Childbirth as Protective of the Health of Women
in Contrast to Induced Abortion - II.
Smoking, Alcohol and Drug Use

This bibliography is the second in a series which provides evidence of the protective effects of childbirth and the detrimental effects of induced abortion on the health of women. The specific subject is smoking, alcohol and drug use.

Alcohol and Drug Abuse

Increased use of alcohol or drugs in women who have had abortions occurred in significant numbers in conjunction with the stress related to their abortion. This was reported to be an attempt to overcome nightmares or insomnia, and represented an attempt to reduce grief reactions, or to repress the abortion experience itself.

Twelve (12) studies of special populations were located which reported an increased incidence of alcohol use and/or abuse among women following induced abortion. In 6 of these 12 studies an increased incidence of drug use or abuse was also reported. Three (3) additional studies have reported significantly higher incidence of illicit drug use in postabortion women compared to childbearing women. One other study reported a significantly higher incidence in substance abuse in postabortion women compared to women with other pregnancy outcomes. Another 3 studies have reported an increasing incidence of illicit drug use as induced abortion is repeated. Two studies reported that substance abuse at the time of pregnancy decision-making was a factor in the decision for abortion.

Two randomized studies of U.S. women found a significantly increased incidence of self-reported alcohol use or substance abuse compared to women with no reported induced abortion. No studies were located claiming to demonstrate induced abortion is not associated with substance use or abuse or that induced abortion is protective.

The following studies provide some examples of the extent of alcohol or drug use where there are control or comparison groups.


A study of 253 inner-city teenage women at Boston City Hospital during 1984-1986 was undertaken to determine the incidence and risk factors for drug use. Lifetime drug use was 84% for alcohol, 62% for marijuana, and 23% for cocaine. Use in the last year was 65% for alcohol, 40% for marijuana and 17% for cocaine with slightly lower percentages of use during pregnancy. Among adolescents with no live born children there was no significant difference between drug users and non-users (79.5% vs. 80.2%), or among women with one live born child (17.0% vs. 17.7%), or among women with two or more live born children (3.5% vs. 2.1%). However, adolescents with prior elected abortion were significantly more likely to be drug users compared to non-users (33.0% vs. 16.3%). This, not only was elective induced abortion a risk factor, but women having two or more live born children had a much lower incidence of drug use.

- Continued on Page 3
Incidence of Self-Reported Substance Use Following Induced Abortion

Special Populations

- In a study of 30 women who reported being stressed by abortion, 60% stated that they had increased alcohol and drug use (both licit and illicit) after their abortion. Many reported their first heavy use to have occurred in conjunction with the stress related to the abortion.¹

- In a study of 68 women in a religiously-based postabortion support and recovery group, 37% said they had frequently used alcohol, and 48% of these women said they began drinking after their abortion experience. In the same study, 21% said they frequently used drugs, and 42.9% of these women said they began using drugs after their abortion experience.²

- In a study of 252 members of Women Exploited by Abortion (WEBA) nearly one-third stated they drank more heavily after their abortion, and 15% described themselves as becoming alcoholics; 40% said they began to use or increased the use of drugs after their abortion and 11% described themselves as becoming drug addicts.³

- In a study of 344 women receiving a variety of services at a pregnancy services center in Akron, Ohio, between 1988-1993 who reported one or more induced abortions, 17% checked drug/alcohol abuse as a postabortion psychological complaint in a questionnaire survey. A sub-group of African-American women reported 6% drug/alcohol abuse.

Random Surveys

- In a 1981 national random survey of 917 U.S. women to determine their sexual experience and drinking practices, 13% of heavy drinkers (at least one ounce of absolute alcohol per day) and 13% of moderate drinkers (.22-.99 ounces per day) reported having a non-spontaneous abortion compared to 5% of light drinkers (under .22 ounces per day) and 4% of abstainers. Overall, 6% of ever-pregnant U.S. women reported a non-spontaneous abortion.⁵

