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Artificial Contraception is Associated With Increased Numbers of Induced Abortions

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Abstract

Since the sexual revolution, it has been a widely accepted fact that contraceptives have been a necessity for our society. They seem to be the best way to prevent unwanted pregnancies that would otherwise result from sexual unions between two people unprepared for the commitment of raising any or additional children. It almost goes without saying that the more effective and available contraceptives become, the less likely women who wish to avoid pregnancy will become pregnant and the fewer induced abortions they will seek. In reality, the information available concerning abortions and the women who obtain them points to a different conclusion. The more effective and available contraceptives become in a society, the

more widespread the practice of induced abortions becomes. On the other hand, natural family planning has been associated with fewer induced abortions when an unplanned pregnancy results. This paper will present a sample of the information available, attempt to draw conclusions, and discuss the possible reasons that contraceptives are unavoidably linked to increasing numbers of induced abortions and that, conversely, natural family planning is associated with very few or no induced abortions.

Mechanisms and Efficacies of Family Planning Methods

Initially, the mechanisms and efficacies of six methods of artificial family planning will be presented. These include two hormonal methods (oral contraceptive pills and Depo-Provera), the intrauterine device, two barrier methods (the latex condom and the diaphragm), and sterilization (tubal ligation and vasectomy). Subsequently, the mechanisms and efficacies of two methods of natural family planning will be discussed. These include the Ovulation Method and the Sympto-Thermal Method.

Oral contraceptive pills, the most widely used hormonal form of contraception in the United States, are available as a combination of synthetic estrogen and progestogen or as progestogen alone. The primary mechanism of the combined pill is to inhibit ovulation by suppressing gonadotropins. When this suppression fails and ovulation does occur, secondary mechanisms, such as altering cervical mucus to make it impenetrable to sperm and altering the endometrial lining to make implantation unlikely after fertilization, become important.¹ The progestogen-only pill, or minipill, works not primarily by suppressing ovulation, but by altering cervical mucus and the endometrium.¹ In a comprehensive literature review, James Trussell et al. found perfect use failure rates, or method failure rates, (percent of women experiencing an unintended pregnancy in the first year of perfectly consistent and correct use) for the combined pill to be 0.1 percent. In the same review, they found typical use failure rates, or user failure rates (percent of women experiencing an accidental pregnancy in the first year of use, including inconsistent and incorrect use) for the combined pill to be 3 percent. The perfect use and typical use failure rates for the progestogen-only pill were found to be 0.5 and 3 percent, respectively.²⁻⁷ Jones and Forrest found that contraceptive failure rates were underestimated and made corrections based on underreported abortions. They compared abortion statistics published by the Alan Guttmacher Institute to the numbers of abortions reported to the Centers for Disease Control. Since the Alan Guttmacher Institute identified many more abortions than the CDC, they determined that the actual number of abortions performed in the United States was vastly

underreported (only 35 percent of the actual abortions performed were reported from 1984 to 1987).⁸ Since the data from the CDC are used in contraceptive failure research, failure to report abortions is likely to result in an underestimation of contraceptive failure.⁹ Jones and Forrest, therefore, corrected the typical use failure rates for both types of oral contraceptive pills combined to 2.8 to 26.8 percent, depending on age, race, and marital status.^{8, 10} (see table below)

Method	Perfect Use Failure Rates (%)	Typical Use Failure Rates (%)	Corrected Typical Use Failure Rates (%)
Oral Contraceptive Pills-Combined	0.1 ²⁻⁷	3 ²⁻⁷	2.8-26.8 ⁸
Oral Contraceptive Pills-Progestogen Only	0.5 ²⁻⁷	3 ²⁻⁷	2.8-26.8 ⁸
Depo Provera	—	0.3 ²⁻⁷	—
IUD (Paragard T380A)	0.8 ²⁻⁷	3 ²⁻⁷	—
Condom	2 ²⁻⁷	12 ²⁻⁷	6.4-51.3 ⁸
Diaphragm	6 ²⁻⁷	18 ²⁻⁷	9.1-42.1 ⁸
Tubal Ligation	0.2 ²⁻⁷	0.4 ²⁻⁷	—
Vasectomy	0.1 ²⁻⁷	0.15 ²⁻⁷	—
Ovulation Method of Natural FP	3 ²⁻⁷ , 0.4-1.3 ¹³	20 ²⁻⁷ , 2.1-5.4 ¹³ , 0.2 ¹⁴	—
Sympto-Thermal Method of NFP	2 ²⁻⁷	20 ²⁻⁷	—

