

# Birth Control Methods

**Important Definition:** The pregnancy rate is expressed as a percentage. It represents the number of pregnancies per 100 sexually active women per year. Note that “even a low annual risk of pregnancy implies a high cumulative risk of pregnancy during a lifetime of use. For example, an annual probability of pregnancy of 3% implies a 26% probability of pregnancy over ten years.”<sup>1</sup>

*Except where otherwise noted, this information is adapted by Heartbeat from Robert A. Hatcher, MD’s, Contraceptive Technology, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998). Specific citations to Hatcher and his contributors is given for many items. (Additional information has also been added to include current and up-to-date studies.)*

<b>Behavioral Methods</b>				
<b>Name</b>	<b>Description</b>	<b>Advantages</b>	<b>Side-Effects/ Disadvantages</b>	<b>Notes</b>
<b>No Birth Control Used</b>	<b>The pregnancy rate for those practicing sexual activity without birth control efforts of any kind is 85%.<sup>2</sup></b>	<ul style="list-style-type: none"> <li>• No hormonal side-effects.</li> </ul>		
<b>Abstinence</b>	Refraining from sexual activity.	<ul style="list-style-type: none"> <li>• For unmarried individuals, abstinence follows God’s plan for sexuality.</li> <li>• No risk of pregnancy.</li> <li>• No risk of STDs/STIs.</li> <li>• Enhances relational trust</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>	
<b>Outer-Course</b>	Non-penetrative sexual activity, such as mutual masturbation.	<ul style="list-style-type: none"> <li>• Promoted by promiscuity advocates as a means of sexual expression without risk of pregnancy or STDs/STIs</li> </ul>	<ul style="list-style-type: none"> <li>• Pre-ejaculate fluid contains sperm and can potentially impregnate a woman, even if there is no penetration.</li> <li>• Penetrative intercourse is not necessary to contract an STD/STI. Transmission of an STD/STI is possible by hand-to-genital contact with an infected person.</li> </ul>	

# Birth Control Methods

Natural Family Planning Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Ovulation (Billings) Method</b>	Complete abstinence during a woman's fertile period, the timing of which is determined based on changes in cervical mucus.	<ul style="list-style-type: none"> <li>• 98-99% effective.</li> <li>• Requires no artificial intervention.</li> <li>• No side-effects.</li> <li>• Encourages communication and joint responsibility of partners.</li> <li>• Based on actual data for each new cycle, not on assumptions based on previous cycles.</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>	
<b>Sympto-Thermal Method</b>	Complete abstinence during a woman's fertile period, the timing of which is determined based on: (a) changes in cervical mucus (as with the Billings method); (b) changes in basal body temperature indicating ovulation has occurred; and (c) observation of changes in the physical appearance and position of the cervix.	<ul style="list-style-type: none"> <li>• Same as for Billings method.</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>	
<b>Calendar or "Rhythm" Method</b>	Complete abstinence during a woman's fertile period, the timing of which is estimated based on: (a) an assumed 14-day period between ovulation and start of menstruation; and (b) an assumed regularity in menstrual cycle.	<ul style="list-style-type: none"> <li>• Requires no artificial intervention</li> </ul>	<ul style="list-style-type: none"> <li>• High failure rate since a woman's cycle is not necessarily as regular as required for the assumptions to prove true.</li> </ul>	

# Birth Control Methods

## Barrier Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Male Condom</b>	<p>A covering worn over the penis during intercourse to prevent semen and pre-ejaculate fluids from entering the vagina. May be made of latex rubber, animal skin, or polyurethane plastic.</p> <p>In order to be effective, the condom must be used properly as outlined below. Failure at any point eliminates both the contraceptive and disease protection effects.</p> <p>The point of giving this much detail here is to indicate how difficult consistent condom use is, especially for immature or inexperienced couples. But without 100% consistency, condom use is, according to the CDC, nearly useless.<sup>3</sup></p> <ol style="list-style-type: none"> <li>1. Condom package must be opened carefully to avoid damage to condom.</li> <li>2. Condom must be put on <i>before</i> penis has contact with partner's genitals or other potentially infectious areas of body.</li> <li>3. But condom must be put on <i>after</i> penis erect.</li> </ol>	<ul style="list-style-type: none"> <li>• Condoms can reduce the rate of transmission of some, but not all, STD's/STI's.</li> </ul>	<ul style="list-style-type: none"> <li>• Though promoted as an STD preventative, it does not protect against HPV, one of the most common and most harmful STD's. (See Notes.)</li> <li>• Condoms must be used correctly every time a couple engages in sexual activity.</li> <li>• Some people are allergic to latex (more common among health-care workers due to frequent exposure to latex-containing materials).</li> <li>• Animal skin condoms do not protect against STD's.</li> <li>• Despite legally mandated testing, condoms break and (due to user error) slip during use. When this happens, their effectiveness is voided.</li> <li>• In the February 2005 issue of <i>Consumer Reports</i>, 23 kinds of latex condoms were evaluated. <i>Consumer Reports</i> recommended that condom users avoid two types of condoms distributed by Planned Parenthood. ("Honeydew" and "Assorted Colors"). Both received a "poor" rating for strength (meaning they broke more often). The "Honeydew" condom also received a "poor" rating for reliability.</li> <li>• Some condoms have spermicidal additives.</li> </ul>	<p>While advocates often exaggerate condom effectiveness at preventing pregnancy and STD'S/STI's, contraceptive opponents also understate their effectiveness, reducing their own credibility.</p> <p>According to a 2004 CDC Report to Congress, abstaining from sexual activity is the surest way to prevent HPV infection. HPV is significantly linked with cervical cancer, which kills nearly 5,000 women in the United States annually.</p>

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## Barrier Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Male Condom (cont'd.)</b>	<ol style="list-style-type: none"> <li>4. If application began upside-down, the condom must be thrown away and a new one used to prevent risk of pregnancy or STD/STI from pre-ejaculate fluids.</li> <li>5. Tip of condom must be loose, allowing room for semen to accumulate.</li> <li>6. Condoms must remain in place during intercourse.</li> <li>7. Condoms must be lubricated to avoid breakage during intercourse. Oil-based lubricants actually cause latex condoms to deteriorate.</li> <li>8. Penis must be withdrawn from the vagina while still erect.</li> <li>9. Condom must be held in place during withdrawal to avoid slippage.</li> <li>10. After intercourse, couple must again avoid contact between penis and partner's genitals or other potentially infectious areas of the body.</li> </ol>		<ul style="list-style-type: none"> <li>• Some of these additives may cause potentially allergenic proteins to leach out of latex condoms.</li> <li>• High-frequency use of spermicides may cause genital ulceration and irritation, thereby facilitating transmission of STD's/STI's.</li> <li>• One study found that use of spermicide-coated condoms significantly increased the risk of urinary tract infections among young women.<sup>4</sup></li> </ul> <p>There is no evidence that condoms containing spermicides are more effective than condoms without spermicides.<sup>5</sup></p>	

