LEGAL ABORTION HARMS WOMEN

Over the 40 years since *Roe v. Wade* and subsequent Supreme Court decisions have given us a policy of abortion on demand throughout the nine months of pregnancy for virtually any reason, evidence has been accumulating that legal abortion not only kills unborn human beings, but also harms women. The following is a brief review of some of this evidence.

Maternal Deaths

The U.S. Centers for Disease Control (CDC) report that 403 women died from legal abortions between 1973-2008.¹ Kevin Sherlock, an investigative reporter who examined newspaper articles and public records in county courthouses, coroners' offices and morgues, found there were 30% to 40% more abortion related maternal deaths during 1980-1989 than CDC figures indicated. Sherlock said the Health Commissioner of New York City stated he had national data indicating there were 176 abortion related deaths during 1981-1984, 419% higher than CDC figures for those years.² Mark Crutcher verified 23 deaths from legal abortion in 1992-1993 that were reported to state agencies. The CDC listed only two of these deaths.³

Using the extensive health records of Denmark, researchers David C. Reardon and Priscilla K. Coleman studied the medical records of the entire population of women in Denmark between 1962 and 1991 who were still alive in 1980.⁴ They calculated the mortality rates associated with the women's first pregnancy outcomes (delivery, miscarriage, early or late abortion). A total of 463,473 women had their first pregnancy between 1980 and 2004. Of the total, 2,238 women died. Comparing the annual mortality rates of the women during each of the first ten years following first pregnancy outcome, the authors found that, compared to women who had given birth, early and late abortions were associated with higher maternal mortality rates in each of the ten years. Compared to birth, miscarriages were associated with higher maternal mortality rates in 8 of the 10 years but were lower than mortality rates for women who had early or late abortions in 16 of 20 comparisons. The authors note that, "...compared to a first pregnancy ending in live birth, an abortion prior to 12 weeks is associated with 80% higher risk of death within the first year and a 40% higher risk of death over 10 years." In 8 of 10 years, risks for women who had abortions after 12 week's gestation were even higher than for those who had abortions prior to 12 weeks.

In a second Danish study, Coleman, Reardon and Calhoun examined the records of over one million women born between 1992 and 1993.⁵ They compared mortality rates for five groups of women: those who had never given birth, those who had one or more births only, those who had one or more abortions only, those who had one or more natural loses (e.g. miscarriages) only, and those who had some combination of the foregoing. The authors found that "... when women's year of birth was statistically controlled, compared with women who had only given birth, increased risks [of maternal death] were observed among several groups: never pregnant 644%, only induced abortion 470%, only natural loss 234%, all potential outcomes (induced abortion, natural loss and birth) 21%, combined outcomes of induced abortion and natural loss 340% and combined outcomes of induced abortion and birth 30%." Hence, while **abortion increases the risk of maternal death in all instances**, the authors note that birth anywhere in the process (prior to or after induced abortion) seems to have a suppressing effect on the mortality rate associated with induced abortion. Furthermore, the authors found a "dose effect" when the number of induced abortions were taken into account. That is, "Increased risks of death were 45%, 114% and 191% for 1,2, and 3 abortions, respectively, compared to no abortions after controlling for other reproductive outcomes and last pregnancy age."

The primary strength of these large population studies based on comprehensive reliable Danish government records is that they offer more accurate information than the data gathered by agencies such as the U.S. Centers for Disease Control which relies on information recorded on death certificates. It has been noted that the latter can miss from 50% to 73% of all pregnancy-associated maternal deaths.⁶

Two other studies involving shorter time periods and fewer women also showed that abortion is associated with a greater incidence of maternal death that is live birth. Thus a study of 15,823 Finnish women from 1987 to 2000 found that the mortality rate for those who had an induced abortion was 83.1/100,000 while it was 28.2/100,000 for those who gave birth. In a study of 173,279 low-income women in California from 1989 to 1997, it was found that those who had experienced a birth only had a mortality rate of 549.6/100,000 while those who had an abortion only had a mortality rate of 853.9/100,000. As in the second Danish study above, the American authors found that births anywhere in the pregnancy history dampened the negative effects of any abortions experienced.

