

## Contraceptive Use and Methods in the U.S.

During her lifetime, the typical woman in the U.S. will spend approximately 36 years at potential biological risk of becoming pregnant.<sup>1</sup> About 38.6 million American women – or 93 percent of those actually “at risk” for pregnancy<sup>2</sup> – use a method of contraception. The remaining seven percent of “at risk” women (2.9 million) who are not using birth control account for almost half (47 percent) of the 3 million unintended pregnancies each year in the U.S.<sup>3,4</sup>

Among women aged 15-44 at risk for pregnancy, use of the male condom increased from 13 percent to 19 percent between 1988 and 1995 – the years of the last two national surveys on contraception. At the same time, use of oral contraceptives decreased from 28 percent to 25 percent among the same group.<sup>3</sup>

### Attitudes about Contraception

- The characteristics women consider to be “very important” when choosing a contraceptive method are effectiveness at preventing pregnancy (90%), followed by effectiveness at protecting against STDs (77%) and no health risk (77%). Whether a method is easy to use (51%) and requires no advanced planning (45%) were also considered very important for a significant proportion of women.<sup>5</sup>
- The most common reason women give for not using contraception is that they wouldn’t mind if they got pregnant (39%), followed by concern about unpleasant side effects (28%) and not wanting to ruin the spontaneity of sex (25%).<sup>6</sup>
- Women who discussed contraception with their doctors at their most recent gynecological visit were almost twice as likely to say that they used birth control “all the time.”<sup>6</sup> Yet, 30 percent of women at risk for an unplanned pregnancy said that contraception was not mentioned during their most recent visit.<sup>6</sup>

### Use of Contraception by Adolescents and Young Adults

- There are approximately nine million girls aged 15-19 in the U.S., 37 percent of whom are thought to be at risk for pregnancy. An additional nine million women are aged 20-24, and 69 percent of them are believed to be at risk for pregnancy. Of the 9.7 million women aged 25-29, 74 percent are considered at risk for pregnancy.<sup>3,7</sup>

- Unlike women aged 30 and older, teens and young adults are most likely to rely on oral contraceptives and the male condom. Among adolescents aged 15-19, the Pill is most popular (35%), followed by condoms (30%). The same holds true for women aged 20-24 (48% the Pill, 24% use condoms) and aged 25-29 (37% the Pill, 23% condoms).<sup>3,7</sup>
- Use of the male condom by adolescents and young adults at risk for pregnancy increased between 1988 and 1995, rising slightly among women aged 15-19 (from 27% to 30%) and almost doubling among women aged 20-24 (from 13% to 24%) and women aged 25-29 (from 14% to 23%).<sup>3,7</sup>
- The proportion of women at risk for pregnancy who relied on oral contraceptives declined between 1988 and 1995. The greatest decreases in pill use occurred among women aged 15-19 (from 47% to 35%) and women aged 20-24 (from 60% to 48%).<sup>3,7</sup>
- Women aged 15-24 are more likely than women in other age groups to rely on the implant and the injectable. These methods, combined, are used by 10 percent of girls aged 15-19 and nine percent of women aged 20-24.<sup>3,7</sup>
- Among women at risk for unintended pregnancy, 19 percent of girls aged 15-19, nine percent of young women aged 20-24, and six percent of women aged 25-29 are not using a contraceptive method.<sup>3,7</sup>

Percentage of Current Contraceptive Use Among Women At Risk for Pregnancy, by Age