Another hormonal contraceptive, Depo-Provera, is an injectable form of medroxyprogesterone acetate which inhibits the release of gonadotropins, thus preventing follicular maturation and ovulation. This also results in endometrial thinning, so, if ovulation does occur, implantation of the fertilized egg will be impaired. The injection must be administered every three months to remain effective.¹ Failure rates were found to be 0.3 percent.²⁻⁷

Intrauterine devices (IUDs) are T-shaped units that are inserted into the uterine cavity and release copper from their wire surfaces (Paragard T380A, GynoPharma Inc., Somerville, NJ). Proposed mechanisms of action have included impaired sperm transport, interference with fertilization, and prevention of implantation.¹ In a literature review of

IUDs, Spinnato reaffirmed that the prevention of implantation after fertilization is a major mechanism of action. This is based on the fact that there is a greater inhibition of intrauterine pregnancies compared to extrauterine pregnancies.¹¹ The perfect use and typical use failure rates for the Paragard T380A IUD are 0.8 and 3 percent, respectively.²⁻⁷

The latex condom, a barrier method of contraception, was designed to prevent sperm from entering the cervical canal. The perfect use failure rate for the condom is 2 percent, while the typical use failure rate is 12 percent.²⁻⁷ When corrected for underreported abortions, the typical use failure rate is between 6.4 percent for married women over 29 years old with income greater than 200 percent of the poverty level and 51.3 percent for married women less than 20 years old with income less than 200 percent of the poverty level.⁸

Another barrier method of contraception commonly used in the United States, the diaphragm, is a dome-shaped rubber cup that fits into the vagina between the posterior fornix and the pubic arch. Its mechanism of action is also to prevent sperm from entering the cervical canal.^{1,7} Perfect use failure rates and typical use failure rates for the diaphragm are 6 percent and 18 percent^{2-7, 12} with typical use failure rates between 9.1 and 42.1 percent when corrected for underreporting of abortions.⁸

Tubal ligation, or female sterilization, when used as a contraceptive, has a method failure rate of 0.2 percent and a user failure rate of 0.4 percent.²⁻⁷ These rates vary according to use of electrocoagulation, tubal ring, or spring clip; according to approach by minilaparotomy versus laparoscopy; and according to the skill and technique of the surgeon.³ Failure rates for vasectomy, or male sterilization, although difficult to obtain, are estimated at 0.1 percent for method failure rate and 0.15 percent for user failure rate.²⁻⁷

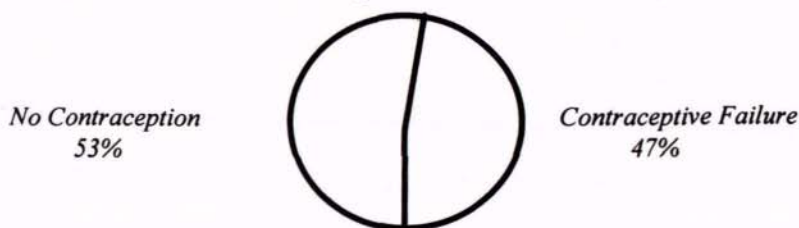
As opposed to the aforementioned artificial methods of family planning, natural family planning is a method of spacing children in which the couple determine when it is fertile. The two periodically abstain from or engage in sexual activity on fertile days, depending on their motives. There are two main types of natural family planning. With the first, the Ovulation Method, the couple monitors and charts changes in the quality of the woman's cervical mucus in terms of color, clarity, spinnbarkeit, and lubrication to determine times of fertility in her cycle. Ovulation usually occurs within three days of the last day of noted clear, stretchy, or lubricative mucus. The couple is expected to abstain from sexual intercourse during days of fertile mucus if they are trying to avoid a pregnancy. The second method, the Sympto-Thermal Method, is similar to the first, but in addition to making observations related to the quality of cervical mucus, the couple also includes measurements of basal body