Physical Health

<u>Maternal Injuries and Complications</u> Mark Crutcher documents 23 different injuries and complications (perforated uterus, bowel/intestine extraction, brain damage, etc.) suffered by 233 women having a legal surgical abortion.⁸ Fifty-three percent of these resulted in death, and many caused permanent injury (sterility, colostomy, vegetative state, etc.). These cases are just the tip of the iceberg, as abortionists often do not report problems, women having abortions are reluctant to sue, and the generally pro-choice media are unlikely to expose abortion malpractice.

A recent Finnish study covering the years 2000-2006 compared all women having a medical (drug induced) abortion (N=22,368) to those having a surgical abortion (N=20,251). The women were pregnant for 63 days or less, and were followed for just 42 days after the abortion. Overall, women undergoing medical abortions were more likely to suffer adverse complications in this time frame (20% did) than women undergoing surgical abortions (5.6% experienced complications within the 42 days). The three main complications associated with medical abortions were hemorrhage, infection and incomplete abortion. 8a

The remainder of this report discusses the consequences of surgical abortion.

<u>Breast Cancer</u> Joel Brind, Ph.D., Professor of Biology and Endocrinology at Baruch College of the City University of New York, and Angela Lafranchi, M.D., a breast cancer surgeon, have compiled a list and analysis of studies of the relationship between induced abortion and breast cancer. Since 1957, **73 epidemiological studies** (statistical studies of large populations) **have been conducted** in Asia, Europe, the Middle East and the U.S. **Seventy-eight percent of these studies report an increased risk of breast cancer for women who have abortions.** Twenty-four of the studies were conducted in the U.S., and 79% of them report an increased risk of breast cancer for women who have abortions.

Other more general data also indicate a relationship between induced abortion and breast cancer. For example, the lifetime risk of abortion for the average American woman has increased from 1 in 12 in 1970 to 1 in 7 in 2006. One study found breast cancer rates in the U.S. climbed more than 40% between the mid 1980s and 1998. Among the three age groups in the study, only the youngest generation (those under 40 in 1973, when Roe v. Wade was passed) experienced an increase in breast cancer rates. A more recent study found that between 1976 and 2009, the incidence of advanced breast cancer (which had metastasized to other parts of the body) had increased by 89.5% for women ages 25-39. Again, no other age group had a similar increase. Although these three studies demonstrate only a correlation

between abortion and breast cancer, Professor Joel Brind offers a causal explanation for the relationship: During pregnancy, the release of higher levels of estrogen in the first two trimesters cause the growth of milk-related structures in the breast called Type 1 and Type 2 lobules. By the 32nd week, the lobules mature into Type 4. If a pregnancy is terminated before 32 weeks, the immature lobules are more prone to develop cancer. If the pregnancy continues to birth, especially a first pregnancy, women are actually less likely to develop breast cancer than those who have never given birth.^{10b}

<u>Ectopic Pregnancies</u> (These implant in the Fallopian tubes, rather than the womb). In general, the incidence of ectopic pregnancies has paralleled the incidence of legal abortion in the U.S., increasing from 1970 to 1989-90, and decreasing thereafter. A specific study found that from 1970-1989, ectopic pregnancies in the U.S. increased almost fourfold, coinciding with the general increase in legal abortions. Ectopic pregnancies caused 13% of all pregnancy related maternal deaths during this period, ¹¹ and have been linked to induced abortion. ¹²

<u>Future Pregnancies</u> At least 130 studies find that induced abortion increases the risk of prematurity and low birth weight in subsequent births. Many of these studies are reviewed by Calhoun et al.¹³ A more recent analysis of 37 studies from around the world, carefully chosen for their scientific rigor, concluded that women having a first or second trimester abortion increase the risk of having a premature baby by 36%. Women having more than one abortion increase the risk of prematurity by 93 percent.¹⁴