Method/Age	15-44	15-19	20-24	25-29	30-34	35-39	40-44
<b>Female</b>	25.6	0.3	3.6	16.0	27.7	38.6	46.7
<b>Sterilization</b>							
<b>Pill</b>	24.9	35.4	47.6	36.6	26.8	10.5	5.5
<b>Male Condom</b>	18.9	29.7	24.0	22.8	17.3	15.9	11.5
<b>Male</b>	10.1	0.0	1.0	4.2	9.8	17.6	19.0
<b>Sterilization</b>							
<b>No Method</b>	7.5	19.3	8.6	6.4	5.7	5.6	6.7
<b>Withdrawal</b>	2.9	3.3	3.0	3.5	2.7	3.0	1.8
<b>Injectable</b>	2.7	7.9	5.6	3.9	1.7	1.0	0.3
<b>Periodic</b>	2.2	1.1	0.9	1.6	3.0	2.7	2.4
<b>Abstinence</b>							
<b>Diaphragm</b>	1.7	0.0	0.6	0.8	2.2	2.8	2.5
<b>Implant</b>	1.3	2.2	3.4	1.9	0.6	0.3	0.1
<b>Spermicide</b>	1.3	0.8	1.1	1.6	1.4	1.0	1.8
<b>IUD</b>	0.7	0.0	0.3	0.7	0.8	0.9	1.2
<b>Other</b>	0.1	0.0	0.1	0.0	0.3	0.1	0.5
<b>Female Condom</b>	0.0	0.0	0.1	0.0	0.0	0.0	0.0

Source: 1995 National Survey of Family Growth, Abma et al. (1997) and Contraceptive Technology (1998)

## Protection from STDs, Including HIV

Most contraceptive methods, including those most frequently used in the U.S. (sterilization and oral contraceptives), do not protect against transmission of STDs, including HIV. However, public health officials agree that latex condoms, when used consistently and correctly, are highly effective in preventing HIV transmission and can reduce the risk of other STDs.<sup>8</sup>

## Female Sterilization

- Tubal sterilization, the most commonly used method of birth control, is a permanent operation that blocks the fallopian tubes.<sup>9</sup> It has a 0.5 percent failure rate.<sup>7</sup>

## Oral Contraceptives

- Oral contraceptives (OCs) are the most popular reversible method of birth control in the U.S. Most women who rely on the Pill use “combined” oral contraceptives, which contain the hormones estrogen and progestin; other pills contain only progestin.<sup>9</sup>
- Combined oral contraceptive pills stop the release of an egg (ovulation) and thin the uterine lining. Progestin-only pills thin the uterine lining and make the cervical mucus thicker so sperm cannot reach the egg.<sup>9</sup>
- Five percent (5%) of women will experience an unintended pregnancy within the first year of typical use of either type oral contraceptives. If combined pills are used consistently and correctly, just one in 1,000 women will become pregnant. When progestin-only pills are used consistently and correctly, one in 200 women will become pregnant.<sup>7</sup>

## Male Condoms

- Condoms are made of latex, plastic, or natural membranes that prevent exchange of bodily fluids during intercourse.
- Fourteen percent (14%) of women will experience an unintended pregnancy in the first year of typical use of the male latex condom. If condoms are used consistently and correctly, about three percent of users become pregnant.<sup>7</sup>
- Condoms can be used in conjunction with water-based lubricants or spermicides, but should not be used with oil-based lubricants.<sup>9</sup>

## Male Sterilization

- Vasectomy is a permanent operation that blocks the vas deferens, the tubes that carry a man’s sperm outside his penis.<sup>9</sup> It has a 0.15 percent failure rate.<sup>7</sup>

## Contraceptive Efficacy Rates

Efficacy is measured based on the probability that a woman will become pregnant during the first year of either “perfect use” – using birth control correctly at every act of intercourse – or “typical use,” which assumes the average person will not always use their method consistently and correctly. The difference between efficacy rates for “perfect” and “typical” use varies by contraceptive method. Efficacy for methods such as sterilization or the implant – which do not require the user to act – will obviously differ from those for contraceptives such as the condom or oral contraceptives.

## Injectable

- The injectable contraceptive contains a medicine called Depo-Provera, a hormone that prevents ovulation. A woman using Depo-Provera must receive a new injection every three months or 13 weeks.<sup>9</sup>
- For typical couples relying on Depo-Provera, about 3 in 1,000 will experience accidental pregnancy in the first year.<sup>7</sup>
- Depo-Provera may lower estrogen levels and cause bone loss, although this effect is still being studied. Women currently using Depo-Provera are encouraged to exercise regularly and take extra calcium.<sup>9</sup>
- In October 2000, the U.S. Food and Drug Administration (FDA) approved a second, monthly injectable, Lunelle, which contains estrogen and progestin.