temperature, texture and position of the external cervical os, and presence of mittelschmerz during ovulation as additional indicators of the couple's fertility. A unique feature of natural family planning, its ability to be used to avoid or achieve a pregnancy during any given cycle, makes it extremely difficult to compare to contraceptive methods in terms of efficacy and failure rates. Oftentimes, pregnancies that result from the couple's use of the method to achieve a pregnancy are included as method failures. Another pitfall in determining failure rates for natural family planning is that all methods of "periodic abstinence" are frequently included in one category. This means that failures with the rhythm method, a much older and less reliable method than the two previously mentioned, are included in determining failure rates for natural family planning.⁶ In the same comprehensive literature review previously described, Trussell et al. found the perfect use failure rate for the Ovulation Method to be 3 percent and the perfect use failure rate for the Sympto-Thermal Method to be 2 percent. All methods of periodic abstinence were grouped together to obtain a typical use failure rate of 20 percent.²⁻⁷ Hilgers compiled studies done from 1980 to 1994 on the effectiveness of the Creighton Model of the Ovulation Method, showing a method effectiveness after one year of use from 98.7 to 99.6 percent. This equates with a perfect use failure rate from 0.4 to 1.3 percent. These same studies showed a use effectiveness from 94.6 to 97.9 percent, or a typical use failure rate from 2.1 to 5.4 percent.¹³ A study of 19,843 predominantly poor and illiterate women in Calcutta showed a typical use failure rate of 0.2 percent.¹⁴

Outcomes of Contraceptive Failures

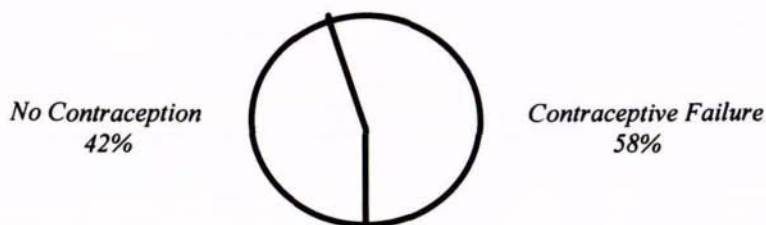
Once it has been established that unintended pregnancies do result from contraceptive failures, it is important to determine the outcomes of these pregnancies. Of the 3.67 million unintended pregnancies per year in the United States,^{15,16} 1.72 million, or 47 percent, are secondary to contraceptive failures.¹⁵ The other 53 percent, or 1.94 million unintended pregnancies are to women not using contraception. (See figure 1, below)

Figure 1. Unintended Pregnancies – 3.67 million/yr. in US



Of the 1.5 million abortions per year in the United States,¹⁷ 870,000, or 58 percent, are to women who have used a form of contraception during the month of becoming pregnant.¹⁸ The other 42 percent, or 630,000 abortions, are to women who did not experience a contraceptive failure.¹⁸ (Of note, 270,000, or 18 percent, of the total number of induced abortions are to married women, and 1.23 million, or 82 percent, are to unmarried women.¹⁸) (See figure 2, below)

Figure 2. Abortions – 1.5 million/yr. in US



Using abortion statistics from 1994-5 published by the Alan Guttmacher Institute, Henshaw and Kost determined contraceptive use reduces the probability of having an abortion by 85 percent. They created an "abortion index" which they defined as: "The ratio of the abortion rate for each subgroup to the overall abortion rate. It is calculated by dividing the proportion of abortion patients in a subgroup by the proportion of U.S. women 15-44 in that subgroup."¹⁸ Their conclusion that contraception reduces the likelihood of obtaining an abortion, however, is in error as they compared the proportion of abortion patients who had been using contraception to the proportion of U.S. women 15-44 who use contraception. Since every woman who uses contraception does not become pregnant (avoiding pregnancy is, in fact, the intended purpose of contraception), the subgroups that *should* be compared are the proportion of abortion patients who had been using contraception and the proportion of U.S. women 15-44 who use contraception *and experience an unintended pregnancy*. If *these* subgroups are used, the abortion index for women who use contraception and who experience an unintended pregnancy is 1.23, while women who do not use contraception and who experience an unintended pregnancy have an abortion index of only 0.79. Therefore, women using no method of contraception are 64 percent as likely to have an abortion as are women using contraception. Or, stated differently,

abortions for contraceptors were 1.56 times more likely than for non-contraceptors.¹⁹

