregular cycles. Moreover, the rhythm method requires abstaining for many days, perhaps weeks, each month. Rhythm methods also require that records of the menstrual cycle be kept for many months prior to implementation. Rhythm methods cannot be used spontaneously. Nor do rhythm methods afford protection against STIs.

**Sterilization** Sterilization permanently makes the individual incapable of fertilizing a partner or of conceiving. Many people decide to be sterilized when they plan to have no chil-
dren or no more children. With the exception of abstinence, sterilization is the most effective form of contraception. Yet the prospect of sterilization arouses strong feelings because a person is transformed all at once, and presumably permanently, from someone who might be capable of bearing children to someone who cannot. This transformation involves a change in self-concept, which may disturb people who link fertility to their self-identity. Still, sterilization is the most widely used form of birth control among couples in committed relationships age 30 and above.

**MALE STERILIZATION** The male sterilization procedure used today is the vasectomy. About one man in six in the United States has had a vasectomy.

A vasectomy is usually carried out in a doctor’s office, under local anesthesia, in 15 to 20 minutes. Small incisions are made in the scrotum. Each vas deferens is cut, a small segment is removed, and then the ends are tied off or cauterized to prevent them from growing back together (see Figure 12.6). Sperm no longer reach the urethra and are reabsorbed harmlessly by the body.

The man can usually resume sexual relations within a few days. However, health-care providers recommend follow-ups to check for the presence of sperm in the ejaculate, since sperm can be found for many weeks and sometimes months even when operations have been successful (Dhar, 2006). And rarely—in about 1 case in 500—the vas “recanalizes,” meaning that the severed ends rejoin spontaneously (Lucon, 2006).

Vasectomy does not diminish sex drive or result in any change in sexual arousal, erectile or ejaculatory ability, or sensations of ejaculation. Male sex hormones and sperm are still produced by the testes. Without a passageway to the urethra, however, sperm are no longer expelled with the ejaculate. Since sperm account for only about 1% of the ejaculate, the volume of the ejaculate is not noticeably different.

**Figure 12.6 • Vasectomy.** The male sterilization procedure is usually carried out in a doctor’s office, using local anesthesia. Small incisions are made in the scrotum. Each vas deferens is cut, and the ends are tied off or cauterized to prevent sperm from reaching the urethra. Sperm are harmlessly reabsorbed by the body after the operation.

**Vasectomy** The surgical method of male sterilization in which sperm are prevented from reaching the urethra by cutting each vas deferens and tying it back or cauterizing it.

Methods of Contraception
During this method of female sterilization, the surgeon approaches the fallopian tubes through a small incision in the abdomen just below the navel. A narrow instrument called a laparoscope is inserted through the incision, and a small section of each fallopian tube is cauterized, cut, or clamped to prevent ova from joining with sperm.

Over the years there has been some concern as to whether or not vasectomy raises the risk of prostate cancer. A New Zealand study comparing the incidence of vasectomy among 923 men who had had prostate cancer and a matched group of 1,224 who had not (Cox et al., 2006) found no connection between the two. Individuals considering vasectomy should discuss the most recent available findings with their physicians.

Reversibility is simple in concept but not in practice. Thus, vasectomies should be considered permanent. In an operation to reverse a vasectomy, called a vasovasotomy, the ends of the vas deferens are sewn together, and in a few days they grow together. Estimates of success at reversal, as measured by subsequent pregnancies, are quite variable and have been reported to range from 16 to 79% (Brechin & Bigrigg, 2006; Hatcher et al., 2008). Even so, the man still produces viable sperm and they can be harvested, if with some difficulty, and used to fertilize ova via methods such as intracytoplasmic sperm injection (Karpman et al., 2006).

Few serious complications from vasectomies have been reported, but minor complications are not uncommon. They typically involve temporary local inflammation or swelling after the operation. Ice packs and anti-inflammatory drugs, such as aspirin, may help reduce swelling and discomfort.

**FEMALE STERILIZATION** About 21% of American women between the ages of 15 and 44 have been surgically sterilized (U.S. Bureau of the Census, 2006). The percentages are higher among older women in committed relationships. **Tubal sterilization**, also called **tubal ligation**, is the most common method of female sterilization. Tubal sterilization prevents ova and sperm from passing through the fallopian tubes.

The two main surgical procedures for tubal sterilization are **mini-laparotomy** and **laparoscopy**. In a **mini-laparotomy**, a small incision is made in the abdomen, just above the pubic hairline, to provide access to the fallopian tubes. Each tube is cut and tied back or clamped. In a **laparoscopy** (see Figure 12.7), sometimes called “belly button surgery,” the fallopian tubes are approached through a small incision in the abdomen just below the navel. The surgeon uses a narrow, lighted instrument called a **laparoscope** to view the tubes. A small section of each of the tubes is cauterized,
cut, or clamped. The woman usually returns to her daily routine in a few days and can resume sex when it becomes comfortable. In an alternative sterilization procedure, a **culpotomy**, the fallopian tubes are approached through an incision in the back wall of the vagina.

None of these methods disrupts sex drive or sexual response. Surgical sterilization does not induce premature menopause or alter the woman’s production of sex hormones. The menstrual cycle is undisturbed. The unfertilized egg is reabsorbed by the body rather than sloughed off in the menstrual flow.

A **hysterectomy** also sterilizes a woman, but a hysterectomy is a major operation that is commonly performed because of cancer or other diseases of the reproductive tract; it is inappropriate as a method of sterilization.

