In clinical studies of the progestin-containing IUD, nearly 50 percent of the observed pregnancies were ectopic.2

Possible effects on libido

A study among healthy German female medical students found those using oral contraceptives had significantly decreased sexual desire compared to those not using hormonal contraceptives. This study confirmed the findings of a smaller U.S. based investigation.19

References

3. FDA labels for Mirena, Nuvaring, Ortho Evra, Ortho-cyclene, Seasonique.
15. FDA label, Ortho-tricyclenol, 2007 version.

Today over 100 million women are using some form of hormonal contraceptive (most are on the Pill).1 In the United States, 11 million women aged 15-44 are currently using the oral contraceptive pill; it is the most common form of birth control used in the U.S.2 and it is also now commonly used to “treat” a variety of female cycle irregularities. This is despite the truth that these are the only medications designed to take a healthy, functioning system and make it dysfunctional. Yet even with their widespread use for over 50 years, controversy continues to surround hormonal contraceptives.

Are all hormonal contraceptives the same?

No. There are many different types and forms available and manufacturers continue to develop more every year. The formulations in use today all contain 3-5 times less drug than the original forms of the Pill, so generally today’s formulation could be considered “low dose.” Broadly speaking, hormonal contraceptives fall into two classes.

Combined estrogen/progesteron preparations

These formulations use two types of artificial hormones — estrogen and progesterin — to disrupt the normal healthy functioning of a woman’s fertility:3 They are literally dozens of formulations available today; some dispense a constant level of hormone throughout the cycle, and some use varying amounts of the hormones in bio- or tri-phasics.

Furthermore, the type of progesterin used can vary. The most common forms of these preparations are:

- Oral ingested pills taken daily (i.e., Lo/Ovral, Loestrin, Yaz, Seasonal)
- Patches changed weekly (i.e., Ortho Evra)
- Vaginal ring worn 3 weeks then left out for 1 week (i.e., Nuvaring)

Progesterin-only preparations

These formulations do not contain any estrogen; rather, they have only one of several types of progesterin. The most common forms of these preparations are:

- Orally ingested pills taken daily, often called the mini-pill (i.e., Micronor, Nor-QD, Nor-A, BE, Camila, Errin)
- Injections given every three months (i.e., Depo-Provera)
- Implants worn under the skin for three years (i.e., Implanon)
- Intrauterine devices worn up to three years (i.e., Mirena)

How do they work?

Hormonal contraceptives have three recognized mechanisms to disrupt a woman’s fertility:2

- They prevent ovulation (the release of an egg from the ovary into the fallopian tube)
- They inhibit sperm migration by thickening and altering cervical mucus (making it harder for sperm and egg to meet)
- They prevent implantation of a fertilized egg into the endometrium (the lining of the uterus where the new life attaches and grows until birth)

In any given cycle, one or all of these mechanisms could be working to prevent a pregnancy. Which of these mechanisms is predominant is influenced by the type of hormonal contraceptive being used.

Combined preparations are the most effective at consistently suppressing ovulation, although in typical use an egg is released during a woman’s cycle over 8 percent of the time.4 This is known as breakthrough ovulation.

Breakthrough ovulation occurs more frequently in women on progesterin-only formulations, occurring in 30 percent to 65 percent of cycles.5 Progesterin-only formulations are more sensitive to incorrect dosing (forgetting to take a pill, or taking it at a different time of the day), therefore in typical use ovulation likely occurs more frequently. With the progesterin-

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20102011

Hormonal Contraceptives

Contraception

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Can hormonal contraceptives cause early abortions?

Yes. A new human life is formed when sperm and egg combine at the moment of fertilization. Even the then-president of the American College of Obstetrics & Gynecology said this in 1981 when testifying before the U.S. Senate on a proposed bill attempting to restrict Roe vs Wade:

“...I believe that it is realistic to assume that the IUD and the low-dose oral contraceptive pills could be considered as abortifacients.”

Unintended pregnancy rates from the use of hormonal contraceptives are lower than the known frequency of break-through ovulation so at least some of the time, pregnancy is prevented by a mechanism other than suppression of ovulation. Ectopic pregnancies occur in women using hormonal contraceptives, proving that inhibition of sperm migration is not completely effective as a primary or backup mechanism. (In clinical trials of Mirena, nearly half of the pregnancies that occurred were ectopic.) Thus, the third mechanism of action of these drugs — prevention of implantation of the fertilized egg — must be effective in at least some cycles.

Are they Safe?

Discontinuing hormonal contraceptives due to side effects is common in U.S. women; 64 percent of women who stop taking the Pill do so because of side effects, and another 13 percent stop because of worries of side effects. The most commonly reported side effects of hormonal contraception are headache, cramping, breast tenderness and bloating and/or swelling.

Beyond these complications, use of hormonal contraceptives brings increased risk of several serious complications.

Blood clots

Women who use hormonal contraception experience blood clots more frequently than women of comparable age who do not. The risk of these events varies according to the progestin used in the formulation; the most commonly used proges-
tin in U.S. formulations (Levonorgestrel) increases the risk 5-fold compared to women not using hormonal contracep-
tives, while the newer progesterins increased this risk 6-9 times depending on the specific type of clot.

RISK  (Odds Ratio)

<table>
<thead>
<tr>
<th>Type of Clot</th>
<th>Drospirenone</th>
<th>Desogestrel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk of Blood Clots by Progestin Type</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Venaous Thrombolitic Event</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Deep Venous Thrombosis</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

Stroke and heart attack

The risks of stroke and myocardial infarction (heart attack), extremely rare in young healthy women, are significantly increased among hormonal contraceptive users. Recent study found oral contraceptive users are at 1.9 times higher risk of ischemic stroke compared to non-users of childbearing age. Oral contraceptive users are also at double the risk of myocardial infarction compared to non-users.

Smoking while taking hormonal contraceptives can dramatically increase the risk of serious complications; stroke risk is tripled in contraceptive users who smoke and use of combined hormonal contraceptives by women in their twenties who also smoked increases their risk of death by about 7 times.

Cancer

In 2005 the research arm of the World Health Organization declared the combined hormonal contraceptive a human carcinogen. Use of hormonal contraceptives is associated with an increased risk of breast, cervix, and liver cancer.

Recent studies among U.S. women have shown:

• Women who started using hormonal contraceptives before age 18 have a 90 percent increased risk of any breast cancer and a 370 percent increased risk for “triple negative” breast cancer (a particularly aggressive form responsible for about 10-17 percent of all cases in the U.S.).

• Women who use contraceptives 11 years or longer are at a 210 percent increased risk of breast cancer. For perspective, this same study found smoking, a well known carcinogen, increased breast cancer risk 25 percent in the same study population.

In contrast, use of hormonal contraceptives does decrease the risk of ovarian and endometrial cancers. New cases of these cancers are 5-10 times less common in US women than breast cancer.

Other known health risks

Progestin only preparations are associated with bleeding disturbances (increased or decreased monthly bleed or irregular patterns of bleeding). The risk of ovarian cysts is higher with these formulations. Ten percent of pregnancies that occur in women using these formulations are ectopic (tubal) which itself is potentially life threatening if not treated.