# Birth Control Methods

## Barrier Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Male Condom (cont'd.)</b>	11. Condoms must not be reused. <b>The pregnancy rate for condom-only users is 2% (perfect use) to 15% (typical use) after one year.</b>			

# Birth Control Methods

## Barrier Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<p><b>Female Condom</b></p>	<p>A polyurethane tube, somewhat larger than a male condom. Like a male condom, it is open at one end and closed at the other, but it has rings imbedded in each end. The ring at the closed end fits over the woman's cervix. The ring at the open end remains outside the vagina during intercourse.</p> <p><b>The pregnancy rate for female-condom users is 5% (perfect use) to 21% (typical use) after one year.<sup>6</sup></b></p>	<ul style="list-style-type: none"> <li>• Polyurethane is stronger than the latex common in male condoms, and is less susceptible to breakage.</li> </ul>	<ul style="list-style-type: none"> <li>• Must not be used in combination with male condoms, as they can bind against each other, causing slippage or breakage.</li> </ul> <p>(See "Side-Effects/Disadvantages" of Spermicides.)</p>	<p>First marketed in the United States in 1993.</p>

# Birth Control Methods

## Barrier Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Diaphragm</b>	<p>A dome-shaped rubber device, available only by prescription, which a woman fills with spermicide and inserts over her cervix before intercourse. Not as effective without spermicide. The diaphragm must be left in place for six hours after intercourse.</p> <p>Diaphragms should be removed within 24 hours of insertion to reduce risk of toxic shock syndrome.</p> <p><b>The pregnancy rate for diaphragm users is 6% (perfect use) to 16% (typical use) after one year. (Even with consistent use, diaphragm wearers are more likely to become pregnant the more often they have sexual intercourse).</b><sup>7</sup></p>	<ul style="list-style-type: none"> <li>• Fairly effective contraceptive, especially in conjunction with spermicide.</li> <li>• No systemic side-effects (except in the rare case of serious latex allergy).</li> <li>• No alterations to a woman's hormonal patterns.</li> <li>• Under woman's control. Can be inserted in advance and left in for up to a day (additional spermicide must be applied for repeated intercourse).</li> <li>• Diaphragm users have a lower incidence of cervical dysplasia (pre-cancerous cellular changes) and cancer (lower than general population and lower than women using other birth control methods).<sup>8</sup></li> </ul>	<p>Side-effects include:</p> <ul style="list-style-type: none"> <li>• Skin irritation.</li> <li>• Cramps.</li> <li>• Bladder pain.</li> <li>• Rectal pain.</li> <li>• Allergic reaction to spermicide.</li> <li>• Allergic reaction to latex, usually with only minor symptoms, but (rarely) potentially fatal.</li> <li>• Increased risk for urinary tract infection, bacterial vaginosis, and vaginal candidiasis (probably due to effects of spermicide on bacterial balance in the vagina).<sup>9</sup></li> <li>• Vaginal trauma and laceration (rare).</li> <li>• A new size may be needed if the woman gains ten pounds or more.</li> <li>• Some men report pain when engaging in intercourse with a partner using a diaphragm.</li> <li>• Toxic shock syndrome is rare (2-3 cases/100,000 women using vaginal barriers per year) but possible.</li> </ul> <p>Women who should not use caps or diaphragms include those who:<sup>10</sup></p> <ul style="list-style-type: none"> <li>• Have had full-term delivery of a child within last six weeks.</li> </ul>	<p>Oil-based lubricants and medications (including over-the-counter vaginal creams) may cause deterioration of latex female contraceptive barriers. "Their effect on diaphragm or cap integrity has not been studied, but it is reasonable to warn vaginal barrier users to avoid oil products."<sup>11</sup></p>

# Birth Control Methods

## Barrier Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Diaphragm (cont'd)</b>			<ul style="list-style-type: none"> <li>• Have had recent miscarriage or abortion.</li> <li>• Have any vaginal bleeding, including menstruation.</li> <li>• Have known or suspected cervical or uterine malignancy, abnormal Pap smear, or vaginal or cervical infection.</li> </ul> <p>Not appropriate for women who:<sup>12</sup></p> <ul style="list-style-type: none"> <li>• Have poor vaginal muscle tone.</li> <li>• Have vaginal obstructions.</li> <li>• Have a history of urinary tract infections.</li> <li>• Have a history of toxic shock syndrome.</li> <li>• Have very short menstrual cycles (the cap cannot be worn during menstruation and sperm from intercourse during that time may survive until ovulation).</li> <li>• Are allergic to latex or spermicides.</li> <li>• Have any vaginal bleeding, including menstruation.</li> <li>• Have known or suspected cervical or uterine malignancy, abnormal Pap smear, or vaginal or cervical infection.</li> </ul> <p>See “Side-Effects/Disadvantages” of Spermicides.</p>	



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## Barrier Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Cervical Cap</b>	<p>Very similar to a diaphragm, a cervical cap is smaller and fits more snugly over the cervix. It, too, is used with spermicides, and is available only by prescription (it must be fitted properly). Cervical caps should be removed within 48 hours of insertion to reduce risk of toxic shock syndrome.</p> <p><b>For cervical cap users with previous pregnancies, the pregnancy rate is 26% (perfect use) to 32% (typical use) after one year. For women with no previous pregnancies, the rate is 9% (perfect use) to 16% (typical use) after one year.</b><sup>13</sup></p>	<ul style="list-style-type: none"> <li>• Fairly effective contraceptive, especially in conjunction with spermicide.</li> <li>• No systemic side-effects (except in the rare case of serious latex allergy).</li> <li>• No alterations to a woman's hormonal patterns.</li> <li>• Under woman's control. Can be inserted in advance and left in for up to 48 hours.</li> <li>• Additional spermicide is not necessary for repeated intercourse.</li> </ul>	<p>Same side-effects listed above for diaphragms.</p> <p>Cervical caps are not appropriate for women who:<sup>14</sup></p> <ul style="list-style-type: none"> <li>• Find them difficult to insert.</li> <li>• Have very short menstrual cycles (see explanation under "Diaphragm," above).</li> <li>• Have an abnormal Pap smear.</li> <li>• Have a history of toxic shock.</li> <li>• Have an STD/STI or other reproductive tract infection.</li> <li>• Have inflammation of the cervix.</li> <li>• Increased incidence of yeast vaginitis.</li> </ul> <p>(See "Side-Effects/Disadvantages" of Spermicides.)</p>	<p>The choice between a cervical cap and a diaphragm is based mainly on fit (and factors such as those listed in the Side Effects/Disadvantages column to the left.)</p>