Female sterilization is highly effective in preventing pregnancy, although slightly less effective than male sterilization. Overall, about 1 woman in 200 (0.4%) is likely to become pregnant in the first year following a tubal sterilization (Hatcher et al., 2008), most likely the result of a failed surgical procedure or an undetected pregnancy at the time of the procedure. Like vasectomy, tubal ligation should be considered irreversible. Reversals are successful, as measured by subsequent pregnancies, in 43 to 88% of cases (Hatcher et al., 2008). Reversal is difficult and costly, however.

**Truth or Fiction Revisited:** Not all sterilization operations can be surgically reversed. Therefore, sterilization is not advised for individuals who believe they might change their minds. Nevertheless, the woman continues to ovulate, and even if the tubes cannot be rejoined, it may be possible to harvest the ova, fertilize them in vitro, and insert them into the uterus for implantation.

Some women have medical complications, such as abdominal infections, excessive bleeding, punctures of nearby organs, and scarring. The use of general anesthesia (typical in laparoscopies and in some mini-laparotomies) poses additional risks, as in any major operation. (Most of the deaths that are attributed to tubal sterilization actually result from the anesthesia. But there are only 2 to 5 deaths per 100,000 operations.)

**ADVANTAGES AND DISADVANTAGES OF STERILIZATION** The major advantages of sterilization are effectiveness and permanence. Sterilization is nearly 100% effective. The permanence is also its major drawback, however. People sometimes change their minds about wanting to have children.

Sterilization procedures create varying risks of complications following surgery, with women generally incurring greater risks than men. Sterilization affords no protection against STIs.

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**Real Students; Real Questions**

**Q** I was watching Grey’s Anatomy the other night, and a patient wanted to have her tubes tied without her husband knowing. Is there a law that says that spouses need to talk to each other before a procedure is done?

**A** By and large, medical procedures requested by competent adults are protected by patient–physician confidentiality.
Selecting a Method of Contraception

If you believe that you and your partner should use contraception, how will you determine which method is right for you? There is no simple answer. What is right for your peers may be wrong for you. You and your partner will make your own selections, but there are some issues you may want to consider:

1. **Convenience.** Is the method convenient? Does it require a device that must be purchased in advance? If so, is a prescription required? Will the method work at a moment’s notice, or, as with the birth-control pill, will it require time to reach maximum effectiveness?

2. **Moral acceptability.** A method that is morally acceptable to one person may be objectionable to another. For example, those who strictly follow the teachings of the Roman Catholic Church may find any artificial means of contraception to be objectionable.

3. **Cost.** Methods vary in cost. Some more costly methods involve devices (such as the diaphragm, the cervical cap, and the IUD) or hormones that require medical visits in addition to the cost of the devices themselves.

4. **Sharing responsibility.** Most forms of birth control place the burden of responsibility largely, if not entirely, on the woman. The woman must consult with her doctor to obtain birth-control pills or other prescription devices such as diaphragms, cervical caps, and IUDs. The woman must take birth-control pills reliably or check to see that her IUD remains in place.

5. **Safety.** How safe is the method? What are the side effects?

6. **Reversibility.** In most cases the effects of birth-control methods can be fully reversed by discontinuing their use. In other cases reversibility may not occur immediately, as with oral contraceptives. It’s most cautious to consider sterilization irreversible.

7. **Protection against sexually transmitted infections (STIs).**

   **Truth or Fiction Revisited:**
   
   The truth is that only some contraceptives, like the condom, prevent STIs as well as conception.

8. **Effectiveness.** Techniques and devices vary widely in their effectiveness in actual use. The failure rate for a particular method refers to the percentage of women who become pregnant when using the method for a given period of time, such as during the first year of use. Most contraceptive methods are not used correctly much or even all of the time. Failure rates among typical users are often considerably higher because of incorrect, unreliable, or inconsistent use. Table 12.1 on page 363 shows the failure rates, reversibility, and degree of protection against STIs associated with various contraceptive methods.
Abortion

“WHEN I WAS YOUNG, I felt it myself, that it was wrong to kill a baby,” said Maria, a 17-year-old Latina high school student who lives in Houston. She is waiting to be seen at an abortion clinic. “But when I got to be a teenager, and started having sex, things looked different. It’s more complicated when it’s your own life. I want to go to college, and I know that having a baby now, without a husband or anything, would make that very hard” (Lewin, 1998a)

Maria is not all that unusual for young people in the United States today. Abortion has little to do with politics to her. The Roe v. Wade decision occurred a decade before Maria was born. Like many adults in the United States, Maria believes that abortion is murder, but like many of those, Maria also believes that abortion is an acceptable solution to a bad situation.

In common usage, the term abortion usually refers to an induced abortion (in contrast to a spontaneous abortion, or miscarriage)—that is, the purposeful termination of a pregnancy. Perhaps more than any other contemporary social issue, induced abortion (hereafter referred to simply as abortion) has divided neighbors and family members into opposing camps.

In the United States, the abortion rate increased steadily from the early 1970s through 1980, leveled off somewhat in the 1980s, reached a peak in about 1990, when there were about 1.4 million abortions, and has declined to about 1.2 million abortions per year (Frost & Frohwirth, 2005). The great majority of abortions in the United States occur during the first trimester (see Figure 12.8). This is when they are safest to the woman and least costly.

About 43% of women in the United States have an abortion at some time (Frost & Frohwirth, 2005). Most are single, and about half are already mothers. They are young: Nearly three-quarters of them are under 30 years old. About 60% percent of these women are European American, about one in three (35%) is African American, and nearly one in six is Latina American.

