

## HORMONAL CONTRACEPTIVES AND “EMERGENCY CONTRACEPTIVES”

### Prevalence of Contraception

According to a June, 2010 report by the Alan Guttmacher Institute<sup>1</sup>:

- Virtually all women (99%+) aged 15-44 who have ever had sexual intercourse have used at least one contraceptive method among those listed below.
- Some 62% of the 62 million women aged 15-44 are currently using some method.
- Some 31% of the 62 million women do not need a method because they are infertile, are pregnant, postpartum or trying to become pregnant, have never had intercourse, or are not sexually active.

Thus, only 7% of women aged 15-44 are at risk for unintended pregnancy but are not using contraceptives.

The same report lists the following contraceptive methods used by American women:

METHOD	% OF USERS	FAILURE RATE (Typical User)
Pill	28.0	8.7
Tubal sterilization	27.1	0.7
Male condom	16.1	17.4
Vasectomy	9.9	0.2
IUD	5.5	0.5*
Withdrawal	5.2	18.4
3 mo.injectable: Depo-Provera	3.2	6.7
Vaginal ring: NuvaRing	2.4	na
Implant/patch	1.1	1/8
Periodic abstinence	1.1**	25.3
Other	0.4	na

\* Combined average of Copper T and Mirena.

\*\* Combined average of Calendar method and NFP.

na = not available

**Note:** The above failure rates differ by demographic group. For example, poor, cohabiting teenagers using the pill have a failure rate of 48.8%.<sup>2</sup>

## HORMONAL CONTRACEPTIVES

### What Are They?

Hormonal contraceptives were first available in pill form in 1960. They may now be taken by mouth (“The Pill”), implanted into body tissue (“The Rod”), absorbed through the skin (“The Patch”), injected under the skin (Depo-Provera), dispensed from an intrauterine device (Miranda), or placed inside the vagina (Nuvaring).

As the table above indicates, the pill, or oral contraceptives (OCs), are the most commonly used. According to the National Cancer Institute<sup>3</sup>:

- Currently, two types of OCs are available in the United States. The most commonly prescribed OC contains two man-made versions of natural female hormones (estrogen and progesterone) that are similar to the hormones the ovaries normally produce. This type of pill is often called a 'combined oral contraceptive.' The second type of OC is called the minipill. It contains only a synthetic type of progesterone, called progestin or progestogen.
- **Estrogen** stimulates the growth and development of the uterus at puberty, causes the endometrium (the inner lining of the uterus) to thicken during the first half of the menstrual cycle, and influences breast tissue throughout life, but particularly from puberty to menopause.
- **Progesterone**, which is produced during the last half of the menstrual cycle, prepares the endometrium to receive the egg. If the egg is fertilized, progesterone secretion continues, preventing release of additional eggs from the ovaries. For this reason, progesterone is called the 'pregnancy supporting' hormone' since it provides a nutrient-rich endometrium for the developing human being to implant.

### **How Do Hormonal Contraceptives Work?**

In 2008, the Practice Committee of the American Society for Reproductive Medicine noted that in the wide variety of oral contraceptives available their "mechanisms of action are the same." They either 1.)inhibit ovulation (so no egg is released), 2.)alter the cervical mucus (so that it is more difficult for the sperm to reach the egg), 3.)and/or modify the endometrium, thus preventing implantation.<sup>4</sup>

It is to be noted that the last "mechanism of action" constitutes an abortion, since the developing human being already consists of some 100 cells, but cannot implant in the mother's womb. However, the family planning/population control movement persuaded the medical community to redefine "pregnancy" as commencing only after implantation, so that hormonal contraceptives could be continued to be considered "contraceptives" – that is, as preventing pregnancy, rather than aborting an existing pregnancy, which they do (at least in some instances) and would be considered as doing under the original definition, which considered the woman pregnant from the time of conception (fertilization).

There are no scientific studies that have firmly determined the relative frequency with which these three mechanisms (or some combination of them) occur. Hence, we do not know how many abortions can be attributed to hormonal contraceptive use. One finding suggests that with the use of combined birth control pills (estrogen and progesterone), fertilization occurs, but implantation fails in from 1.7% to 28.6% of the time per cycle, whereas with progestin-only pills (that thin the endometrium) fertilization rates are from 33% to 65% per cycle.<sup>5</sup>

### **What Are the Side Effects of Hormonal Contraceptive Use?**

#### **Relationship to Cancer**

National Cancer Institute states that "the risk of endometrial and ovarian cancers is reduced with the use of OCs [oral contraceptives] while the risk of breast and cervical cancer is

increased.”<sup>3</sup> An increased risk of liver cancer is also associated with OC use.<sup>6</sup> According to the U.S. Centers for Disease Control and Prevention, from 2004-2008, 2.3 times as many women died from breast, cervical and liver cancer as died from endometrial and ovarian cancers.<sup>7</sup>

The International Agency for Research of Cancer of the World Health Organization states: “artificial contraceptives are carcinogenic on a par with cigarettes and asbestos.”<sup>6</sup>

In a review of 34 case-control studies from various countries of the relationship between prior OC use and premenopausal breast cancer, researchers concluded that “use of OCs was associated with an increased risk of premenopausal breast cancer in general,” increasing the risk by 19%. The association was particularly strong for women who used OCs before a first full-term pregnancy, increasing their risk by 44%.<sup>8</sup>