# Birth Control Methods

Barrier Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Sponge</b>	<p>The contraceptive sponge is a non-prescription, spermicide-saturated, polyurethane sponge that is inserted into the vagina, covering the cervix. It is left in place for six to 24 hours.</p> <p>Contraceptive sponges should be removed within 24 hours of insertion to reduce risk of toxic shock syndrome.</p> <p><b>For women with previous pregnancies, the pregnancy rate is 20% (perfect use) to 32% (typical use) after one year. For women with no previous pregnancies, the rate is 9% (perfect use) to 16% (typical use) after one year.</b><sup>15</sup></p>	<ul style="list-style-type: none"> <li>• Fairly effective contraceptive.</li> <li>• No systemic side-effects.</li> <li>• No alterations to a woman's hormonal patterns.</li> <li>• Under woman's control.</li> <li>• Can be inserted in advance and left in for up to 24 hours.</li> <li>• Additional spermicide is not necessary for repeated intercourse.</li> </ul>	<ul style="list-style-type: none"> <li>• Little or no protection from STD's/STI's (See "Spermicides" below.)</li> <li>• Difficulty with removal is common.</li> <li>• Vaginal dryness.</li> <li>• Foul odor and vaginal discharge if left in too long.</li> <li>• Increased incidence of yeast vaginitis.</li> </ul>	<p>The "Today Sponge" was removed from U.S. stores in 1995 when its producer decided it would be too expensive to make needed upgrades to its manufacturing facilities.</p> <p>In April of 2005, the "Today Sponge" was reintroduced and approved by the FDA.</p>

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## Barrier Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Spermicide<sup>16</sup></b>	<p>Spermicides are over-the-counter products that kill sperm cells. They come in the form of gels, foams, creams, films, suppositories or oral tablets. They can be used alone or in combination with other male or female barrier methods. Spermicide must be left in place six hours after intercourse. Currently, only one active ingredient, nonoxynol-9 (N-9) is available in the United States. Others are available in other countries.</p> <p><b>For spermicide-only users, the pregnancy rate is 18% (perfect use) to 29% (typical use) after one year.<sup>17</sup></b></p>	<ul style="list-style-type: none"> <li>• Available over-the-counter.</li> <li>• Under the woman's control.</li> <li>• May provide some protection from bacterial STD's/STI's (estimated 25%),<sup>18</sup> but the evidence is currently unclear. Additional evidence indicates spermicides may increase susceptibility to HIV (see side-effects column).</li> </ul>	<p>Side-effects include:</p> <ul style="list-style-type: none"> <li>• Temporary skin irritation of vulva, vagina or penis, perhaps an allergic reaction.<sup>19</sup></li> <li>• Increased incidence of yeast vaginitis and urinary tract infection.</li> <li>• Though generally considered safe, (toxicology studies to detect systemic effects are limited), intravaginal exposure to large doses of N-9 has been associated with abnormalities such as liver toxicity.</li> <li>• Early studies indicated possible link between exposure and birth defects. Recent studies have discounted causal relationship.</li> </ul> <p>Though lab tests indicate spermicide kills some STD's, evidence is not paralleled in actual use, perhaps because:</p> <ul style="list-style-type: none"> <li>• Distribution is not as uniform intravaginally as it is in vitro.</li> <li>• Spermicide may alter balance of vaginal flora, resulting in increased susceptibility to infection<sup>20</sup> including HIV infection.<sup>21</sup></li> <li>• High-frequency use of spermicides may cause genital ulceration and irritation, thereby facilitating STD transmission.<sup>22</sup></li> </ul>	<p>“No evidence to date shows that spermicide protects against HIV.”<sup>23</sup></p>

# Birth Control Methods

## Barrier Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Spermicide (cont'd.)</b>			<ul style="list-style-type: none"> <li>Research has found that N-9 has harmful effects on the endometrium, which ultimately may facilitate infection with HIV and other pathogens.<sup>24</sup></li> <li>One study found use of spermicide-coated condoms significantly increased risk of urinary tract infections among young women.<sup>25</sup></li> </ul>	

# Birth Control Methods

Intrauterine Devices				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>IUD</b>	Small plastic “T” or “Y,” either wound with copper coil or filled with slow-release progesterone.	<ul style="list-style-type: none"> <li>• Semi-permanent</li> <li>• Reversible</li> </ul>	<ul style="list-style-type: none"> <li>• May be abortifacient.</li> <li>• Can cause miscarriage or premature delivery.</li> <li>• Can cause direct harm to the child, including the embedding of the IUD in developing fetus.<sup>26</sup></li> <li>• Can cause infertility, usually as a result of infection.</li> </ul>	

# Birth Control Methods

## Intrauterine Devices

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<p><b>IUS<sup>27</sup></b> <b>(e.g., Mirena)</b></p>	<p>The Mirena<sup>®</sup> IUS is like many other types of IUD's or coils, as it is fitted by a doctor and remains in the womb for a fixed amount of time (approximately five years), after which it must be changed.</p> <p>It is made of a light, plastic T-shaped frame and the stem of the T contains Levonorgestrel. It is about 1/7 the strength of the Pill. The IUS is inserted within a week of beginning a period.</p> <p>Infections (e.g., Chlamydia) should be ruled out before inserting an IUS.</p> <p>Like the Pill, the IUS can have one of three mechanisms:</p> <ol style="list-style-type: none"> <li>1. Suppressing ovulation, so there is no egg to fertilize.</li> <li>2. Changes to cervical mucus, preventing sperm from entering the uterus and reaching the egg if ovulation does occur.</li> <li>3. Changes to the endometrium which reduces the likelihood of implantation of an embryo if fertilization does take place.</li> </ol>	<ul style="list-style-type: none"> <li>• May avoid some of the side-effects that other hormonal contraceptives have.</li> <li>• Periods may be lighter than usual.</li> </ul>	<ul style="list-style-type: none"> <li>• If it does fail, there is a higher risk of ectopic pregnancy.</li> <li>• May be difficult to fit and local anaesthetic may be used.</li> <li>• Painkillers are helpful to reduce discomfort.</li> <li>• There is a chance that the IUS may dislodge and come out, either in part or altogether.</li> <li>• Side-effects include headache, water retention, breast tenderness and acne.</li> <li>• Progestagen hormones increase the chance of ovarian cysts.</li> <li>• Bleeding can be erratic or heavy initially (within the first three months of use.)</li> </ul>	<p>Also used as a treatment for heavy periods. About one-third of women using the IUS will not have any periods at all.</p>