Abortion is practiced widely in Canada, Japan, Russia, and many European nations. It is less common in developing nations, largely because of sparse medical facilities. Abortion is rarely used as a primary means of birth control. It usually comes into play when other methods have failed.

There are many reasons why women have abortions, including psychological factors as well as external circumstances. Abortion is often motivated by a desire to reduce the risk of physical, economic, psychological, and social disadvantages that the woman perceives for herself and her present and future children should she take the pregnancy to term.

The national debate over abortion has been played out in recent years against a backdrop of demonstrations, marches, and occasional acts of violence, such as firebombing of abortion clinics, even murder. Most who label themselves pro-life believe that human life begins at conception and view abortion as the killing of an unborn child. Some pro-life people brook no exception to their opposition to

Induced abortion The purposeful termination of a pregnancy before the embryo or fetus is capable of sustaining independent life.

Figure 12.8 ● When Women Have Abortions (in Weeks).

Eighty-eight percent of abortions occur during the first 12 weeks of pregnancy, 2001.

Where Are the Missing Chinese Girls?

It is no secret that most people in most cultures would prefer that their child, or at least their first child, be a boy. According to traditional gender roles, boys carry on the business of the family and represent continuity of the lineage (LaFraniere, 2009; Sullum, 2007). They pass on the family name. In less developed nations such as China and India, especially in rural areas, sons also represent protection from neglect and poverty in the later years. These attitudes are reflected in verses from the ancient Chinese Book of Songs, written some 3,000 years ago:

When a son is born,  
Let him sleep on the bed,  
Clothe him with fine clothes,  
And give him jade with which to play . . .  
When a daughter is born,  
Let her sleep on the ground,  
Wrap her in common wrappings,  
And give broken tiles with which to play . . .

When Mao Zedong took power in 1949, his Communist government replaced family support in old age with state support and also rejected male superiority. There remained a balance in the numbers of males and females in the population throughout most of the 1970s. But beginning in 1979, China attempted to gain control of its mushrooming population of more than a billion by enforcing strict limits on family size (Ding & Hesketh, 2006).

As noted in Table 12.2, the desirability of having small families has generally caught on in the Chinese population. That is, the great majority of women interviewed in a recent survey expressed the desire to have either one or two children. However, there were some differences according to the woman’s age, her area of residence, and her level of education. How would you account for them?

Since more boys than girls die in infancy, a “normal” ratio of boys to girls is about 106 to 100, which characterized China in the 1970s. The ratio was about 108.5 boys to 100 girls in the early 80s, then 111 to 100 in 1990, 117 to 100 in 2000, and is now at least 120 boys for every 100 girls (LaFraniere, 2009).

Therefore, a great shortage of Chinese women is being created, which may not be much of a problem for parents but which will certainly be a problem for men seeking mates in future years. Chinese officials are concerned that the shortfall means that millions of men will have no prospect of getting married and settling down when they are of age. Thus there will be an increased likelihood of social unrest, which can become political dissent as well as ordinary crime (Festini et al., 2006; Potts, 2006).

Prenatal Sex Selection

How do the Chinese have so many more sons than daughters? Once upon a time in places like China and India, much of the answer lay in infanticide—that is, in the killing of unwanted female babies. Today, according to the International Planned Parenthood Federation, the main answer is the selective abortion of female fetuses, as identified by inexpensive, portable ultra-sound scanners and backstreet abortion clinics. It is estimated that there are some seven million abortions in China each year, and that 70% percent of them are of females (Hesketh & Xing, 2006; LaFraniere, 2009).

The director of China’s National Population and Family Planning Commission admitted that the gender gap created by the country’s population policy has created a very serious challenge for the country (Festini et al., 2006; Sullum, 2007). However, the country does not intend to loosen its constraints on population growth. Instead, the government will experiment with educational campaigns, penalties for sex-selective abortions, and bonuses for parents who have girls (Sullum, 2007).
abortion, but most would permit abortion to save the mother’s life or when a pregnancy results from rape or incest.

The pro-choice movement contends that abortion is a matter of personal choice and that the government has no right to interfere with a woman’s right to terminate a pregnancy. Pro-choice advocates argue that women are free to control what happens within their bodies, including pregnancies.

### When Does Human Life Begin?

**THE QUESTION AS TO WHEN HUMAN LIFE BEGINS** is one that you will have to answer for yourself. We can only note that moral concerns about abortion often turn on the question of when human life begins. For some Christians, the matter revolves around when they believe the fetus obtains a soul.

In his thesis on **ensoulment**, the thirteenth-century Christian theologian Saint Thomas Aquinas wrote that a male fetus does not acquire a human soul until 40 days after conception. A female fetus does not acquire a soul until after 80 days. Scientists, too, have attempted to define when human life can be said to begin. Astronomer Carl
What does it mean to be “pro-life” on the abortion issue? What does it mean to be “pro-choice”? Which position is closer to your own views on abortion?

The *Reasoning about Abortion Questionnaire (RAQ)* (Parsons et al., 1990) assesses agreement with pro-life or pro-choice lines of reasoning about abortion. To find out which position is closer to your own, indicate your level of agreement or disagreement with each of the following items by circling the number that most closely represents your feelings. Then refer to the key in the appendix to interpret your score.