Prematurity is the leading cause of death among newborn babies. According to the National Vital Statistics Report, babies who died of preterm-related causes accounted for 36.5% of all infant deaths in 2005. Moreover, those who survive may face lifelong problems. These include mental retardation, cerebral palsy, breathing and respiratory problems, vision and hearing loss, and feeding and digestive problems. Subsequent miscarriage is also associated with abortion. A study of over a million single births which occurred in Norway from 1967 to 1988 found that babies born prematurely were more likely to die in the first year of life, as well as during ages 1 to 5, compared to those born full term. Moreover, prematurity was linked to lower levels of education and more childlessness in both women and men followed into adulthood. Women who were preemies were more likely to give birth to preemies themselves. The prematurity was linked to give birth to preemies themselves.

Between 1980 and 2005, the preterm birth rate in the U.S. increased by 43%, coinciding with the increase in legal abortions. A recent study of over 45,500 mothers giving birth in the United States found that women with one previous abortion were 70% more likely to have a pre-term birth. This risk increased two-fold in women who had two abortions and three-fold in those who had three or more abortions. ¹⁹

Black women have an abortion rate 4.3 times as high as other ethnic groups. While they make up only about 12.5% of American females, they have some 38.2% of the abortions. Correspondingly, they are also 3 times more likely than other women to have a preterm birth before 32 weeks gestation and four times more likely to have a preterm birth before 28 weeks.²⁰

Mental Health

<u>Suicide</u> A 13-year study (1987-2000) of the entire female population of Finland aged 15-49 found the suicide rate among women who had abortions was 6 times higher than that of women who had given

birth, and twice that of women who had miscarriages.²¹ David C. Reardon studied the MediCal records of over 173,000 California women who had given birth or aborted in 1989. Women who had statefunded abortions were 2.5 times more likely to die of suicide than MediCal women who had given birth.²² A more recent U.S. study involving a nationally representative sample of 3,310 women found that those experiencing an abortion were 59% more likely to engage in suicidal ideation and 51% more likely to have attempted suicide than those not having an abortion. This study controlled for the women's age, race, education, marital status, household income and whether they had experienced violence (physical abuse, rape, other sexual assault, being mugged or held up, or threatened with a weapon). Thirty percent of the women reported that the suicidal ideation took place after their first abortion, while 23% reported their suicide attempt occurred after their abortion.²³ David Fergusson et al. studied a cohort of New Zealand women from birth to 30 years of age, and found an increased incidence of suicide and suicide ideation in post-abortive women.^{24, 25}

A report on Spanish women found that 40% of those who had abortions contemplated suicide, and that women who had abortions had a suicide rate between 6 and 7 times higher than women who gave birth.²⁶

<u>Post-Abortion Syndrome</u> Post-Abortion Syndrome is characterized by flashbacks to the abortion experience, anxiety attacks on the abortion anniversary, difficulty relating to children, and depression. Although short-term follow-up studies of abortion tend to find women are relieved, longer term studies suggest depression and other psychological problems occur.²⁷ Two large scale studies utilizing a nationally representative sample of American women found that, compared to similar women who had not had an abortion, women who had abortions were more likely to suffer from Posttraumatic Stress Syndrome (PTSD).²⁸

<u>Psychological Problems</u> Overall, at least 22 studies find a link between abortion and depression. Using the MediCal data base, and comparing 14,297 women who aborted to 40,122 women who gave birth (controlling for preexisting psychological history), Priscilla K. Coleman et al. found that rates of first-time outpatient mental health treatment for 4 years after abortion or birth were 17% higher for the abortion group. These authors cite 3 other large scale studies finding a higher incidence of psychological treatment among women who abort.²⁹