# Birth Control Methods

## Intrauterine Devices

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>IUS<sup>28</sup> (cont'd.) (e.g., Mirena)</b>	For Mirena IUS users, the pregnancy rate is 0.1% after one year of use. <sup>29</sup>			

# Birth Control Methods

Hormonal Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Hormonal Methods in General</b>		<p>For those who approve of contraceptives, all of the hormonal methods have the advantage of being “coitus independent” – that is, they do not require special behavior at the time of sexual activity.</p>	<ul style="list-style-type: none"> <li>• None of the hormonal treatments provide any protection against STD’s.</li> <li>• The contraceptive effect of hormonal methods may be reduced or negated by certain antibiotics.</li> <li>• Women who smoke or are over 35 years old may experience a greater risk of cardiovascular effects when taking hormonal contraceptives.</li> <li>• Most (if not all) hormonal methods may cause an early abortion.</li> </ul>	<p>Some pro-life advocates contend the Pill and other hormonal methods cause post-fertilization loss of embryos (much medical literature implies or states that this is so)<sup>30</sup> and that use of the contraceptive Pill is, therefore, wrong.</p> <p>Other pro-life proponents reply that research data indicates that, if “breakthrough” ovulation occurs, the cascade of related hormonal changes overcomes mechanism three. Unless substantive research yields new evidence, say these pro-lifers, it is wrong to call for rejection of the Pill on abortifacient grounds.</p> <p>Until evidence is clearer, Heartbeat recommends that, in the name of informed consent, affiliates warn clients of the possibility that the Pill (and other hormonal methods) causes abortion.</p>



# Birth Control Methods

Combined Hormonal Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>The Pill</b>	<p>“The Pill” is the common name for over 40 different commercially available formulations of a hormonal birth control method using a combination of progestins and estrogens.</p> <p>Typically, the Pill is taken once a day for 21 days, then stopped for seven days (or replaced with a “reminder” sugar pill). Then the monthly pill-taking cycle is resumed. The Pill is thought to have three main effects:</p> <ol style="list-style-type: none"> <li>1. Suppressing ovulation, so there is no egg to fertilize.</li> <li>2. Thickening and decreasing cervical mucus, preventing sperm from entering the uterus and reaching the egg if ovulation does occur.</li> <li>3. Reducing number and size of endometrial glands, resulting in an atrophied endometrium and preventing implantation of an embryo if fertilization does take place.</li> </ol> <p>The Pill is sometimes a contraceptive (mechanisms one and two) and sometimes causes abortion (mechanism three).</p>	<ul style="list-style-type: none"> <li>• Can be used by any healthy woman.</li> <li>• Reversible.</li> <li>• Under the woman’s control.</li> <li>• Reduction of ovulatory and menstrual cramps and pain.</li> <li>• Can reduce (but may also increase) PMS symptoms, including depression.</li> <li>• Reduces risk of ovarian cancer and endometrial cancer.<sup>31</sup></li> <li>• Prevention of ovarian cysts.</li> <li>• Improves acne.</li> <li>• May protect against osteoporosis, endometriosis, and rheumatoid arthritis.</li> <li>• Prevention of atherogenesis.</li> <li>• Decreased risk of symptomatic pelvic inflammatory disease (PID), but possibly increased risk of asymptomatic PID and cervical infections.<sup>32</sup></li> </ul>	<ul style="list-style-type: none"> <li>• No protection against STDs/STIs. In fact, increases Chlamydia infections.<sup>33</sup></li> <li>• Must be taken correctly and consistently (daily).</li> <li>• Must not be used simultaneously with certain other medications. (e.g., antibiotics can decrease or negate the effectiveness of the Pill).</li> <li>• Recent studies suggest that long duration use of oral contraceptives (i.e., more than 5 years) increases the risk of cervical cancer in HPV positive women.<sup>34</sup></li> <li>• Oral contraceptives have been classified as carcinogenic by the World Health Organization’s cancer research group, the International Agency for Research on Cancer. This reclassification places combined hormonal contraceptives in the same classification as tobacco and asbestos.<sup>35</sup></li> <li>• For women with genital herpes, taking oral contraceptives can double the likelihood of actively shedding the virus and, therefore, passing the infection.<sup>36</sup></li> </ul> <p>Side-effects include:</p> <ul style="list-style-type: none"> <li>• Changes to menstrual cycle.</li> <li>• Nausea, queasiness, dizziness, and vomiting.</li> </ul>	

# Birth Control Methods

Combined Hormonal Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>The Pill (cont'd.)</b>	See "Notes" column, "Hormonal Methods in General." <b>For combination-hormone users, the on-Pill pregnancy rate after one year is 0.1%.<sup>37</sup></b>		<ul style="list-style-type: none"> <li>• Headaches.</li> <li>• Breast tenderness.</li> <li>• Blurred or loss of vision.</li> <li>• Decreased sex drive.</li> <li>• Weight gain.</li> <li>• May increase (but may also decrease) PMS symptoms, including depression.</li> <li>• Small risk of serious heart diseases.</li> <li>• Acceleration of gallbladder disease (though the Pill does not cause gallbladder disease).</li> <li>• Probably a slightly increased risk of breast, cervical, and possibly liver cancer.</li> <li>• Risk of blood clots if taken in the first 2-3 weeks after giving birth.</li> <li>• Reduced milk production if taken in the first 6-12 weeks after giving birth (the World Health Organization recommends waiting six months).</li> </ul>	

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Combined Hormonal Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Seasonale<sup>®38</sup></b>	<p>Seasonale<sup>®</sup> is similar to the Pill in that one pill is taken each day, but it comes with three months of pills and extends the time between periods. Typically, individuals have four periods a year, although spotting and breakthrough bleeding do occur. Like the Pill, Seasonale<sup>®</sup> can have one of three mechanisms:</p> <ol style="list-style-type: none"> <li>1. Suppressing ovulation, so there is no egg to fertilize.</li> <li>2. Changes to cervical mucus, preventing sperm from entering the uterus and reaching the egg if ovulation does occur.</li> <li>3. Changes to the endometrium which reduces the likelihood of implantation of an embryo if fertilization does take place.</li> </ol>		<ul style="list-style-type: none"> <li>• Same as for other hormonal treatments.</li> <li>• May cause the abortion of an early embryo.</li> </ul>	