<table>
<thead>
<tr>
<th>Item</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Mixed Feelings</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Abortion is a matter of personal choice.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. Abortion is a threat to our society.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. A woman should have control over what is happening to her own body by having the option to choose abortion.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. Only God, not people, can decide if a fetus should live.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. Even if one believes that there may be some exceptions, abortion is still basically wrong.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6. Abortion violates an unborn person’s fundamental right to life.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>7. A woman should be able to exercise her rights to self-determination by choosing to have an abortion.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>8. Outlawing abortion could take away a woman’s sense of self and personal autonomy.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>9. Outlawing abortion violates a woman’s civil rights.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>10. Abortion is morally unacceptable and unjustified.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>11. In my reasoning, the notion that an unborn fetus may be a human life is not a deciding issue in considering abortion.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>12. Abortion can be described as taking a life unjustly.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>13. A woman should have the right to decide to have an abortion based on her own life circumstances.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>14. If a woman feels that having a child might ruin her life, she should consider an abortion.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>15. Abortion could destroy the sanctity of motherhood.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>16. An unborn fetus is a viable human being with rights.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>17. If a woman feels she can’t care for a baby, she should be able to have an abortion.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>18. Abortion is the destruction of one life for the convenience of another.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>19. Abortion is the same as murder.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>20. Even if one believes that there are times when abortion is immoral, it is still basically the woman’s own choice.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Sagan, for example, wrote that fetal brain activity can be considered a scientific marker of human life (Sagan & Druyan, 1990). Brain activity is needed for thought, the quality that is considered most “human” by many. Brain-wave patterns typical of children do not begin until about the 30th week of pregnancy. But opponents argue that a newly fertilized ovum carries the potential for human thought in the same way that the embryonic or fetal brain does. It could even be argued that sperm cells and ova are living things in that they carry out the biological processes characteristic of cellular life. All in all, the question of when human life begins is apparently not going to be resolved by science.

## Historical and Political Perspectives on Abortion

### ATTITUDES TOWARD ABORTION HAVE VARIED

Attitudes toward abortion have varied across cultures and eras. Abortion was permitted in ancient Greece and Rome, but women in ancient Assyria were impaled on stakes for attempting abortion. The Bible does not specifically prohibit abortion (Sagan & Druyan, 1990). For much of its history, the Roman Catholic Church held to Thomas Aquinas’s belief that ensoulment of the fetus did not occur for at least 40 days after conception. In 1869, Pope Pius IX declared that human life begins at conception. Thus, an abortion at any stage of pregnancy became murder in the eyes of the church and grounds for excommunication.

**Truth or Fiction Revisited:** It is true that abortions were legal in the United States prior to the Civil War. In fact, abortion was legal in the United States from 1607 to 1828 (Hitt, 1998). Women were permitted to terminate a pregnancy until “quickening” occurred (the point at which the woman was first able to feel the fetus stirring within her). More restrictive abortion laws emerged because of a national desire to increase the population and because of concerns voiced by physicians about protecting women from botched abortions (Hitt, 1998). By 1900, virtually all states in the union had enacted legislation banning abortion at any point during pregnancy, except when necessary to save the woman’s life.

Abortion laws remained essentially unchanged until the late 1960s, when some states liberalized their abortion laws under mounting public pressure. Then, in 1973, the U.S. Supreme Court, in effect, legalized abortion nationwide in the landmark *Roe v. Wade* decision. *Roe v. Wade* held that a woman’s right to an abortion was protected under the right to privacy guaranteed by the Constitution. The decision legalized abortions for any reason during the first trimester. In its ruling, the Court also noted that a fetus is not considered a person and is thus not entitled to constitutional protection. The Court ruled that states may regulate a woman’s right to have an abortion during the second trimester to protect her health, as in requiring her to obtain an abortion in a hospital rather than a doctor’s office. The Supreme Court also held that when a fetus becomes viable, its rights override the mother’s right to privacy. Because the fetus may become viable early in the third trimester, states may prohibit third-trimester abortions, except when an abortion is necessary to protect a woman’s health.

Since *Roe v. Wade*, most states have also enacted laws requiring parental consent or notification before a minor may have an abortion. According to a CBS News Poll taken in 2005, 80% of adults in the United States say that at least one parent should be notified before minor girls can have abortions. Yet, with or without such
rules, most girls seeking abortion do consult their parents. On the other hand, a survey reported in the *Journal of the American Medical Association* found that 48% of a sample of 950 girls visiting Planned Parenthood said that they would stop using all of the organization’s services if their parents were notified of the visits (Reddy et al., 2002).

**Attitudes toward Legalized Abortion: A Nation Divided**

National public opinion polls taken since *Roe v. Wade* have consistently shown that a majority of people in the United States support a woman’s right to have an abortion under at least some circumstances (see Figures 12.9, 12.10, and 12.11). Reduced support for legal abortion is associated with religious commitment, conservative attitudes on premarital sex, and belief in having large families.

Although most people in the United States favor legalized abortion, they do not do so under all circumstances (see Figure 12.11). Most Americans consider themselves to be “pro-life,” but they think abortion should be allowed under certain circumstances (Saad, 2009).

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**Figure 12.9**  
With Respect to the Abortion Issue, Would You Consider Yourself to Be Pro-Choice or Pro-Life?  
Source: Gallup Poll.

**Figure 12.10**  
Do You Think Abortions Should Be Legal under Any Circumstances, Legal Only under Certain Circumstances, or Illegal in All Circumstances?  
Source: Gallup Poll.