In their New Zealand study, Fergusson et al., following a birth cohort of some 530 women to age 30, and controlling for over 30 variables including pre-abortion mental health, found post-abortion women had rates of mental disorder that were about 30% higher.³⁰ A Canadian study of 41,089 women who had abortions compared to a matched sample of 39,220 women who did not have abortions found the abortion group had a 165% higher rate of hospitalization for psychiatric problems.³¹

In a study utilizing a national sample of 5,877 American women controlling for several personal, situational and demographic variables, Priscilla K. Coleman et al. found that for 12 out of 15 mental health outcomes examined, a decision to have an abortion resulted in an elevated risk for women.³² Thus, for women who had abortions the risk of alcohol abuse increased by 120%, of drug abuse by 79%, of bipolar disorder by 167%, of major depression by 45%, of panic disorders by 111%, of post-traumatic stress syndrome by 59%, and of agoraphobia (fear of crowds, public places, or open spaces) by 95%. The researchers noted that "the abortion variable made a significant independent contribution to more mental health outcomes than a history of rape, sexual abuse in childhood, physical assault in adulthood, physical abuse in childhood and neglect." On the other hand, spontaneous abortions or miscarriages had an independent effect on just 4 of the 15 psychiatric illnesses examined, indicating that abortion is more traumatic for women than a miscarriage.

A second study focusing on 3,310 women in the same nationally representative sample and controlling for socio-demographic variables and experience with violence found that women who had abortions were more 51% more likely to suffer from major depression, 67% more likely to suffer from generalized anxiety disorder, and between 3 and 4 times more likely to suffer from alcohol and substance abuse.³³ From 42% to 49% of these negative outcomes were known to have first appeared after the woman's abortion. Women who had abortions were also 61% more likely to suffer from mood disorders and social phobias, and 51-59% more likely to attempt suicide or engage in suicidal ideation, respectively. In 30% of these cases, suicidal ideation was reported to have occurred only after an abortion was experienced, which was also true of 23% of the suicidal attempts.

<u>Substance Abuse</u> At least 29 studies show a link between abortion and substance abuse. Most of these studies are cited in Reardon.³⁴ Five large scale studies have been published and include samples from the United States, New Zealand, and Australia.^{35,36} Reardon and Ney found aborting women were 5 times more likely to report later substance abuse than birthing women, and 4 times more likely than those having miscarriages.³⁷ The most recent national sample study found women experiencing abortion were 2 to 4 times more likely than those not experiencing abortion to be involved with substance abuse/dependency. The researchers were able to determine that in 42% to 49% of the cases, the substance abuse/dependence began after the abortion.³⁸

There is evidence to suggest that teens undergoing abortion may be more likely to experience more physical and psychological problems than older women. Teens are more likely to be pressured into unwanted abortions, and to undergo later-term abortions. For example, utilizing a longitudinal sample of U.S. teens, Priscilla K. Coleman found that teens who abort are 5 times more likely to seek help for psychological problems than teens who carried unwanted pregnancies to term. Coleman also found that those who aborted were more than 3 times more likely to report subsequent sleep problems and 9 times more likely to report marijuana use.³⁹

Comprehensive Summary Study In September 2011, Coleman published a comprehensive review an analysis of 22 of the world's best large studies of abortion's impact on women's mental health. Chosen for their methodological rigor, as well as sample size, the studies' results were combined in one meta-analysis, and involved 877,181 women, of which 163, 831 had experienced an abortion. Her study's overall finding was that women who had undergone an abortion experienced an 81% greater risk of mental health problems. The study also found that almost 10% of all women's mental health problems are directly linked to abortion. After taking into account such variables as demographics, exposure to violence and prior history of mental problems, Dr. Coleman found that abortion was associated with the following increased risks: anxiety disorders 34%, depression 37%, alcohol use/abuse 110%, marijuana use/abuse 220%, suicide behaviors 155%. Dr. Coleman concluded that this information should be shared with all women seeking abortion.⁴⁰