- A reproductive history survey was bulk-mailed to 4,929 U.S. women aged 24-44 in a national random survey in October, 1990. 700 completed forms were returned. Of the 700 women, 588 reported having one or more pregnancies including 152 of whom reported at least one induced abortion. The relative risk of self-reported substance abuse subsequent to a first pregnancy was 3.9 times higher in women who aborted their first pregnancy (14.6%) compared to women who reported never undergoing an induced abortion (3.6%).⁶

References

(1) Anne Speckhard, Psycho-Social Stress Following Abortion (1987) p. 51
(2) Jeanette Vought, Post-Abortion Trauma. 9 Steps to Recovery (1991) p. 111-112
(3) David Reardon, Aborted Women: Silent No More (1987) p. 23
(6) David Reardon, New Study Confirms Link Between Abortion and Substance Abuse, The Post-Abortion Review, 1(3): 1, Fall, 1993
Continued from Page 1


In a study of 679 inner-city women in 1984-86 who delivered a live-born or stillborn infant, there were 117 cocaine users and 562 non-users. Cocaine users were less likely to report no elective abortions (51% v. 67%) compared to non-users, but were more likely to report two elective abortions (19% v. 9%), or three or more elective abortions (9% v. 3%) compared to non-users.

Comment: This study demonstrates that induced abortion, and particularly repeat abortion, is a risk factor for cocaine use. Approximately two-thirds of the women using cocaine were identified as North American blacks. Drug use is a risk factor for death among young black women in the U.S. For example, in New Jersey and New York, the leading cause of death in 1987 among black women aged 15 to 44 was HIV/AIDS. Among the death certificates that included any mention of HIV/AIDS among these women, 27% also included drug abuse as a contributing factor.


In a study at the University of California, San Diego, of maternal characteristics of mothers with drug-exposed infants, it was found that mothers using heroin had a significantly greater number of abortions (2.4) compared to drug-free mothers (1.2). No differences were found in parity between heroin users compared to drug-free mothers.

Substance Abuse in Pregnant Women: Recent Experience at the Perinatal Center for Chemical Dependence of Northwestern Memorial Hospital, L.G. Keith et al, Obstet Gynecol 73:715, 1989.

A study was done of 137 drug-using women receiving prenatal care at Northwestern Memorial Hospital compared with 123 matched controls from the general obstetric population. Women using cocaine or opiates were significantly more likely to report previous abortion(s) (1.5) compared with controls (0.6). No significant differences in parity were found between women using drugs and women in the general obstetric population.


A sample of 706 women, average age 24.3 years, was studied. Most had participated in an earlier high school study of adolescents enrolled in the 10th and 11th grades in New York state high schools nine years earlier. It was found that the likelihood of current use of illicit drugs (other than marijuana) was 6.1 times higher if there was a history of prior abortion. In contrast, women with postmarital births were much less likely (0.14) to report current use of illicit drugs. See also Drug Use as a Risk Factor for Premarital Teen Pregnancy and Abortion in a National Sample of Young White Women, B. Mensch, D.B. Kandel, Demography 29(3):409, Aug., 1992.

Illicit drug use has the strongest effect of any predictor on experiencing an abortion: the odds of an abortion are nearly five times as large for premaritally pregnant white teens who used other illicit drugs as for those who did not use these drugs.

New Study Confirms Link Between Abortion and Substance Abuse, David Reardon, Elliot Institute, The Post-Abortion Review 1(3): 1, Fall, 1993.

A reproductive history survey was mailed by bulk mail to a national, random sample of 4,929 U.S. women aged 24-44 in October 1990, and 700 completed forms were returned (14.2% response rate). Of the 700 women, 588 reported a history of one or more pregnancies including 152 of whom reported having had at least one induced abortion. The relative risk of self-reported substance abuse subsequent to a first pregnancy was found to be 3.9 times higher in women who aborted their first pregnancy (14.6%) compared to women who reported never undergoing an induced abortion (3.8%) which was statistically significant.

The following two studies are among the few randomized U.S. studies on the effects of abortion. The results of one study were published in the American Journal of Public Health (APJH) in 1984. However, the APJH article did not include any data or reference to abortion although it included data and discussion of other obstetrical issues. The results of the APJH article were also summarized in leading newspapers. Subsequently, one of the authors of the study was contacted to discuss the likelihood of increased incidence of alcohol use after abortion. The author stated that data on alcohol use and abortion was included in another arti-
Article published in Archives of Sexual Behavior (an obscure journal) and provided the citation. However, the general public was denied the benefit of this important public health information.