**Figure 12.11**  
Combined Position on Legality of Abortion  
Source: Gallup Poll.
Historical and Political Perspectives on Abortion

Many people in the pro-choice movement argue that if abortions were to be made illegal again, thousands of women, especially poor women, would die or suffer serious physical consequences from botched or nonsterile abortions. People in the pro-life movement counter that alternatives to abortion, such as adoption, are available. Pro-choice advocates argue that the debate about abortion should be framed not only by notions of the mother’s right to privacy but also by the issue of the quality of life of an unwanted child. They argue that minority and physically or mentally disabled children are often hard to place for adoption. These children often spend their childhoods being shuffled from one foster home to another. Pro-life advocates counter that killing a fetus eliminates any potential that it might have, despite hardships, of living a fruitful and meaningful life.

Figure 12.9 shows the breakdown of Americans who have considered themselves to be pro-life and pro-choice according to national surveys done from 1995 to 2009 (Saad, 2009). You can see that the percentage of people who label themselves pro-life has been growing. On the other hand, only a minority of respondents—22% in the 2009 poll—would restrict abortion under all circumstances (see Figure 12.10). But there is yet another caveat: Of those who would permit abortion under certain circumstances, the majority would permit it in only a few circumstances (see Figure 12.11). Such few circumstances might include rape, incest, and deformity in the fetus.

Despite polls such as these, Roe v. Wade is not in the personal memories of most individual women who choose to have abortions in the United States today. Many

A Death in Wichita

Occasionally the pro-choice–pro-life battle turns deadly. At least four physicians who practice abortions have been killed. The latest to die, as of this writing, was George Tiller of Wichita, Kansas. He was gunned down in his church in 2009. Tiller was one of the few remaining doctors who are willing to practice late-term abortions. Despite Dr. Tiller’s death, pro-life groups are still demonstrating in the area of his office.

How do pro-life people feel about the killing of Tiller? We can only note what some of them say. Troy Newman (2009), president of Operation Rescue, a well-known anti-abortion organization headquartered in Wichita, said, “This idiot”—referring to Tiller’s killer—“did more to damage the pro-life movement than you can imagine.”

Mark S. Gietzen (2009), president of the Kansas Coalition for Life, noted, “You can’t be pro-life and go around killing people, but some people are really mad at me for saying that.”

Many people in the pro-choice movement argue that if abortions were to be made illegal again, thousands of women, especially poor women, would die or suffer serious physical consequences from botched or nonsterile abortions. People in the pro-life movement counter that alternatives to abortion, such as adoption, are available. Pro-choice advocates argue that the debate about abortion should be framed not only by notions of the mother’s right to privacy but also by the issue of the quality of life of an unwanted child. They argue that minority and physically or mentally disabled children are often hard to place for adoption. These children often spend their childhoods being shuffled from one foster home to another. Pro-life advocates counter that killing a fetus eliminates any potential that it might have, despite hardships, of living a fruitful and meaningful life.

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Despite polls such as these, Roe v. Wade is not in the personal memories of most individual women who choose to have abortions in the United States today. Many
of them have a hard time recognizing that abortion was ever illegal, and cannot imagine what it would mean if abortion were to be made illegal again.

Says a 19-year-old woman from Chicago who is waiting in an abortion clinic: “I’ve never heard anything about Roe vs. Wade. I know there is tension between different groups and that there are people who are really, really against abortion. My mom is totally against it. If she knew I was here, Wow! I can’t even imagine what it was like when abortion was illegal. I just opened up the phone book. People definitely take it for granted today. I think of the movie Dirty Dancing. I never understood why she was so sick, but it was because she got an illegal abortion” (Lewin, 1998a).

Says Sirena, a 24-year-old woman from Brooklyn who has two young children and has had three abortions: “I don’t think there could ever be a time when abortion would be illegal. No one would let that happen. There would be too many girls throwing babies in the garbage or abusing their kids. But there’s always going to be people who are against abortion, like my sister, and people who are pro-choice, like me. It’s always been the same and it’s always going to be” (Lewin, 1998a).

So, are we a nation divided? Do people divide themselves into two camps, pro-life and pro-choice? Yes, but only a minority of people are at the extremes—either favoring or restricting abortion under all circumstances (Saad, 2009).

Methods of Abortion

Regardless of the moral, legal, and political issues that surround abortion, there are many abortion methods.

Vacuum aspiration  Truth or Fiction Revisited: It is not true that the D&C is the most widely used type of abortion method; vacuum aspiration—also called suction curettage—accounts for more than 90% of abortions in the United States. It is relatively painless and inexpensive. It can be done with little or no anesthesia in a medical office or clinic, but only during the first trimester. Later, thinning of the uterine walls increases the risks of perforation and bleeding.

In the procedure the cervix is usually dilated first by insertion of progressively larger curved metal rods, or “dilators,” or by insertion, hours earlier, of a stick of seaweed called Laminaria digitata. Laminaria expands as it absorbs cervical moisture, providing a gentler means of opening the os. Then a tube connected to an aspirator (suction machine) is inserted into the uterus. The uterine contents are evacuated (emptied) by suction (see Figure 12.12). Possible complications include perforation of the uterus, infection, cervical lacerations, and hemorrhaging, but these are not common.

Dilation and Curettage (D&C)  The D&C was once the customary method of performing abortions. It now accounts for only a small number of abortions in the United States. It is usually performed 8 to 20 weeks following the last menstrual period (LMP). Once the cervix has been dilated, the uterine contents are scraped from the uterine lining with a blunt scraping tool.

D&Cs are carried out in a hospital, usually under general anesthesia. The scraping increases the chances of hemorrhaging, infection, and perforation. Because of these risks, D&Cs have largely been replaced by the vacuum aspiration method.
Vacurette is inserted through cervical canal

1. Vacurette is inserted through cervical canal

2. Suction is turned on; material flows through tubing

3. Empty uterus collapses

Collection hose
Vacuum tube to bottles
Collection bottles
Pump compartment

**Figure 12.12 • Vacuum Aspiration.** This is the safest and most common method of abortion, but it can be performed only during the first trimester. An angled tube is inserted through the cervix into the uterus, and the uterine contents are then evacuated (emptied) by suction.