## Diaphragm

- A diaphragm is a rubber disk that covers the cervix and blocks semen. Spermicide is also placed on a diaphragm before insertion to kill sperm and physically block the cervix.
- A diaphragm can be put in several hours before intercourse and must remain in place for six hours after last sex. It can be left in place for up to 48 hours.<sup>9</sup>
- Twenty percent (20%) of women will experience an unintended pregnancy within the first year of typical use of the diaphragm. If the diaphragm is used consistently and correctly, about six percent will become pregnant.<sup>7</sup>
- Because diaphragms are fitted to a woman’s cervix, she may need a new fitting after giving birth, having an abortion or miscarriage, or gaining 15 pounds or more.<sup>9</sup>

## Implant

- Norplant implants are six matchstick-sized rods that are inserted, by a health care provider, into a woman’s upper arm. The implants release very small amounts of a hormone similar to progesterone, which women produce naturally during the last two weeks of their menstrual cycle.

- Among typical couples who use Norplant, about 2 in 1,000 will experience an accidental pregnancy in the first year.<sup>7</sup>

### **Spermicides**

- Spermicides are preparations, like gels, creams, foams, or films, which contain chemicals that kill sperm.
- Twenty-six percent (26%) of women will experience an unintended pregnancy within the first year of typical use of spermicides alone. Six percent (6%) of women would get pregnant using spermicides alone consistently and correctly.<sup>7</sup>
- Some studies suggest that nonoxynol-9 (N-9), a common spermicide used alone or with condoms, may irritate the vaginal lining, thus increasing risk of HIV transmission.<sup>10</sup>

### **IUD**

- An IUD is a small device that a health care provider places in a woman's uterus. The Copper-T IUD slowly releases copper into the uterine cavity, which stops sperm from traveling and prevents implantation of a fertilized egg if fertilization does occur. The Progesterone-T IUD slowly releases progesterone, which thickens cervical mucus to hinder sperm travel and changes the uterine lining to prevent implantation of a fertilized egg.<sup>9</sup>
- Among typical couples who use the Copper-T IUD, about 0.8 percent will experience an accidental pregnancy during the first year. Among typical couples who use the Progesterone-T IUD, about two percent will experience an accidental pregnancy during the first year.<sup>7</sup>
- In December 2000, the FDA granted approval to Mirena, a new low-dose progestin-releasing IUD that can be used to prevent pregnancy for up to five years, with a failure rate of less than one percent.<sup>17</sup>

### **Sponge**

- The sponge is a doughnut-shaped cervical barrier that releases spermicide over a 24-hour period. Once inserted, it is effective almost immediately.
- Under typical circumstances, 40 percent of women who have had children and use the sponge will become pregnant during the first year of use, compared with 20 percent of women who have never had children. If the sponge is used consistently and correctly, 20 percent of women who have given birth and six percent of women who have not will become pregnant.<sup>7</sup>

### **Cervical Cap**

- A cervical cap is a small, soft rubber cap that comes in four sizes. A woman puts spermicide into the cap and then places it over her cervix.
- A cervical cap may be inserted an hour before

intercourse and can stay in place for up to 48 hours. It does not need to be removed for each new act of intercourse during that period, as long as it stays in place for six to eight hours after last sex.<sup>9</sup>

- Under typical circumstances, 40 percent of women who have had children and rely on the cervical cap will become pregnant during the first year of use, compared with 20 percent of women who have never had children. When the cap is used consistently and correctly, 26 percent of women who have given birth and nine percent of women who have not will become pregnant.<sup>7</sup>
- Cervical caps should be replaced annually, and a new fitting for a cap may be necessary after giving birth, having an abortion or miscarriage, or gaining at least 15 pounds.<sup>9</sup>