In a random national survey of 917 U.S. women in 1981, 4% of the abstainers and 5% of lighter drinkers had a prior reported non-spontaneous abortion versus 13% for moderate drinkers, 13% for heavier drinkers and 6% for women who had ever been pregnant. Moderate and heavy drinkers combined exceeded lighter drinkers to a statistically significant degree.


In the 1981 national survey of female drinking, 17% of all women drinkers said they had driven vehicles while drunk or high at least once in the preceding year, including 27% of moderate drinkers and 45% of heavier drinkers. In the preceding year, 34% of the heavier drinkers had started fights with their husbands or partners while drinking and 11% had started fights with people outside the family. Inability to remember behavior while drinking happened to 10% of all women drinkers in the preceding year, including 36% of the heavier drinkers. In the same period, 11% of moderate drinkers and 21% of the heavier drinkers reported drinking several drinks rapidly for a quick effect. Only 7% of the heavier drinkers reported any interference with household chores or any inability to stop drinking before becoming intoxicated.

This study found that women reporting non-spontaneous abortions were significantly more likely to be heavier drinkers who were more likely to be driving while intoxicated. A study by the Insurance Institute for Highway Safety based on 1986-87 data found that each 0.02% increase in blood alcohol content nearly doubles the risk of being in a single vehicle fatal crash. The risk of a female 21-24 years of age at a blood alcohol level of 0.05%-0.09% of dying in a single vehicle accident was reported to be 35 times higher compared to a blood level of 0.00 - 0.01%. The Centers for Disease Control reported that from 1982 to 1990, the number of female drivers involved in fatal crashes increased 28%, while the number of male drivers involved in fatal crashes remained essentially unchanged.


A Scottish study of 1,008 women who consumed alcohol during pregnancy included 110 women with a prior termination of pregnancy (induced). Based upon self-reports of the women, pregnancy termination was correlated with weekly consumption and maximum day's consumption in the first trimester, and was higher compared to women who had prior spontaneous abortions, stillbirth, or who had a mentally or physically handicapped child.

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Comment: A recent Canadian study found that pregnant women who were binge drinking were significantly more likely to have had previous therapeutic abortions compared to controls. Characteristics of pregnant women who engage in binge alcohol consumption. J. Gladstone et al, Can Med Assoc. J. 156:789, March 15, 1997.


A study of 293 women admitted to the King County, Washington Detoxification Center in 1976 inquired about potentially stressful events including childbirth, miscarriage, abortion, hysterectomy and menopause. Among the women there were 154 primary alcoholics, 58 secondary alcoholics, and 81 problem drinkers. 72% of the sample had borne children and 18% had had abortions. It was found that problem drinkers and secondary alcoholics were likely to have experienced an alcohol-related problem subsequent to an abortion.

Smoking and Reproductive History

The American Cancer Society estimates that there will be 80,100 new cases of lung cancer in U.S. women in 1998 and 67,000 women will die from lung cancer in 1998. It is estimated that 1 in 18 U.S. women will develop invasive lung and bronchus cancers in their lifetime. The 5-year survival rate for lung cancer is only 14%.

Cigarette smoking is by far the most important risk factor for the development of lung cancer. Among U.S. females in 1958-60, the rate of death from lung cancer of U.S. females was only 5.5 per 100,000 population. By 1971-73, it had increased to 12.7 per 100,000 population; during the period
from 1991-93, had risen to 32.9 per 100,000 population and in 1994 was 42 per 100,000 population. In 1973 the number of deaths of U.S. females from lung cancer totaled 15,706, but had increased to 56,234 in 1993 and is estimated at 67,000 in 1998.

The relationship between cigarette smoking and induced abortion has been little studied despite its importance. Epidemiologists, in assessing the effects of induced abortion, considered smoking to be an independent factor without considering whether or not they might be related.