Not only is the *rate of abortions* per unplanned pregnancy in contraceptors higher than in non-contraceptors, but the *overall number of abortions* is also higher in contraceptors than in non-contraceptors (870,000, or 58 percent, versus 630,000, or 42 percent).¹⁸ This is true even though contraception is purported to reduce the total number of unintended pregnancies AND the total number of induced abortions. The difference between contraceptive use and non-use is even more remarkable if one considers the fact that 1.3 million, or 89 percent, of all abortions are to women who have used some form of contraceptive method in the past (either during the month of conception or previously) while 165,000, or 11 percent, are to women who have never contracepted.¹⁸

Similar findings have been reported in other countries outside of the United States. In a study from Finland, 200 women who sought first trimester induced abortions were interviewed to determine their contraceptive history. Of the total seeking an induced abortion, 74.5 percent had been using some form of contraception during the time of conception.²⁰ A New Zealand study showed that, of 355 women seeking an induced abortion, 61 percent had been using a contraceptive method during the month of conception.²¹ Among 1521 women seeking an induced abortion in China, 71.9 percent had been using some form of contraception during the month of conception. 77.1 percent had used a contraceptive method sometime in the past.²²

Outcomes of Natural Family Planning Failures

Unfortunately, it is difficult to compare the data available for unintended pregnancies resulting from natural family planning use to that available for contraceptive failures. This is the case because none of the abortion seekers in the previously mentioned studies were questioned about their use or non-use of the Ovulation or Sympto-Thermal Methods. Users of the Ovulation Method are required to participate in "pregnancy follow-ups" if they experience a pregnancy. Although it has been observed anecdotally that very few, if any, of these women obtain an induced abortion, a more meaningful comparison could be made if the outcomes of these pregnancies were officially studied and categorized according to births versus induced abortions. Data collected from the Alan Guttmacher Institute do suggest, however, that natural family planning users who experience an unintended pregnancy are less likely to seek an induced abortion. The data show that, of women using either an oral contraceptive or an IUD who experience an unintended pregnancy, 58 percent will obtain

an abortion while 30 percent will give birth. Of women using barrier methods of contraception who experience an unintended pregnancy, 29 percent will obtain an abortion and 56 percent will give birth. Finally, of women using periodic abstinence or withdrawal who experience an unintended pregnancy, 20 percent will obtain an abortion and 56 percent will give birth.²³

Appendix A:

- U = total number of unintended pregnancies in the U.S.
= 3.67 million
- C = number of unintended pregnancies to women who contracept.
= 0.47 U
- N = number of unintended pregnancies to women who do not contracept.
= 0.53 U
- B = number of abortions in the U.S.
= 1.5 million
- AC = number of abortions to women who do contracept.
= 0.58 B
- AN = number of abortions to women who do not contracept.
= 0.42 B
- Q = contraceptive abortions/contraceptive unintended pregnancies.
= AC/C
= (0.58B)/(0.47 U)
= 1.23 (B/U)
- R = non-contraceptive abortions/non-contraceptive unintended pregnancies.
= AN/N
= (0.42 B)/(0.53 U)
= 0.79 (B/U)
- B/U = number of abortions per unintended pregnancies.
- Q/R = ratio of contraceptive abortions to non-contraceptive abortions.
= 1.56
- R/Q = ratio of non-contraceptive abortions to contraceptive abortions
= 0.64