Relationship Problems

<u>With Partners</u>: In a review of 68 studies, Priscilla K. Coleman analyzed findings regarding the negative impact of abortion on partner relationships.⁴¹ Partners having abortions experience increased communication problems, domestic violence, sexual dysfunction and likelihood of separation and divorce. Post-abortion feelings of guilt, anger and grief, as well as different beliefs about the nature of abortion, and male-female differences in how these are experienced and reacted to, also put strains on the relationship. Research has also shown that inadequate pre-abortion counseling contributes to relationship problems, as does partner disagreement regarding the abortion decision.⁴²

<u>With Children</u>: As we noted above, Post-Abortion Stress Syndrome is characterized in part by difficulty relating to children. In addition, at least three studies have found, respectively, that compared to women who did not have an abortion, aborting mothers: 1) gave lower emotional support to their 1 to 4 year-olds and their 5 to 9 year-olds exhibited more behavior problems, 2) were more likely to physically abuse their children, although this was not true of mothers who had a miscarriage or stillbirth, and 3) were more likely to use physical punishment, including slapping, hitting, kicking, biting, and beating. 43,44,45

Conclusion

In evaluating these studies, we should keep in mind the difference between a correlation between variables and establishing a causal connection between them. Nevertheless, to call legal abortion "safe" for women (compared to childbirth) is surely inaccurate.

References

- 1. Karen Pazol, et al. "Abortion Surveillance—United States, 2009," *MMWR Surveillance Summaries* (Nov. 23, 2012) 61 (SS08):1-71. (On line at www.cdc.gov).
- 2. Kevin Sherlock. Victims of Choice, Akron, OH: Brennyman Books, 1996.
- 3. Jane Chastain "Anthrax, Abortion and Other Abominations" *The Life Activist*, (Nov. 2001):3-4 Denton, TX: Life Dynamics, Inc.
- 4. David C. Reardon and Priscilla K. Coleman, "Short and Long Term Mortality Rates Associated with First Pregnancy Outcome: Population Register Based Study for Denmark, 1980-2004," *Medical Science Monitor* 18 (9):71-76.
- 5. Priscilla K. Coleman et al., "Reproductive History Patterns and Long-Term Mortality Rates: A Danish, Population-Based Record Linkage Study," *The European Journal of Public Health* (Advance Access, September 5, 2012):1-6 (On line).
- 6. See David C. Reardon, et al., "Deaths Associated with Abortion Compared to Childbirth—A Review of New and Old Data and The Medical and Legal Complications," *The Journal of Contemporary Health Law & Policy* (2004) 20(2):279-327 and Byron Calhoun, "The Maternal Mortality Myth in the Context of Legalized Abortion," *The Linacre Quarterly* 80(3):264-276 (August, 2013).
- 7. See M. Gissler et al., "Pregnancy-Associated Mortality after Birth, Spontaneous Abortion or Induced Abortion in Finland, 1987-2000," *American Journal of Obstetrics and Gynecology 190* (2004):422-427 and David C. Reardon et al., "Deaths Associated with Pregnancy Outcome: A Record Linkage Study of Low Income Women," *Southern Medical Journal* 95(8):834-841 (August, 2002).
- 8. Mark Crutcher, *Lime 5*, Denton, TX: Life Dynamics, Inc., 1996.
- 8a. Maarit Niinimake, et al., "Immediate Complications after Medical Compared with Surgical Termination of Pregnancy," *Obstetrics and Gynecology* 114:4 (October, 2009):795-804.
- 9. Breast Cancer Prevention Institute, "Epidemiological Studies: Induced Abortion and Breast Cancer Risk," (Updated August 8, 2013), On line.