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Combined Hormonal Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<p><b>“The Patch”</b> (e.g., Ortho Evra®)<sup>39</sup></p>	<p>The Patch is worn on the upper outer arm, the upper torso (excluding the breasts), abdomen or buttocks for one week. A new patch must be applied each week for three weeks. No patch is worn on the fourth week.</p> <p>It must be applied on certain days of a woman’s cycle, or back-up contraception (such as a condom, spermicide or a diaphragm) is recommended.</p> <p>Like the Pill, the Patch can work using one of three mechanisms:</p> <ol style="list-style-type: none"> <li>1. Suppressing ovulation, so there is no egg to fertilize.</li> <li>2. Changes to cervical mucus, preventing sperm from entering the uterus and reaching the egg if ovulation does occur.</li> <li>3. Changes to the endometrium which reduces the likelihood of implantation of an embryo if fertilization does take place.</li> </ol> <p><b>For Ortho Evra® users, the pregnancy rate is 0.3% (perfect use) to 8% (typical use) after one year.</b><sup>40</sup></p>		<ul style="list-style-type: none"> <li>• The Patch has some of the same side-effects as other hormonal treatments.</li> <li>• The risk of death from a blood clot is three times higher for Patch users than for those using the Pill.<sup>41</sup></li> <li>• Twenty-three deaths have occurred from the use of the patch since August of 2002. Seventeen of those deaths were related to blood clots. The other deaths resulted from heart attacks and strokes.<sup>42</sup></li> <li>• The FDA has logged 9,116 reports of adverse reactions to the Patch in a 17-month period. In one year, 44 serious injuries or deaths have been associated with the Patch.<sup>43</sup></li> <li>• Skin irritation or rashes at site of patch.</li> <li>• May cause the early abortion of an embryo.</li> <li>• In the clinical trials for Ortho Evra®, approximately 2% of the patches completely detached.</li> <li>• Results of clinical trials indicate that Ortho Evra® may be less effective in women who weigh more than 198 pounds.</li> </ul>	<p>If a woman experiences shortness of breath, difficulty breathing, leg pain, swelling, anxiety, chest pain, fainting and/or convulsions, she should seek medical attention. It could be a sign of a potentially dangerous blood clot (also known as pulmonary embolism), which can be fatal.</p> <p>For more information, go to: <b><a href="http://www.orthopatchlawsuit.com">www.orthopatchlawsuit.com</a></b>.</p>

# Birth Control Methods

Combined Hormonal Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<p><b>Vaginal Rings</b> (e.g., NuvaRing®)<sup>44</sup></p>	<p>The NuvaRing® is a flexible, transparent ring that must be inserted into the vagina on a certain day of the woman’s cycle.</p> <p>The appropriate day depends on whether the woman has been on birth control, and if so whether it was a combined hormonal birth control pill, a progestin-only pill (like the mini-pill), or another progestin-only birth control method other than the mini-pill.</p> <p>If a woman has had a first-trimester abortion or miscarriage and intends to use the NuvaRing®, she is instructed to insert the NuvaRing® on certain days of her cycle as well. She may also be instructed to use a spermicide or condom if transitioning from certain forms of birth control to the NuvaRing®.</p> <p>The NuvaRing® is worn for three weeks and is then removed for one week. A new ring is inserted one week after the last ring was removed.</p>		<ul style="list-style-type: none"> <li>• Same as for other hormonal treatments.</li> <li>• May cause an early abortion of an embryo.</li> <li>• If the NuvaRing® is accidentally expelled, it must be reinserted within three hours or contraceptive effectiveness may be reduced.</li> </ul>	

# Birth Control Methods

Combined Hormonal Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Vaginal Rings (cont'd.) (e.g., NuvaRing®)</b>	<p>Hormones are steadily released into the woman's body. Like the Pill, the NuvaRing® can have one of three mechanisms:</p> <ol style="list-style-type: none"> <li>1. Suppressing ovulation, so there is no egg to fertilize.</li> <li>2. Changes to cervical mucus preventing sperm from entering the uterus and reaching the egg if ovulation does occur.</li> <li>3. Changes to the endometrium, which reduces the likelihood of implantation of an embryo if fertilization does take place.</li> </ol> <p><b>For NuvaRing® users, the pregnancy rate is 0.3% (perfect use) to 8% (typical use) after one year.</b></p>			

# Birth Control Methods

Combined Hormonal Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Lunelle<sup>®</sup> (injection)<sup>45</sup></b>	<p>Lunelle<sup>®</sup> is an injection that contains synthetic hormones (estrogen and progestin.) It is available by prescription and is injected every 28 to 30 days. The initial injection is given within the first five days of menstrual bleeding.</p> <p>Like the Pill, Lunelle<sup>®</sup> can have one of three mechanisms:</p> <ol style="list-style-type: none"> <li>1. Suppressing ovulation, so there is no egg to fertilize.</li> <li>2. Changes to cervical mucus, preventing sperm from entering the uterus and reaching the egg if ovulation does occur.</li> <li>3. Changes to the endometrium which reduces the likelihood of implantation of an embryo if fertilization does take place.</li> </ol> <p><b>For Lunelle users, the pregnancy rate is .05% (perfect use) to 3% (typical use) after one year.<sup>46</sup></b></p>		<p>Same as for other hormonal treatments.</p> <ul style="list-style-type: none"> <li>• May cause an early abortion of an embryo.</li> <li>• Injections may impact and worsen the effects of depression.</li> <li>• Does not protect against sexually transmitted diseases.</li> <li>• Injections may be painful.</li> </ul> <p>Because of a potential increase in the risk of blood clots, heart attack, stroke, gallbladder disease or tumors in the liver, Lunelle<sup>®</sup> should not be used by women who:</p> <ul style="list-style-type: none"> <li>• Smoke.</li> <li>• Have high blood pressure.</li> <li>• Have breast or uterine cancer.</li> <li>• Have a history of blood clots.</li> <li>• Have a history of heart attack or stroke.</li> <li>• Are allergic to hormones.</li> <li>• Have diabetes.</li> <li>• Have liver disease.</li> <li>• Have unexplained vaginal bleeding.</li> </ul>	<p>Ovulation usually returns within three menstrual cycles after discontinuing the injections.</p>

# Birth Control Methods

The Morning-After Pill				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<p><b>Morning-After Pill (MAP) or Emergency Contraception Pill (ECP)</b></p>	<p>Preven™ is a combined oral treatment. Plan B® is a progestin-only oral treatment. (Preven was taken off the market in the U.S. as of December 30, 2004.)</p> <p>In addition to Plan B,® the FDA has declared 18 brands of oral contraceptives to be effective for emergency contraception.<sup>47</sup></p>	<ul style="list-style-type: none"> <li>• Effective after intercourse.</li> </ul>	<ul style="list-style-type: none"> <li>• Same as for other hormonal treatments.</li> <li>• May cause an early abortion of an embryo.</li> </ul>	