D&Cs are still used to treat various gynecological problems, however, such as abnormally heavy menstrual bleeding.

**Real Students, Real Questions**

**Q** Will having an abortion make it difficult for me to get pregnant again?

**A** There is usually no connection between having an abortion and getting pregnant again, as long as the abortion is carried out competently by a licensed health-care provider.

**DILATION AND EVACUATION (D&E)** The D&E is used most commonly during the second trimester, when vacuum aspiration alone would be too risky. The D&E combines suction and the D&C. First, the cervix is dilated. The cervix must also be dilated more fully than with vacuum aspiration to allow for passage of the larger fetus. Second, a suction tube is inserted to remove some of the contents of the uterus. But suction alone cannot safely remove all uterine contents. So the remaining contents are removed with forceps. A blunt scraper may also be used to scrape the uterine wall to make sure that the lining has been removed fully. Like the D&C, the D&E is usually performed in the hospital under general anesthesia. Most women recover quickly and relatively painlessly. In rare instances, however, complications such as excessive bleeding, infection, and perforation of the uterine lining arise.

**INDUCING LABOR BY INTRA-AMNIOTIC INFUSION** Second-trimester abortions are sometimes performed by chemically inducing premature labor and delivery. The procedure, which must be performed in a hospital, is called instillation,

**D&E** Abbreviation for dilation and evacuation, an abortion method in which the cervix is dilated prior to vacuum aspiration.
Most Americans believe that early abortions should be permitted, but there is great concern over the late-term surgical abortion method generally known as partial-birth abortion and referred to, medically, as an intact dilation and extraction, or intact D and X. In this method, the cervix is dilated and a fetus that may be 10 inches long is extracted through the birth canal. Brain tissue is destroyed to rapidly terminate any life functions in the fetus.

Support of abortion rights drops off rapidly as the stages of pregnancy progress. Most people who support early first-trimester abortions oppose partial-birth abortion because of its timing. Others oppose it because of the nature of the disposal of the fetus. However, many pro-choice people argue in favor of partial-birth abortions for at least two reasons. One is that they are relatively rare and usually performed when the health of the mother is at stake. Another is the “slippery-slope” argument, or fear that surrendering a woman’s right to have a partial-birth abortion could eventually lead to surrendering other rights to her own body.

The general attitudes of the medical profession toward the partial-birth abortion may be expressed in the fact that the procedure is rarely found in medical books. Many states have passed bills to outlaw partial-birth abortion, and a number of them have been struck down by the courts on the grounds that the bans do not provide for a health exception—that is, an exception in the case where the mother’s life is at stake. The battle will likely continue.

In the year 2000, the U.S. Supreme Court struck down a Nebraska statute (Stenberg v. Carhart) that banned partial-birth abortion on two grounds. One was that the definition of partial-birth abortion was too vague. The second was that the law did not make an exception for the case in which the procedure was necessary to protect the mother’s health. Today the national picture looks something like this:

- The great majority of the 50 states have passed laws preventing partial-birth abortion.
  - Of these, the majority have been blocked by courts because they do not have health exceptions.
  - Most of the remainder of these continue to be unchallenged, but they will presumably be found to be unenforceable on the grounds that they lack health exceptions.
- A relatively small number of states have bans that specifically allow for a health exception.

**CRITICAL THINKING**

What are the political consequences of labeling this abortion method “partial-birth abortion” as opposed to “intact D & X”?

**Intra-amniotic infusion**

An abortion method in which a substance is injected into the amniotic sac to induce premature labor. Also called instillation.

It is usually performed when fetal development has progressed beyond the point at which other methods are deemed safe. A saline (salt) solution or a solution of prostaglandins (hormones that stimulate uterine contractions during labor) is injected into the amniotic sac. Prostaglandins may also be administered by vaginal suppository. Uterine contractions (labor) begin within a few hours after infusion. The fetus and placenta are expelled from the uterus within the next 24 or 48 hours.

Intra-amniotic infusion accounts for only a small number of abortions. Medical complications, risks, and costs are greater with this procedure than with other methods of abortion. Overly rapid labor can tear the cervix, but previous dilation of the cervix with Laminaria lessens the risk. Perforation, infection, and hemorrhaging are rare if prostaglandins are used, but about half the recipients experience nausea and vomiting, diarrhea, or headaches. Saline infusion can cause shock and even death if the solution is carelessly introduced into the bloodstream.
HYSTEROTOMY  The hysterotomy is, in effect, a cesarean section. Incisions are made in the abdomen and uterus, and the fetus and uterine contents are removed. Hysterotomy may be performed during the late second trimester, between the 16th and 24th weeks following the last menstrual period. It is performed very rarely, usually only when intra-amniotic infusion is not advised. A hysterotomy is major surgery that must be carried out under general anesthesia in a hospital. Hysterotomy involves risks of complications from the anesthesia and the surgery itself.

ABORTION DRUGS  RU-486 (mifepristone) induces early abortion by blocking the effects of progesterone. Progesterone is the hormone that stimulates proliferation of the endometrium, allowing implantation and development of the placenta. The typical course is for the woman to take three mifepristone pills. Two days later, she is given a second oral drug, misoprostol, that causes uterine contractions to expel the embryo.