Researchers also have observed that postabortion women smoke more than women with other pregnancy outcomes but generally have not discussed possible reasons for the difference. However, one recent study found that women choosing childbirth will reduce smoking while those having an abortion will not. Another study has reported that postabortion anxiety was positively correlated with the incidence and level of smoking. The following studies reflect the current state of the literature.


Fifty-seven women from either Los Angeles or Montreal were interviewed during a clinic visit for a pregnancy test, subsequently received positive test results and were interviewed a second time two days later. A third interview took place a month later after the women had undergone an induced abortion or decided to carry to term. Those continuing the pregnancy reported smoking fewer cigarettes at the third interview compared to the first interview, while those aborting did not report a change in smoking behavior with time.

Comments: There is evidence in this study that reduced smoking occurred because of potential harm to the unborn child intended to be carried to term if smoking continued. Another study found that reductions in smoking and drinking during pregnancy occur because of the awareness that doing so might harm the baby. An Australian study found that this was the primary reason influencing this behavior during pregnancy. C.A. Hilton, J.T. Condon, Changes in Smoking and Drinking During Pregnancy, Aust NZ Obstet Gynaecol 29:18, 1989. A Swedish study concluded that responsibility for another being was a more important consideration in reducing or stopping smoking during pregnancy than concern about one's future health.


A study was undertaken of 363 women in Aberdeen, Scotland who underwent induced abortion up to 63 days gestation by use of mifepristone and gamemoprost pessary or vacuum aspiration. Women completed a Hospital Anxiety and Depression Scale and semantic rating scale designed to measure self-esteem both prior to and 16 days following their abortion. It was found that postabortion anxiety scores at follow-up correlated with the number of cigarettes smoked, with the most anxious women having the heaviest smoking habits.

Comments: This study is consistent with the findings of other research which has found that women frequently smoke for emotional reasons. It has been found that death anxiety is a frequent emotion in postabortion women. High levels of anxiety have been found in women reporting being stressed by abortion. Other studies have found that stress appears to increase the likelihood of smoking in pregnancy. A recent Swedish study found that pregnant smokers were likely to be unmarried, have unplanned pregnancies, and have low support from the child's father and concluded that the study supported the stress hypothesis for smoking incidence.


Hong Kong researchers studied Chinese women with two or more prior induced abortions with no other pregnancies prior to the index pregnancy compared to a control group of women with a single pregnancy carried to term. The smoking rate among the study group was 13.0% compared to...
1.4% of the control group. The pregnancies were planned for 50.9% of the study group and 55.8% of the control group; 11.6% of the study group versus 4.6% of the control group were unmarried; 3.2% of the study group had no education versus 7.7% of the control group. Third stage complications in vaginal deliveries were 2.9% retained placenta for the study group versus 0.4% for the control group; primary postpartum haemorrhage was 1.6% for the study group versus 0.8% for the control group. Among women with three or more abortions, 7.0% had retained placenta and 3.5% had primary postpartum haemorrhage.

Comments: This study reflects the difference in smoking incidence for childbearing women with a history of multiple induced abortions compared to women with no abortion history. It also is limited to a single ethnic group and has a similar percentage of planned pregnancies and married women between cases and controls.


All women between the ages of 15-34 (n=541) in a rural area in southern Sweden who were registered as living in the health care area on June 30, 1990 were studied to determine the characteristics of smokers compared with non-smokers. Smokers were significantly more likely to have prior legal abortions (19%) compared with non-smokers (9%). There were no differences between smokers and non-smokers where there were prior miscarriages or live-born children.

Outcome of First Delivery After


In a study of 4,719 Swedish women who had abortions at the University Hospital in Uppsala Hospital during 1970-1975, 207 women were identified as having a first singleton birth subsequent to a two-stage second trimester abortion using instillation followed by curettage. These women were compared to 180 parity matched controls (at least 6.6% with previous induced abortions) as well as all women in Sweden in 1975 with no induced abortion history. Women with prior second trimester abortion were significantly more likely to be 19 years of age or younger and less likely to be married compared to controls. It was found that 58.1% of women with prior second trimester abortion smoked compared with 40.3% of parity matched controls and 37.8% of controls with no induced abortion. 37.1% of women with prior second trimester abortion smoked 10 or more cigarettes per day compared to 21.1% of parity matched controls, or 18.9% of controls without induced abortion.