# Birth Control Methods

Progestin-Only Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<p><b>Progestin-Only Methods in General</b><sup>48</sup></p>	<p>Some contraceptives use only progestins, not estrogens.</p> <p><b>For progestin-only method users, the pregnancy rate after one year is 0.5%.<sup>49</sup></b></p> <p>Like combination pills, progestin-only treatments are believed to work mainly in three ways:</p> <ol style="list-style-type: none"> <li>1. Suppressing ovulation.</li> <li>2. Thickening and decreasing cervical mucus, preventing sperm from entering the uterus.</li> <li>3. Reducing number and size of endometrial glands, resulting in an atrophied endometrium.</li> </ol> <p>In addition, Dr. Hatcher identifies the following effects:<sup>50</sup></p> <ol style="list-style-type: none"> <li>1. Inhibition of progesterone receptor synthesis (preparation of the endometrium for reception of the embryo).</li> <li>2. Reduction in the activity of the cilia in the fallopian tube.</li> <li>3. Diminished functioning of the corpus luteum.</li> </ol>	<ul style="list-style-type: none"> <li>• Avoids the rare but serious heart-related complications of compounds containing estrogen, especially important to older women.</li> <li>• May avoid other estrogen-related side-effects (nausea, breast tenderness, severe headaches, and hypertension).<sup>51</sup></li> <li>• Reduces or stops menstruation.</li> <li>• Reduces menstrual cramps and pain.</li> <li>• No <i>mittelschmerz</i> (pain felt by women when they ovulate) when ovulation is suppressed.</li> <li>• Decreased risk of endometrial cancer, ovarian cancer, and PID.</li> <li>• Can be used while breast feeding (though there is no medical consensus as to how soon after delivery they may be started).</li> <li>• All progestin-only treatments are reversible.</li> </ul>	<p>Progestin-only treatments offer no protection against STD's. All progestin-only "contraceptives" have these potential side-effects.</p> <ul style="list-style-type: none"> <li>• Unpredictable (frequent, rare or absent) menstrual cycles (most common reason women discontinue progestin-only treatments).</li> <li>• Weight gain.</li> <li>• Repeated, severe headaches.</li> <li>• Breast tenderness.</li> <li>• Depression.</li> <li>• Severe abdominal pain.</li> <li>• Greatly increased ectopic pregnancy rate (five times that of non-users or combination-pill users). However, since diagnosed <i>pregnancy</i> rate is so low for progestin-only users, <i>actual number</i> of ectopic pregnancies is much lower than for non-users and combi-pill users.</li> </ul> <p>The World Health Organization (WHO) recommends not using progestin-only treatments for women who:</p> <ul style="list-style-type: none"> <li>• Are pregnant</li> <li>• Have unexplained abnormal vaginal bleeding (progestin-only treatments can mask the symptoms of an underlying serious condition).</li> </ul>	

# Birth Control Methods

Progestin-Only Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Progestin-Only Pills (in general) cont'd</b>			<ul style="list-style-type: none"> <li>• Have breast cancer or suspicious symptoms.</li> <li>• The WHO also cautions against progestin-only treatment when other less-serious situations are present in combination.<sup>52</sup></li> </ul>	

# Birth Control Methods

## Progestin-Only Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Norplant</b>	<p>Five rods are implanted just under the skin of the woman's arm, where they can remain for up to five years. They release low doses of levonorgestrel "at a low, steady rate of 85 micrograms (mcg) daily initially, decreasing to 50 mcg at 9 months, 35 mcg at 18 months, and to 30 mcg per day thereafter."<sup>53</sup></p> <p><b>For Norplant-only users, the pregnancy rate after one year of use is 0.05%.</b><sup>54</sup></p> <p>Implants can remain in place longer than five years, but do not provide reliable birth control effect. New implants can be inserted after five years.</p>	<p>Norplant's biggest advertised benefit is that it is long-lasting. Once inserted, it provides a birth control effect for up to five years.</p>	<p>Not as effective when patient is also on certain other drugs, especially anti-seizure medications.<sup>55</sup></p> <p>In addition to the side-effects listed above for all progestin-only treatments, Norplant has the following potential side-effects:</p> <ul style="list-style-type: none"> <li>• Small incidence of skin irritation, infection, and expulsion, as much as two months after the initial insertion.<sup>56</sup></li> <li>• Causes ovarian cysts, though these usually regress without treatment.</li> <li>• Increased risk of osteoporosis.</li> </ul> <p>Because of abnormal menstruation patterns, many women become confused and concerned, often thinking they are pregnant when they are not.</p>	<p><b><u>No longer available on the market in the U.S.</u></b></p> <ul style="list-style-type: none"> <li>• One-time cost of implantation is approximately \$500-700. Cost of removal is higher.</li> <li>• Norplant suppresses ovulation in "at least half the cycles."<sup>57</sup></li> <li>• It is less effective for heavier women. (In one study, the pregnancy rate over five years for women weighing 1.5%; for women weighing more than 154 pounds, 2.4%.)<sup>58</sup></li> <li>• About half of Norplant patients have it removed after one to three years.</li> <li>• Norplant can be very difficult and extremely painful to remove, especially if implanted too deeply.</li> <li>• Amenorrhea (missed periods) becomes <i>less</i> common among Norplant users over time.</li> </ul>

# Birth Control Methods

## Progestin-Only Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<p><b>Depo-Provera® (injection)</b></p>	<p>Injection administered every 12 weeks, with contraceptive effects and side-effects lasting beyond the 12 weeks even if the shot is not received again.</p> <p>As with all progestin-only contraceptives, it is believed to cause early abortion some of the time.</p> <p><b>For Depo-Provera® only users, the pregnancy rate after one year of use is 0.03% (provided injections are given on time).</b><sup>59</sup></p>	<ul style="list-style-type: none"> <li>• Can be used safely with almost all other drugs.</li> <li>• Decreases seizures for women with neurological disorders.</li> <li>• Reduces risk of sickle-cell crisis.<sup>60</sup></li> </ul>	<p>Requires clinic visit every 12 weeks. In addition to the side-effects listed above for all progestin-only treatments, Depo-Provera® has the following potential side-effects (side-effects can last <i>up to 8 months</i> after the last shot):</p> <ul style="list-style-type: none"> <li>• Significantly reduces HDL cholesterol levels (the “good” cholesterol).</li> <li>• Heavy bleeding.</li> <li>• Allergic reactions are rare but serious.</li> <li>• Can cause decrease in bone density due to abnormally low estrogen (estradiol) levels.<sup>61</sup></li> <li>• More likely than other progestin-only treatments to cause weight gain (averaging 5.4 pounds in the first year, 8.1 pounds in the second year, and 13.8 pounds after 4 years) or feelings of bloating, with greater weight gain over time.<sup>62</sup></li> <li>• Some studies indicate an increased risk of breast cancer in Depo-Provera® users, especially after lengthy use, but other studies show little or no such risk.</li> <li>• Spotting between periods is common.</li> </ul>	<ul style="list-style-type: none"> <li>• Amenorrhea becomes more common among Depo-Provera® users over time.<sup>63</sup></li> <li>• Over 75% of Depo-Provera® patients discontinue its use after 1 to 4 years.<sup>64</sup></li> <li>• Depo-Provera® is popular among teens in some parts of the country.</li> <li>• Women who are late for a shot must take a pregnancy test and/or recount her sexual activity in the interval, as pregnancy may (but is unlikely to) result.</li> </ul>