As the abortion debate continues, so does research into the use of other drugs. A combination of the cancer drug methotrexate and misoprostol can also be used to terminate early pregnancy. Methotrexate is toxic to the trophoblastic tissue of the embryo, and—as in combination with RU-486—misoprostol causes the uterus to expel the embryo.

Psychological Consequences of Abortion

THE WOMAN WHO FACES AN UNWANTED PREGNANCY may experience a range of negative emotions, including fear, anger directed inward (“How could I let this happen?”), guilt (“What would my parents think if they knew I was having an abortion?”), and ambivalence (“Will I regret it if I have an abortion? Will I regret it more if I don’t?”).

Consider the comments of Yardena, a 22-year-old woman who is the mother of a 3-year-old, who had an abortion at the age of 16, and who was waiting to be seen at the Planned Parenthood clinic when she learned that she was pregnant again: “I’m not pro-choice—I’m anti-abortion. I still have negative feelings about abortion, and I love children, but this is something I have to do at this point in my life” (Lewin, 1998a).

A 19-year-old college student says, “I don’t like the idea of abortion being used as birth control. This is my first time [at the clinic] and my last. If I get pregnant again, which I won’t, I’m having the child. That will mean I was stupid twice. Once is all right, but not the same mistake twice.”

Whether to have an abortion is typically a painful decision—perhaps the most difficult decision a woman will ever make. Even women who apparently make the decision without hesitation may regret it later. Although the woman’s partner is often overlooked in the research on abortion, he may encounter similar feelings.

Women’s reactions depend on various factors, including the support they receive from others (or the lack thereof) and the strength of their relationships with their partners (Ring-Cassidy & Gentles, 2002; Williams, 2001). Women with greater support from their male partners or parents tend to show a more positive emotional reaction following an abortion. Generally speaking, the sooner the abortion occurs, the
Figure 12.13 ● Women’s Psychological Adjustment Two Years after Having Had an Abortion. Of several hundred respondents to an Archives of General Psychiatry survey (Major et al., 2000), 72% of those who had had an abortion reported being satisfied with their decision two years after the fact. How do you interpret this finding? Do you focus on the fact that the great majority of women are satisfied with their choice or do you focus on the fact that a significant number of women (28%) are not?

less stressful it is. Women who have a difficult time reaching an abortion decision, who blame the pregnancy on their character, who have low coping ability, and who have less social support will likely experience more distress following abortion.

Many men are very concerned and supportive of their partners. Others seek to detach themselves from the situation. And of course there are some cases in which the identity of the father is unknown. Some men consider pregnancy the woman’s responsibility: “She’s the one who let herself get pregnant.” Some men reproach the woman for failing to take precautions. No wonder feminists insist that men share full responsibility for pregnancies.

All right. We know that abortion continues to be a political football. We know that people on both sides of the issue cite moral and social reasons as to why their views are correct. But what of the experiences of women who have abortions? How do they react? We reported a couple of anecdotes at the beginning of this section, but let’s forget about anecdotes. We can all point to people who are well-adjusted following abortion and to others who are “a mess.” What do the carefully conducted surveys tell us?

Frankly, their results are less than crystal clear. Consider one survey of several hundred women, reported in Archives of General Psychiatry (Major et al., 2000), who showed up at one of three sites for a first-trimester abortion. More than 1,000 women were approached at random as they arrived at the clinic, and 882 (85%) agreed to be followed for 2 years so that their responses could be assessed at various times. Of these 882, 442 were actually followed for the 2 years. As you can see in Figure 12.13, the majority (72%) said they were satisfied with their decision to have the abortion. A majority said they would make the same decision if they had it to do over (69%) and that they had experienced more benefit than harm from having the abortion (72%). Moreover, four out of five women (80%) were not depressed.

The Politics of Interpreting Data

Note that you can interpret these findings in any way that you like. Pro-choice advocates can say that the great majority of women appear to be psychologically well-adjusted 2 years after having an abortion. But pro-life advocates can say that significant percentages of women are not. To see what we mean, assume that the percentages reported in this study are accurate predictors of the adjustment of all women in the United States who have had abortions. Also assume that there are 1 million abortions per year (which is a slight underestimate). We’ll keep the math straight-
forward. With these assumptions in place, 720,000 women (72%) every year will say they are satisfied with their decision 2 years later. But 280,000 women will not say they are satisfied with their decision. Similarly, 310,000 women (31%) each year will not be able to say they would do it again, and 280,000 women each year will not be able to say that they found the effects of the abortion to be more beneficial than harmful.

Our conclusion is that both sides are correct. The great majority of women appear to be psychologically well-adjusted a couple of years after having an abortion. It is also true that hundreds of thousand of women per year cannot say that they are satisfied with their decision to have an abortion. In other words, numbers alone do not tell this tale. There is no simple answer to the question as to the nature of the psychological effects of having an abortion.

But neither side is entitled to make overgeneralized, extreme claims. Pro-choice advocates cannot claim that women who have abortions suffer no ill psychological effects. (Some women do.) Nor can pro-life advocates argue that the psychological effects of having an abortion are devastating on women. (Most women who have abortions are well-adjusted.)

CRITICAL THINKING
How is it that research concerning the psychological effects of abortion on the mother can be interpreted in different ways by pro-life and pro-choice people? Should research concerning the psychological effects of abortion influence political decisions about abortion?

Real Students, Real Questions

Q I had an abortion. Should I tell the father—even if we are not seeing each other?