### **Female Condom**

- The female condom is a polyurethane tube with one open end and one closed end, both of which contain flexible rings to keep it in place. The tube prevents the exchange of bodily fluids during intercourse.
- Twenty-one percent (21%) of women will experience an unintended pregnancy within the first year of typical use. If female condoms are used consistently and correctly, about five percent of women will become pregnant.<sup>7</sup>

### **Withdrawal**

- Among typical couples who rely on withdrawal, about 19 percent will experience an unintended pregnancy during the first year of use. If withdrawal is performed consistently and correctly, about four percent will become pregnant. Effectiveness depends in large part on withdrawing in a timely fashion.<sup>7</sup>

### **Periodic Abstinence**

- Twenty-five percent (25%) of women will experience an unintended pregnancy within the first year of relying on typical use of "periodic abstinence" – avoiding intercourse on the five or six days when a woman is likely to be fertile. Used consistently and correctly, accuracy of different methods of tracking menstrual cycles range from one to nine percent. Effectiveness is dependent on a woman's ability to chart her cycles accurately and the couple's willingness to abstain during the appropriate time period.<sup>7</sup>

### **Emergency Contraception**

- Emergency contraception is a back-up method of birth control that can be used to reduce the likelihood of pregnancy after unprotected sex or known contraceptive failure (such as a condom breaking). There are two dedicated emergency contraceptive pill (ECP) products, Preven (combined estrogen and progestin) and Plan B (progestin only). Certain types of oral contraceptives, as well as the insertion of a Copper-T IUD, can also be used.

- Several studies have shown that emergency contraception works by inhibiting or delaying ovulation. It does not interrupt an established pregnancy.<sup>11</sup>
- Combined emergency contraceptive pills reduce the risk of pregnancy by about 75 percent.<sup>12</sup> Progestin-only ECPs reduce the likelihood of pregnancy by about 88 percent.<sup>13</sup>

- Contraceptive coverage is likely to increase since nineteen states – Arizona, California, Connecticut, Delaware, Georgia, Hawaii, Iowa, Maine, Maryland, Massachusetts, Missouri, Nevada, New Hampshire, New Mexico, North Carolina, Rhode Island, Texas, Vermont, and Washington – have recently adopted laws or regulations to guarantee coverage of reversible contraception under the same terms and conditions as other prescription drugs.<sup>16</sup>

- Insurance plans do not tend to offer coverage for over-the-counter contraceptives, such as condoms or spermicides.

### Contraceptive Costs

Method	Cost	Associated Costs
<b>Female Sterilization</b>	\$1190-2467	
<b>Male Sterilization</b>	\$353-\$756	
<b>Oral contraceptives</b>	\$18-\$21/per cycle	Annual GYN exam
<b>Male condom</b>	\$.33-\$1.04/per condom	
<b>Implant</b>	\$365 (can last for five years if not removed)	\$48-\$333 for insertion and \$80-\$100 for removal
<b>Injectable</b>	\$30/per quarter	Quarterly office visits
<b>Diaphragm</b>	\$15-\$18	Office visit for fitting; spermicides
<b>IUD</b>	\$82-\$184, depending on type	\$62-\$207 for insertion and \$11-\$70 for removal; office visit
<b>Female Condom</b>	\$1.25-\$3.66/per condom	
<b>Spermicides</b>	\$8.75-\$12.00/per approx. 12 applications	
<b>Sponge</b>	\$.83-\$1.50/per sponge	
<b>Cervical Cap</b>	\$19-\$31	Office visit for fitting; spermicides
<b>Evra Patch</b>	Similar to OCS	
<b>NuvaRing</b>	Coming to market in mid-2002	

Source: Contraceptive Technology (1998)