- 10. H.L. Howe, et al. "Annual Report to the Nation on the Status of Cancer, 1973-1998, Featuring Cancers With Increasing Trends," *Journal of the National Cancer Institute* 93(2001):824-842.
- 10a. Rebecca H. Johnson, et al., "Incidence of Breast Cancer with Distant Involvement among Women in the United States, 1976 to 2009," *JAMA* 309(8):800-805 (2013).
- 10b. Breast Cancer Prevention Institute. "Breast Cancer: Risks and Prevention," (4th edition), On line.
- 11. Tatiana E. Goldner, et al. "Surveillance for Ectopic Pregnancy United States, 1970-1989." *MMWR* Vol. 42, No. SS-6, Dec. 17, 1993.
- 12. A.A. Levin, et al. "Ectopic Pregnancy and Prior Induced Abortion," *American Journal of Public Health* 72:3 (1982):253-256.
- 13. Byron C. Calhoun et al., "Preterm Birth and Abortion," *Research Bulletin* 20:2 (Fall, 2007): 1-8, Association for Interdisciplinary Research in Values and Social Change.
- 14. P.S. Shah and J. Zao, "Induced Termination of Pregnancy and Low Birthweight and Premature Birth: A Systematic Review and Meta-Analysis," *BJOG:An International Journal of Obstetrics and Gynaecology*, (May 19, 2009) On Line.
- 15. Centers for Disease Control and Prevention, "CDC Features: Premature Births," www.cdc.gov/Features/PrematureBirth/
- 16. N. Maconochie et al., "Risk Factors for First Trimester Miscarriage—Results from a UK Population Based Case Control Study," *BJOG: An International Journal of Obstetrics and Gynaecology* 114:2 (Dec. 2006):170-186.
- 17. Geeta K. Swamy, et al. "Association of Preterm Birth with Long-Term Survival, Reproduction, and Next-Generation Preterm Birth," *Journal of the American Medical Association* (*JAMA*), 299:12 (2008):1429-1436.
- 18. Brent Rooney, et al., "Does Induced Abortion Account for Racial Disparity in Preterm Births, and Violate the Nuremberg Code?" *Journal of American Physicians and Surgeons* 13:4 (Winter, 2008):102-104.
- 19. J.S. Brown, et al., "Previous Abortion and the Risk of Low Birth Weight and Preterm Births," *Journal of Epidemiology and Community Health* 62 (2008):16-22.
- 20. Brent Rooney, et al. See reference #18.
- 21. Mika Gissler, et al., "Injury Deaths, Suicides and Homicides Associated with Pregnancy, Finland 1987-2000," *European Journal of Public Health* 15:5 (2005):459-463.
- 22. David C. Reardon, et al., "Deaths Associated with Pregnancy Outcome: A Record Linkage Study of Low Income Women," *Southern Medical Journal* 95:8 (Aug. 2002):834-841.
- 23. Natalie P. Mota, et al. "Associations Between Abortion, Mental Disorders, and Suicidal Behavior in a Nationally Representative Sample," *The Canadian Journal of Psychiatry* 55:4 (April, 2010):239-246.
- 24. David M. Fergusson, et al., "Abortion in Young Women and Subsequent Mental Health," *Journal of Child Psychology and Psychiatry* 47:1 (Jan. 2006):16-24.