References

1. *Physicians' Desk Reference*, Montvale, NJ: Medical Economics Data; 1998.
2. Trussell, J, RA Hatcher, W Cates, FH Stewart, and K Kost. "Contraceptive Failure in the United States: An Update," *Studies in Family Planning* 1990; 21:51-54 (January/February).
3. Trussell, J and K Kost. "Contraceptive Failure in the United States: A Critical Review of the Literature," *Studies in Family Planning* 1987; 18:248-283 (September/October).
4. Trussell, J, JA Leveque et al. "The Economic Value of Contraception: A Comparison of 15 Methods," *American Journal of Public Health* 1995; 85:494-503 (April).
5. Hatcher, RA, J Trussell et al. *Contraceptive Technology 16th Revised Edition*, New York, NY: Irvington Publishers; 1994.
6. Heath, CB, "Helping Patients Choose Appropriate Contraception," *American Family Physician* 1993; 8:1115-1124 (November 1).
7. Tafelski, T and KE Boehm. "Contraception in the Adolescent Patient," *Primary Care* 1995; 22:145-159 (March).
8. Jones, EF and JD Forrest. "Contraceptive Failure Rates Based on the 1988 NSFG," *Family Planning Perspectives*
9. Jones, EF and JD Forrest. "Contraceptive Failure in the United States: Revised Estimates from the 1982 National Survey of Family Growth," *Family Planning Perspectives* 1989; 21:103-109 (June).
10. Grady, WR, MD Hayward, and J. Yagi. "Contraceptive Failure in the United States: Estimates from the 1982 National Survey of Family Growth," *Family Planning Perspectives* 1986; 18: 200-209 (September/October).
11. Spinnato, JA. "Mechanism of Action of Intrauterine Contraceptive Devices and Its Relation to Informed Consent," *American Journal of Obstetrics and Gynecology* 1997; 176: 503-506 (March).
12. Bounds, W, J. Guillebaud, R Dominik, and BT Dalberth. "The Diaphragm With and Without Spermicide: A Randomized, Comparative Efficacy Trial," *Journal of Reproductive Medicine* 1995; 40: 764-774.
13. Hilgers, TW. *The Scientific Foundations of the Ovulation Method*, Omaha, NE: Pope Paul VI Institute Press; 1995.

14. Ghosh, AK, S Saha, G Chatterjee. "Symptothermia vis a vis Fertility Control," *Journal of Obstetrics and Gynecology of India* 1982; 32: 443-447 as seen in Ryder, REJ. "Natural Family Planning: Effective Birth Control Supported by the Catholic Church," *British Medical Journal* 1993; 307: 723-726 (October 16).
15. Forrest, JD. "Epidemiology of Unintended Pregnancy and Contraceptive Use," *American Journal of Obstetrics and Gynecology* 1994; 170: 1485-1489 (May).
16. Rosenberg, MJ, MS Waugh, S Long. "Unintended Pregnancies and Use, Misuse, and Discontinuation of Oral Contraceptives," *Journal of Reproductive Medicine* 1995; 40:355-360 (May).
17. Henshaw, SK and J Van Vort. "Abortion Services in the United States, 1991 and 1992." *Family Planning Perspectives* 1994; 26: 100-112 (May/June).
18. Henshaw, SK and K Kost. "Abortion Patients in 1994-1995: Characteristics and Contraceptive Use," *Family Planning Perspectives* 1996; 28: 140-158 (July/August).
19. For mathematical proof, see Appendix A.
20. Savonius, H, P Pakarinen, L Sjoberg, and P Kajanoja. "Reasons for Pregnancy Termination: Negligence or Failure of Contraception?" *Acta Obstetrics Gynecology Scandinavia* 1995; 74: 818-821.
21. Young, LK, CM Farquhar, LME McCowan, HE Roberts, and J Taylor. "The Contraceptive Practices of Women Seeking Termination of Pregnancy in an Auckland Clinic," *The New Zealand Medical Journal* 1994; 107: 189-192 (May 25).
22. Cheng, Y, Z Wei, L Zhimin, Z Yang, and W Aiyang. "Contraceptive Practices of Women Requesting Termination of Pregnancy: A Study from China," *Contraception* 1997; 55: 15-17.
23. Ory, HW, JD Forrest, and R Lincoln. *Making Choices: Evaluating the Health Risks and Benefits of Birth Control Methods*. New York, NY: The Alan Guttmacher Institute; 1983 as seen in Fehring, RJ, "Contraception and Abortion: Fruits of the Same Tree," *Life and Learning VI: Proceedings of the Sixth University Faculty for Life Conference* 1996; 149-162 (June).
24. Fehring, RJ. "Contraception and Abortion: Fruits of the Same Tree," *Life and Learning VI: Proceedings of the Sixth University Faculty for Life Conference* 1996; 149-162 (June).
25. Smith, JE. *The Connection Between Contraception and Abortion*, Dayton, OH: One More Soul.