# Birth Control Methods

## Progestin-Only Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Depo-Provera<sup>®</sup></b> <b>(cont'd.)</b> <b>(injection)</b>			<ul style="list-style-type: none"><li>• Increased risk of osteoporosis.</li><li>• Because of the abnormal menstruation patterns, many women become confused and concerned, often thinking that they are pregnant when they are not.</li></ul>	

# Birth Control Methods

## Progestin-Only Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Mini-Pill or Progestin-Only Pill or POP</b>	<p>Less effective than combined-hormone contraceptives.</p> <p><b>Mini-pills (or “POPs”) have a pregnancy rate of 5% among typical users in the first year of use.</b></p>	<p>See advantages listed for all progestin-only treatments above.</p>	<ul style="list-style-type: none"> <li>• “Obsessive regularity in pill-taking required for effectiveness.”<sup>65</sup></li> <li>• Taking a mini-pill only three hours later reduces contraceptive effectiveness for two days.</li> <li>• Taking certain other medications concurrently can reduce effectiveness.</li> </ul>	<p>Can cause long periods of amenorrhea.</p> <p>Also used as an “emergency contraceptive.”</p>

# Birth Control Methods

Surgical Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<p><b>Female Sterilization (Tubal Ligation)</b></p>	<p>This irreversible method of contraception involves interrupting the fallopian tubes (via surgical severing, cauterizing, etc.) so that eggs released from the ovaries cannot reach the uterus.</p> <p><b>For sterilized women, the pregnancy rate is 0.5% after one year.</b><sup>66</sup></p> <p>For women with unsuccessful tubal ligations, ectopic pregnancy is likely.</p>	<ul style="list-style-type: none"> <li>• Permanent (if successful)</li> <li>• Minimal long-term side-effects</li> <li>• Long-range cost effectiveness.</li> </ul>	<ul style="list-style-type: none"> <li>• Reversibility is not guaranteed and is expensive.</li> <li>• Ectopic pregnancy common when tubal ligation fails.</li> <li>• Potential hormonal changes and changes to menstrual patterns. Evidence on these possible complications is not definitive.</li> </ul> <p>Risks of the surgery vary based on technique, but include:</p> <ol style="list-style-type: none"> <li>1. Anesthesia problems.</li> <li>2. Puncture of uterus, bladder, or intestines.</li> </ol>	

# Birth Control Methods

## Surgical Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Essure<sup>®</sup></b>	<p>The Essure<sup>®</sup> procedure should be performed by a trained gynecologist.</p> <p>A flexible micro-insert is placed into each fallopian tube.</p> <p>During the following three months, the woman's body and the micro-insert work together to form a tissue barrier that prevents sperm from reaching the egg. The total procedure takes about 35 minutes.<sup>67</sup></p>	<ul style="list-style-type: none"> <li>• Unlike tubal ligation, the Essure<sup>®</sup> procedure does not require incisions or punctures to the body and there is no cutting, clipping, suturing, or burning of tubes.<sup>68</sup></li> <li>• General anesthesia (with its attendant risks) is not used.</li> </ul>	<ul style="list-style-type: none"> <li>• The procedure is irreversible. (Removal of the micro-inserts would require surgery, and there is no data on the safety or effectiveness of surgery to reverse the Essure<sup>®</sup> procedure.<sup>69</sup>)</li> <li>• The procedure is not considered 100% effective.</li> <li>• Some women will not achieve successful placement of both micro-inserts.</li> <li>• The manufacturer recommends that another method of birth control be used for at least 3 months after the procedure.<sup>70</sup></li> <li>• Women should not rely on Essure<sup>®</sup> for contraception before completing an HSG evaluation, because they may get pregnant or have an ectopic pregnancy. (An HSG evaluation is performed by a doctor three months after the Essure<sup>®</sup> procedure.)<sup>71</sup></li> </ul> <p>Women may experience the following during recovery:</p> <ol style="list-style-type: none"> <li>1. Cramps.</li> <li>2. Discharge (like menstrual flow).</li> <li>3. Nausea/vomiting.</li> <li>4. Fainting/light-headedness.</li> </ol>	<p>The manufacturer states that a woman should not use Essure<sup>®</sup> if she:<sup>72</sup></p> <ul style="list-style-type: none"> <li>• is uncertain about ending her fertility;</li> <li>• is pregnant or she suspects she is pregnant;</li> <li>• has delivered a baby, had a miscarriage, or had an abortion within 6 weeks before the Essure procedure;</li> <li>• has an active or recent pelvic infection;</li> <li>• has an unusual uterine shape;</li> <li>• has a known allergy to dye;</li> <li>• has a known hypersensitivity or allergy to nickel;</li> <li>• is unwilling to use another method of contraception for at least 3 months after the procedure;</li> <li>• is unwilling to undergo a HSG evaluation to make sure that her tubes are blocked and the devices are in the correct position;</li> <li>• has had a prior tubal ligation.</li> </ul>



# Birth Control Methods

## Surgical Methods

Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<b>Essure<sup>®</sup></b> <b>(cont'd.)</b>			<ul style="list-style-type: none"> <li>Women who are currently undergoing immunosuppressive therapy (e.g., chemotherapy, taking steroid medication such as prednisone, etc.) should discuss this with their doctor.</li> <li>Women who have previously had abdominal or pelvic surgery should also discuss this with their doctor.</li> </ul>	

# Birth Control Methods

Surgical Methods				
Name	Description	Advantages	Side-Effects/ Disadvantages	Notes
<p><b>Male Sterilization (Vasectomy)</b></p>	<p>Surgical severing of the vas deferens so that sperm are no longer transported from the testes to the prostate for mixing into semen (semen production is not reduced).</p> <p><b>Partners of sterilized men have a pregnancy rate of 0.10% to 0.15% after one year.<sup>73</sup></b></p>	<ul style="list-style-type: none"> <li>• Permanent (if successful).</li> <li>• Minimal long-term side-effects.</li> <li>• Long-range cost effectiveness.</li> </ul>	<ul style="list-style-type: none"> <li>• Reversibility is not guaranteed and is expensive.</li> <li>• Man is not immediately sterile, as sperm can continue to live in his reproductive tract after the surgery. Researchers estimate it takes 20 more ejaculations before the man is effectively sterile.</li> <li>• Increased risk of prostate cancer.<sup>74</sup></li> <li>• Increased risk of autoimmune diseases such as arthritis, kidney problems, etc.<sup>75</sup></li> </ul>	