- 25. David M. Fergusson, et al., "Abortion and Mental Health Disorders: Evidence from a 30-Year Longitudinal Study," *The British Journal of Psychiatry* 193:6 (Dec. 2008): 444-451.
- 26. Matthew C. Hoffman, "New Study: High Rates of Psychological Problems and Death Among Post-Abortive Women," reporting on a study by psychiatrist Carmen Gomez-Lavin of the University of Navarra, Spain, www.LifeSiteNews.com (12/17/08).
- 27. Anne C. Speckhard and Vincent M. Rue, "Post-abortion Syndrome: An Emerging Public Health Concern," *Journal of Social Issues* 48:3 (1992):95-119.
- 28. Priscilla K. Coleman, et al., "Induced Abortion and Anxiety, Mood and Substance Abuse Disorders: Isolating the Effects of Abortion in the National Comorbidity Survey," *Journal of Psychiatric Research* 42 (2008) On Line. See also reference #23.
- 29. Priscilla K. Coleman, et al., "State-Funded Abortions Versus Deliveries: A Comparison of Outpatient Health Claims over Four Years," *American Journal of Orthopsychiatry* 72:1 (2002):141-152.
- 30. David M. Fergusson, et al. See reference #25.
- 31. T. Ostbye, et al., "Health Services Utilization After Induced Abortions in Ontario: A Comparison Between Community Clinics and Hospitals," *American Journal of Medical Quality* 16 (2001):99-106. Cited in Priscilla Coleman, "Abortion Mental Health Research: Update and Quality of Evidence," *Research Bulletin* 20:2 (Spring, 2008) Association for Interdisciplinary Research in Values and Social Change.
- 32. Priscilla K. Coleman et al. See reference #28.
- 33. Natalie P. Mota, et al. See reference # 23.
- 34. David C. Reardon, et al. "Substance Use Associated with Unintended Pregnancy Outcomes in the National Survey of Youth," *The American Journal of Drug and Alcohol Abuse* 30:2 (2004):369-383.
- 35. Kaeleen Dingle et al., "Pregnancy Loss and Psychiatric Disorders in Young Women: An Australian Birth Cohort Study," *The British Journal of Psychiatry* 193 (December, 2008):455-460.
- 36. Willy Pedersen, "Abortion and Depression: A Population-Based Longitudinal Study of Young Women," *Scandinavian Journal of Public Health* 36:4 (2008):424-428. See also references #23, #25, and #29.
- 37. David C. Reardon and Philip G. Ney, Abortion and Subsequent Substance Abuse," *The American Journal of Drug and Alcohol Abuse* 26:1 (2000):61-75.
- 38. Natalie P. Mota, et al. See reference #23..
- 39. Priscilla K. Coleman, "Resolution of Unwanted Pregnancy During Adolescence Through Abortion Versus Childbirth: Individual and Family Predictors and Psychological Consequences," *Journal of Youth and Adolescence* 35:6 (December, 2006): 903-911.
- 40. Priscilla K. Coleman, "Abortion and Mental Health: Quantitative Syntheses and Analysis of Research Published 1995-2009," *The British Journal of Psychiatry* 199 (2011): 180-186.
- 41. Priscilla K. Coleman, "The Decline of Partner Relationships in the Aftermath of Abortion," *Research Bulletin* 20:1 (Winter, 2007) Association for Interdisciplinary Research in Values and Social Change.

- 42. Catherine T. Coyle, et al., "Inadequate Preabortion Counseling and Decision Conflict as Predictors of Subsequent Relationship Difficulties and Psychological Stress in Men and Women," *Traumatology*, (Nov. 16, 2009) On Line.
- 43. Priscilla K. Coleman, "The Quality of the Caregiving Environment and Child Developmental Outcomes Associated with Maternal History of Abortion Using the NLSY Data," *Journal Child Psychology and Psychiatry* 43:6 (September 2002): 743-757.
- 44. Priscilla K. Coleman, "Associations Between Voluntary and Involuntary Forms of Perinatal Loss and Child Maltreatment Among Low Income Mothers," *Acta Paediatrica* 94:10(October 2005): 1476-1483.
- 45. Priscilla K. Coleman, et al., "Induced Abortion and Child Directed Aggression among Mothers of Maltreated Children," *The Internet Journal of Pediatrics and Neonatology* 6:2 (2007).

For earlier, more comprehensive reviews of the medical literature on the dangers of legal abortion, see Thomas W. Strahan (ed.) *Detrimental Effects of Abortion*, Springfield, IL: Acorn Books, 2001, and Elizabeth Ring-Cassidy and Ian Gentles, *Women's Health After Abortion:The Medical and Psychological Evidence*, Toronto: deVeber Institute for Bioethics and Social Research, 2002. The second edition of this book is available for free downloading at www.deveber.org/text/whaa-chapters.html.

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