### **Relationship to Circulatory Disorders**

Nichols notes that the Physician’s Desk Reference (PDR) states that users of birth control are three times more likely to develop superficial venous thrombosis [blood clots], and have a four to eleven times greater risk for deep vein thrombosis or pulmonary embolism than non-users. The risk goes up by a factor of 1.5 to 6 for those women who are genetically predisposed to clots.<sup>9</sup> On top of this “well-established” risk, two recent studies indicated that hormonal contraceptives containing drospirenone (a type of progestin), increase the risk 2-3 times more. The U.S. Food and Drug Administration did its own study and found an increased risk of 1.5 times compared to hormonal contraceptives not containing drospirenone. It issued a safety warning on October 27, 2011 after reviewing these studies, and will issue further advice in December, 2011. Contraceptives containing drospirenone include Yaz, Gianvi, Loryna, Yasmin, Ocella, Syeda, Zarah, Beyaz and Safyral.<sup>10</sup>

High blood pressure is also a fairly common effect of the use of hormonal contraceptives. The risk of strokes and heart attacks also increases.

### **Other Negative Effects on Health**

Recent smaller studies suggest the use of hormonal contraceptives other than the pill also have negative impacts on women’s health. For example, a study of 95 women over two years who used DMPA, the birth control shot (administered once every three months) indicated that 45 of them experienced high bone mineral density loss in the hip or lower spine. This was particularly true of those women who were current smokers, had never given birth, and had a low daily calcium intake. Twenty seven of these women followed for a third year continued to lose bone mass.<sup>11</sup>

Another study of 70 non-smoking minority women, 30 of who used either OCs, the vaginal ring, or the transdermal patch had significantly lower levels of essential vitamins and antioxidants compared to 40 controls. The transdermal patch appeared to have the most negative effect. The vitamins and antioxidants involved are important to body cell health, and over the long term could be related to many chronic diseases, including cardiovascular disease, cancer, cataracts, and aging.<sup>12</sup>

### **EMERGENCY CONTRACEPTIVES OR MORNING AFTER PILLS**

There are two main types of “emergency contraceptives” or “morning after pills.”

- The first type, introduced in 2006, contains Levonorgestrel and goes by the names of **Plan B, One-Step, and Next Choice**. These became available over-the-counter for women 17 and older, and for male partners 17 and older in 2009. If taken within 72 hours of intercourse, they work by interfering with implantation of the embryo, or, if conception has not occurred, by suppressing ovulation or inhibiting sperm migration. A study published in the journal *Fertility and Sterility* found that 10% of 7,300 sexually active women aged 15-44 reported ever using an emergency contraceptive.<sup>13</sup>
- The second type, introduced in 2010, is called **ella**, and contains ulipristal acetate. It is available only by prescription, and is said to be effective up to five days after intercourse. Unlike Plan B and other emergency contraceptives noted above, ella works like mifepristone, a major component of the abortifacient RU 486. It blocks the body's progesterone, a hormone necessary to build and *maintain* the uterine wall. Hence, ella can cause the demise of an already-implanted human embryo. In approving ella, the U.S. Food and Drug Administration said it may "affect" implantation. In contrast, when describing Plan B's action, it said that the drug may "prevent" implantation. It also explicitly stated that Plan B would not terminate an established pregnancy (i.e., one wherein the embryo had implanted). Hence, whether one considers pregnancy as commencing with fertilization or implantation, ella is an abortifacient.<sup>14</sup> It should also be noted that ella is contraindicated if the woman is pregnant and wants to maintain the pregnancy, or if she is breastfeeding.<sup>15</sup>

### **Natural Family Planning**

For child-spacing methods which are drug-free, avoid the negative health risks described above and require and enhance communication between husband and wife, go to any of these websites: [www.americanpregnancy.org](http://www.americanpregnancy.org), Couple to Couple League [www.ccli.org/nfp](http://www.ccli.org/nfp) or [www.NFPandmore](http://www.NFPandmore).

### **References**

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- <sup>3</sup>National Cancer Institute Fact Sheet, "Oral Contraceptives and Cancer Risk: Questions and Answers," downloaded October 20, 2011.
- <sup>4</sup>Practice Committee of the American Society for Reproductive Medicine, "Hormonal Contraception: Recent Advances and Controversies," *Fertility and Sterility* 90:5 (November, 2008) Supplement, pp. S103-S113.
- <sup>5</sup>Elizabeth O'Brien, "Online Video: Noted Endocrinologist Explains How the Birth Control Pill Causes Abortion," LifeSiteNews.com (August 3, 2007).
- <sup>6</sup>Adam Cassandra, "Breast Cancer Awareness Month Ignores Pill's Link to Cancer," LifeNews.com (October 17, 2011).

- <sup>7</sup>U.S. Centers for Disease Control and Prevention, National Center for Health Statistics, U.S. Mortality Files, Table A.3, as reported in the National Cancer Institute's "SEER Cancer Statistics Review, 1975-2008," downloaded November 3, 2011.
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- <sup>13</sup>Peter J. Smith, "Rate of U.S. Women Taking Abortifacient Morning-After Pill Doubles," LifeSiteNews.com (May 3, 2011).
- <sup>14</sup>Anna Franzonello, "NPR, Planned Parenthood Mislead on Abortion Nature of Ella Drug," LifeNews.com (July 19, 2011).
- <sup>15</sup>U.S. Food and Drug Administration. (On line: [fda.gov/drugs](http://fda.gov/drugs) Click on ella and full prescribing information).

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