# Birth Control Methods

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- <sup>1</sup> James Trussell and Deborah Kowal, "The Essentials of Contraception" in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 211.
  - <sup>2</sup> James Trussell and Deborah Kowal, "The Essentials of Contraception" in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 216.
  - <sup>3</sup> D. Lee Warner, MPH and Robert A. Hatcher, MD, MPH, "Male Condoms," in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 342.
  - <sup>4</sup> D. Lee Warner, MPH and Robert A. Hatcher, MD, MPH, "Male Condoms," in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 327-328, citations omitted.
  - <sup>5</sup> D. Lee Warner, MPH and Robert A. Hatcher, MD, MPH, "Male Condoms," in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 327.
  - <sup>6</sup> Trussell J. "Contraceptive efficacy." In Hatcher RA, Trussell J., Stewart F., Nelson A., Cates W., Guest F., Kowall D. *Contraceptive Technology*, Eighteenth Revised Edition (New York: Ardent Media, Inc., 2004) posted at [www.contraceptivetechnology.com/table.html](http://www.contraceptivetechnology.com/table.html) (Accessed on June 28, 2006.)
  - <sup>7</sup> Trussell J. "Contraceptive efficacy." In Hatcher RA, Trussell J., Stewart F., Nelson A., Cates W., Guest F., Kowall D. *Contraceptive Technology*, Eighteenth Revised Edition (New York: Ardent Media, Inc., 2004) posted at [www.contraceptivetechnology.com/table.html](http://www.contraceptivetechnology.com/table.html) (Accessed on June 28, 2006).
  - <sup>8</sup> Felicia Stewart, "Vaginal Barriers" in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 378 (chart.)
  - <sup>9</sup> Felicia Stewart, "Vaginal Barriers," in *Contraceptive Technology*, Seventeenth Revised Edition, (New York: Ardent Media, Inc., 1998), 384.
  - <sup>10</sup> Felicia Stewart, "Vaginal Barriers," in *Contraceptive Technology*, Seventeenth Revised Edition, (New York: Ardent Media, Inc., 1998), 385.
  - <sup>11</sup> Felicia Stewart, "Vaginal Barriers" in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 389.
  - <sup>12</sup> This list from Planned Parenthood's *All About Birth Control: A Personal Guide*, by Jon Knowles and Marcia Ringel (New York: Three Rivers Press, 1998). [Note: The subtitle on the book cover is *The Complete Guide*, does not match that on the title page.], 97.
  - <sup>13</sup> Trussell J. "Contraceptive efficacy." In Hatcher RA, Trussell J., Stewart F., Nelson A., Cates W., Guest F., Kowall D. *Contraceptive Technology*, Eighteenth Revised Edition (New York: Ardent Media, Inc., 2004) posted at [www.contraceptivetechnology.com/table.html](http://www.contraceptivetechnology.com/table.html) (accessed on June 28, 2006).
  - <sup>14</sup> This list is from Planned Parenthood's *All About Birth Control: A Personal Guide*, by Jon Knowles and Marcia Ringel (New York: Three Rivers Press, 1998). [Note: The subtitle on the book cover is the *Complete Guide*, does not match that on the title page.], 97.
  - <sup>15</sup> Trussell J. "Contraceptive efficacy." In Hatcher RA, Trussell J., Stewart F., Nelson A., Cates W., Guest F., Kowall D. *Contraceptive Technology*, Eighteenth Revised Edition (New York: Ardent Media, Inc., 2004) posted at [www.contraceptivetechnology.com/table.html](http://www.contraceptivetechnology.com/table.html) (accessed on June 28, 2006).
  - <sup>16</sup> Willard Cates, Jr., and Elizabeth G. Raymond, "Vaginal Spermicides," in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 357-369.
  - <sup>17</sup> Trussell J. "Contraceptive efficacy." In Hatcher RA, Trussell J., Stewart F., Nelson A., Cates W., Guest F., Kowall D. *Contraceptive Technology*, Eighteenth Revised Edition (New York: Ardent Media, Inc., 2004) posted at [www.contraceptivetechnology.com/table.html](http://www.contraceptivetechnology.com/table.html) (accessed on June 28, 2006).
  - <sup>18</sup> Willard Cates, Jr. and Elizabeth G. Raymond, "Vaginal Spermicides," in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 361.
  - <sup>19</sup> Felicia Stewart, "Vaginal Barriers," in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 383.
  - <sup>20</sup> Felicia Stewart, "Vaginal Barriers," in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 384.

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- <sup>21</sup> Felicia Stewart, "Vaginal Barriers," in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 385-386.
- <sup>22</sup> D. Lee Warner, MPH and Robert A Hatcher, MD, MPH, "Male Condoms," in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 327-328, citations omitted.
- <sup>23</sup> Willard Cates Jr. and Elizabeth G. Raymond, "Vaginal Spermicides," in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 357.
- <sup>24</sup> John K. Jain, Aimin Li, Parviz Minoo, Deborah L. Nucatola, Juan C. Felix, "The effect of nonoxonyl-9 on human endometrium," *Contraception*, 2005; 71(2): 137-142.
- <sup>25</sup> Felicia Stewart, "Vaginal Barriers," in *Contraceptive Technology*, Seventeenth Revised Edition (New York: Ardent Media, Inc., 1998), 384.
- <sup>26</sup> Mercedes Arzù Wilson, *Love & Family: Raising a Traditional Family in a Secular World* (San Francisco: Ignatius Press, 1996), 286-287, citing Patient Package Insert for ParaGardT380A, p. 10; Hatcher et al, *Contraceptive Technology* (1994), 370-373, and personal communication of John Brennan, MD, Milwaukee, WI.
- <sup>27</sup> The information on the Mirena<sup>®</sup> Intrauterine System (IUS) is adapted from [www.womenshealth.co.uk/mirena.asp](http://www.womenshealth.co.uk/mirena.asp) (Accessed on June 29, 2006).
- <sup>28</sup> The information on the Mirena<sup>®</sup> Intrauterine System (IUS) is adapted from [www.womenshealth.co.uk/mirena.asp](http://www.womenshealth.co.uk/mirena.asp) (Accessed on June 29, 2006).
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