A Complicated question. What would be your motive? To show him what he lost? To punish him? We are doubtful that he would fully understand the extent of your loss. So if your motive is to make him understand, you might be headed down a blind alley. Looking at it from another point of view, we can’t think of any reason you would be obligated to tell him. After all, it was, and is, your body. Have an honest talk with yourself about your motives, and maybe your answer will develop from that.
The 3 R's: Reflect, Recite, and Review

Reflect

- What are some of the problems people experience in discussing contraception with their partners?
- What method(s) of birth control do you find to be medically and ethically acceptable? Why?
- Do you think that public high schools should make contraceptives available to students? Explain.

CRITICAL THINKING: One of the issues concerning abortion is whether it is the taking of a human life. How do you define human life? When do you believe human life begins? At conception? When the embryo becomes implanted in the uterus? When the fetus begins to assume a human shape or develops human facial features? When the fetus is capable of sustaining independent life? Do your beliefs have anything to do with the concept of ensoulment? Explain.

Recite

1. What is contraception?
   - Contraception is a technique that prevents a sperm cell and ovum from uniting.

2. What is the political history of contraception in the United States?
   - Anthony Comstock lobbied for passage of a federal law in 1873 that prohibited the dissemination of birth-control information through the mail on the grounds that it was obscene and indecent. In 1918, the courts ruled that physicians must be allowed to disseminate information that might aid in the cure and prevention of diseases. Dismantling of the Comstock law had begun.

3. What methods of contraception are there?
   - Hormone methods supply estrogen and progestin, or just the latter. Birth-control pills include combination pills (estrogen and progestin) and mini-pills (progestin). Combination pills fool the brain into acting as though the woman is already pregnant, so no additional ova are released. Mini-pills contain progestin, thicken the cervical mucus to impede the passage of sperm through the cervix, and render the inner lining of the uterus less receptive to a fertilized egg. Other methods of supplying these hormones include skin patches and injections. “Morning-after” pills have high hormone content that prevents fertilization or implantation of a fertilized ovum. The intrauterine device (IUD) apparently irritates the uterine lining, causing inflammation and the production of antibodies that may prevent ova from becoming implanted. The diaphragm covers the cervix and should be used with a spermicide. The contraceptive sponge absorbs sperm and also contains a spermicide. The cervical cap covers the cervix. Latex condoms afford protection against STIs as well as conception. Douching is ineffective because sperm may pass beyond the range of the douche within seconds after ejaculation. Withdrawal has a high failure rate. Rhythm methods of contraception rely on awareness of the occurrence of fertile segments of the menstrual cycle. Sterilization is considered permanent, although it may be reversed in many cases. The male vasectomy consists of cutting the vas deferens. Female sterilization methods prevent ova and sperm from passing through the fallopian tubes.

4. What is the abortion controversy about?
   - The abortion controversy is largely about when human life begins. Some argue that it begins at conception; others say it begins when the fetus becomes viable; and still others are somewhere in between, as, for example, when they maintain that life begins when neural activity begins in the fetal brain. In 1973, the U.S. Supreme Court, in effect, legalized abortion nationwide in the landmark Roe v. Wade.
decision. Opinions regarding the law vary across cultures and eras. Some pro-life activists have been challenging the extent of the *Roe v. Wade* decision; some would like it completely overturned. Others are strong supporters of the law.

5. **What abortion methods are in use?**

- Abortion methods in use today include vacuum aspiration, D&C, D&E, induction of labor by intra-amniotic infusion, hysterotomy, and drugs such as RU-486. Partial-birth abortion (intact D & X) is the most controversial method.

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**Review**

1. Which of the following is termed a “nonmethod” of birth control in the text?
   - (a) Sterilization
   - (b) The condom
   - (c) Withdrawal
   - (d) Fertility awareness techniques

2. Which of the following is the most effective method of birth control?
   - (a) The female condom
   - (b) Oral contraceptives
   - (c) The contraceptive sponge
   - (d) Douching

3. Which of the following methods of birth control has the most side effects?
   - (a) The intrauterine device (IUD)
   - (b) The male condom
   - (c) The diaphragm
   - (d) The mini-laparotomy

4. Which is true of attitudes toward abortion in the United States?
   - (a) Most people would allow abortion under some circumstances.
   - (b) Most people would allow abortion for women who cannot afford to raise children.
   - (c) All Roman Catholics oppose abortion under all circumstances.
   - (d) Few parents want to be notified if an underage daughter is seeking an abortion.

5. The most common method of abortion practiced in the United States today is
   - (a) the D&C.
   - (b) the D&E.
   - (c) vacuum aspiration.
   - (d) ectopic pregnancy.

6. ________ is/are the most widely used contraceptive.
   - (a) Injectable contraceptives
   - (b) The contraceptive sponge
   - (c) The diaphragm
   - (d) The pill

7. The most controversial abortion method is the
   - (a) mini-pill.
   - (b) D & C.
   - (c) hysterotomy.
   - (d) intact D & X.

8. Rhythm methods rely on
   - (a) fertility awareness.
   - (b) hormonal preparations.
   - (c) barriers.
   - (d) spermicides.

9. Research with African and Thai prostitutes shows that nonoxynol-9 ________ the chances of being infected with HIV.
   - (a) decreases
   - (b) increases
   - (c) has no measurable effect on
   - (d) has mixed effects on

10. The Supreme Court struck down a Nebraska statute (*Stenberg v. Carhart*) that banned partial-birth abortion because
    - (a) partial-birth abortion was politically popular.
    - (b) partial-birth abortion was a medical issue and not a legal issue.
    - (c) the Court was conservative.
    - (d) the law did not make an exception when the procedure was necessary to protect the mother’s health.