A study of 6,363 Swedish women in Malmo during 1963-64 found that, overall, 44% smoked during pregnancy and 97% of those smoked during the entire pregnancy. The smoking habits of women with differing pregnancy outcomes were also studied. Women with induced abortions had higher levels of smoking (56.1%) compared to women with spontaneous abortion (51.0%), women with unwanted pregnancies carried to term (52.4%), women with wanted pregnancies carried to term (41.5%), women with children without malformations and living at 1 year (42.3%), women with children having malformations and/or dead at 1 year (45.6%) and childbearing women overall (43.3%).

Comment: The most important finding of this study is that women with induced abortions had higher levels of smoking (56.1%) compared to women with unwanted pregnancies carried to term (52.4%). This raises the question as to whether induced abortion is therapeutic considering the considerable adverse health effects of smoking.


In a Yugoslavian study in 1968-69, 26.8% of women whose first pregnancy outcome was induced abortion were currently smoking compared to 9.9% among women who had carried their pregnancy to term.


In a study of 9,874 Arab and Israeli women who gave birth and who had been interviewed during pregnancy, smokers had twice the rate of reporting previous induced abortion than women who had never smoked (12% vs. 6%) based upon standardized rates.

A study on the effects of induced abor-

In a California study during 1976-78 of 2,081 women who had a history of one or more previous induced abortions compared to 4,098 matched control without a history of abortion, it was found that 11.4% of those with a history of induced abortion smoked one pack of cigarettes per day compared to 8.1% of controls which was statistically significant.


In a Washington state study of 6,542 white women who delivered a child between 1984-87, 41.6% of the women smoked during this pregnancy if they had a history of 4 or more induced abortions compared with 31.0% smokers (2 prior abortions), 28.1% smokers (1 prior abortion) or 18.0% smokers (no prior abortions).

Comment: Women with no abortion history compared to women with one reported prior abortion were virtually identical with respect to maternal age, marital status and family income, all of which may tend to influence smoking incidence. In general, as the number of abortions increased, women tended to be older and were less likely to be married.


Women patients entering Boston Hospital had smoking rates of 31.7% with no prior induced abortion, 40.3% with one prior abortion, and 51.7% with two or more prior abortions.


In a study of 679 urban women enrolled in prenatal clinics at Boston City Hospital in 1984, 88% of the cocaine users also smoked cigarettes compared to 35% of cocaine nonusers. Cocaine users were more likely to report an elective abortion (49% vs. 33%), were more likely to report two elective abortions (19% vs. 9%) or 3 or more elective abortions (9% vs. 3%) compared to cocaine nonusers.


The authors of this study reported that women who have had an induced abortion are not a random sample of the population. In general, our findings suggest that they were more likely to smoke, to have failed contraception, and to be uncertain of menstrual dates when compared with primigravidae of similar age or with women who had a previous spontaneous abortion.


In a study of 31,917 women members of Kaiser Foundation Health Plan in California during 1974-1976, it was reported that women with previous induced abortions were more likely to be unmarried, black and regular drinkers and smokers.


This review article states that the risks to patient and baby associated with smoking include miscarriage, premature birth, stillbirth, abruptio placenta and placenta previa, low birth weight, sudden infant death syndrome, neurobehavioral deficits, and susceptibility to respiratory infections during infancy.

-Compiled by Thomas W. Strahan, Editor
ASSOCIATION 1998 ANNUAL MEETING
AND PAPER SESSION

The 1998 Annual Meeting of the Association for Interdisciplinary Research in Values and Social Change will be held:

Wednesday, June 17, 1998
Hyatt Regency Orlando International Airport Hotel
Orlando, Florida
8:00 p.m. to 10:30 p.m.

The general public is invited and there is no charge to attend. Presenters are:
Keith Cassidy, PhD - Historical Aspects of the Pro-Life Movement
Michael J. Reznicek, MD - Misuse of Science to Promote Abortion
Priscilla Coleman, PhD - Adolescent and Adult Psychological Reactions to Abortion
Thomas Strahan, JD - Abortion Research on the Internet