### Insurance Coverage of Contraception

- More than two-thirds of women aged 18-44 rely on private insurance to help them finance medical care. Yet coverage of contraception varies greatly by type of health plan.<sup>14</sup>
- Surgical sterilization, for both men and women, is covered by 85 to 90 percent of all insurers, regardless of type of health plan.<sup>15</sup>
- The majority of insurance plans include oral contraceptives, although coverage varies by plan type. Seventy-three percent (73%) of workers enrolled in health maintenance organizations (HMOs) have coverage for the Pill, compared with 61 percent in Preferred Provider Organizations (PPOs), 70 percent in Point-of-Service (POS) networks, and 43 percent in conventional indemnity plans.<sup>14</sup>
- Reversible methods of contraception are not routinely covered by 7 percent of HMOs, 49 percent of PPOs, 19 percent of POSs, and 49 percent of free-for-service plans.<sup>15</sup>
- All five of the most commonly used birth control methods that require a physician visit and/or prescription (IUD, diaphragm, implant, injectable, and oral contraception) are covered by 39 percent of HMOs, 18 percent of PPOs, 33 percent of POSs, and 15 percent of fee-for-service plans.<sup>15</sup>

### Data on Contraceptive Use in the U.S.

Information about contraceptive use in the United States is generally based on the National Survey of Family Growth (NSFG), surveys of women aged 15-44 conducted by the National Center for Health Statistics. These surveys, which occur approximately every five years, cover topics related to fertility, family planning, childbearing, and maternal and child health.

### References

- <sup>1</sup> The 36-year calculation is based on the length of time between average age of first menses (12.5) and average age of natural menopause (48.4). Forrest JD, Timing of reproductive life stages, *Journal of Obstetrics and Gynecology*, 1993, 82:105-110.
- <sup>2</sup> The proportion of women who use contraception in the U.S. is based on the numbers of women who are considered to be "at risk" for unintended pregnancy – defined as being sexually active, not sterile or pregnant, not trying to become pregnant, and not having given birth within the previous two months.
- <sup>3</sup> Abma JC et al., Fertility, family planning, and women's health: new data from the 1995 National Survey of Family Growth, *Vital and Health Statistics*, 1997, Series 23, Number 19.
- <sup>4</sup> Alan Guttmacher Institute (AGI). *Facts in Brief: Contraceptive Use and Facts in Brief: Induced Abortion*. New York: The Alan Guttmacher Institute, 2001.
- <sup>5</sup> Grady W, Klepinger D, and Nelson-Wally A, *Contraceptive Characteristics: The Perceptions and Priorities of Women and Men*, *Family Planning Perspectives*, 1999, 31(4):168-175.
- <sup>6</sup> Kaiser Family Foundation, Glamour, and Princeton Survey Research Associates, *Survey of Women about their Knowledge, Attitudes, and Practices Regarding their Reproductive Health*, February 1997.
- <sup>7</sup> Hatcher RA et al. *Contraceptive Technology*, 17<sup>th</sup> revised edition. New York: Ardent Media, 1998.
- <sup>8</sup> CDC, *Latex Condoms and Sexually Transmitted Diseases – Prevention Messages*, July 5, 2001.
- <sup>9</sup> American Health Consultants and the David and Lucile Packard Foundation, *Contraceptive Patient Handout Manual*, 2000.
- <sup>10</sup> CDC, *Notice to Readers: CDC statement on study results of product containing nonoxynol-9*. *MMWR* 2000, 49:717 and *Nonoxynol 9: Spermicide fails to protect against HIV infection*, *Contraceptive Technology Update*, 21(10), October 2000, 119.
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- <sup>12</sup> Trussell J, Rodriguez G, and Ellerton C, *Updated estimates of the effectiveness of the Yuzpe regimen of emergency contraception*, *Contraception*, 1999, 59:147-151.
- <sup>13</sup> Task Force on Postovulatory Methods of Fertility Regulation, *Randomised controlled trial of levonorgestral versus the Yuzpe regimen of combined oral contraceptives for emergency*, *Lancet*, 1998, 352:428-433.
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- <sup>16</sup> Alan Guttmacher Institute (AGI). *State Policies in Brief: Insurance Coverage of Contraceptives*, 2002.
- <sup>17</sup> Burkman R and Shulman L, *The levonorgestral IUD*, *Dialogues in Contraception*, 2001, 7:1.

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