• There is a moderate to highly increased risk of mental health problems after abortion.

A review which offers the largest quantitative estimate of mental health risks associated with abortion available in the world literature found:

Women who had undergone an abortion experienced an 81% increased risk of mental health problems, and nearly 10% of the incidence of mental health problems was shown to be attributable to abortion. The strongest subgroup estimates of increased risk occurred when abortion was compared with term pregnancy and when the outcomes pertained to substance use and suicidal behaviour.

The results showed that the level of increased risk associated with abortion varies from 34% to 230% depending on the nature of the outcome. Separate effects were calculated based on the type of mental health outcome with the results revealing the following: the increased risk for anxiety disorders was 34%; for depression it was 37%; for alcohol use/abuse it was 110%, for marijuana use/abuse it was 220%, and for suicide behaviours it was 155%. When compared to unintended pregnancy delivered women had a 55% increased risk of experiencing any mental health problem. Priscilla K. Coleman. Abortion and mental health: quantitative synthesis and analysis of research published 1995 -2009. British Journal Psychiatry 2011; 199:180-186.

One particularly significant study from New Zealand, analyzing data from a 25-year period and controlling for multiple factors both pre- and post-abortion, found conclusively that abortion in young women is associated with increased risks of major depression, anxiety disorder, suicidal behaviors, and substance dependence. This is the most comprehensive, long-term study ever conducted on the issue.

D. M. Fergusson, I. J. Horwood, and E. M. Ridder. Abortion in young women and subsequent mental health. *Journal of Child Psychology and Psychiatry* 47 (2006): 16-24.

- There is a risk of long term *physical side effects* from abortion.
 - Risk of subsequent preterm delivery

Women with a history of induced abortion are at higher risk of very preterm delivery than those with no such history (OR + 1.5, 95% CI 1.1–2.0); the risk is even higher for extremely preterm deliveries (<28 weeks). Moreau C, Kaminski M, Ancel PY, Bouyer J, et al. Previous induced abortions and the risk of very preterm delivery: results of the EPIPAGE study. *British J Obstetrics Gynaecology* 2005;112 (4):430-437.

Rooney and Calhoun reviewed studies from 1966-2003 and found 49 studies with a statistically significant risk of preterm birth after an abortion. Rooney B, Calhoun BC. Induced abortion and risk of later premature births. *J of Am Physicians and Surgeons* 2003; 8(2):46-49.

In a 2012 briefing paper, Calhoun cites 127 published studies that demonstrate a statistically significant risk of preterm birth after an abortion. He laments that despite this large body of research, the leading medical organizations for women's healthcare, including the American College of Obstetricians and Gynecologists (ACOG) in their on-line Compendium for 2011, refuse to acknowledge the increased associated risk of preterm labour or the substantial body of literature raising this concern. Byron Calhoun. "Abortion and Preterm Birth: Why Medical Journals Aren't Giving Us The Real Picture" International Organizations Research Group 2012, Briefing Paper No.9.

A nationwide record-linkage study in Finland has found that the number of prior *repeat* abortions is correlated with an increased risk of perinatal deaths and very preterm birth at first birth.

Increased odds for very preterm birth exhibit a dose-response relationship: 1.19 [95% confidence interval (CI) 0.98-1.44] after one induced abortion, 1.69 (1.14-2.51) after two and 2.78 (1.48-5.24) after three IAs.

Observational studies, however large and well-controlled, will not prove causality. Nevertheless, the researchers conclude that "In terms of public health and practical implications, health education should contain information of the potential health hazards of repeat IAs, including very preterm birth and low birthweight in subsequent pregnancies." Klemetti R, Gissler M, Niinimäki M, Hemminki E. Birth outcomes after induced abortion: a nationwide register-based study of first births in Finland. *Hum Reprod* 2012 Nov;27(11):3315-20.

Risk of breast cancer

An epidemiological study of female breast cancer incidence in eight European countries—England & Wales, Scotland, Northern Ireland, the Irish Republic, Sweden, the Czech Republic, Finland, and Denmark— found that an increase in breast cancer incidence in these countries appears to be best explained by an increase in induced abortion rates, especially nulliparous (never previously given birth) abortions. Patrick S. Carroll. The breast cancer epidemic: modeling and forecasts based on abortion and other risk factors. *Journal of American Physicians and Surgeons* 2007; 12 (3).

Breast cancer risk after induced abortion is widely denied, often on the basis of a group of studies based on prospective data. However after examining ten studies which are commonly cited to refute any link between abortion and breast cancer, Brind found:

Collectively, these studies are found to embody many serious weaknesses and flaws, including cohort effects, substantial misclassification errors due to missing information in databases, inadequate follow-up times, inadequately controlled effects of confounding variables, and frank violations of the scientific method. These recent studies therefore do not invalidate the large

body of previously published studies that established induced abortion as a risk factor for breast cancer.

Brind points to many case-control studies, based on retrospective collection of data, which have shown a statistically significant increase in breast cancer risk after induced abortion, especially before the first full-term pregnancy. Brind, J. Induced abortion as an independent risk factor for breast cancer: a critical review of recent studies on prospective data. *J Amer Phys & Surg.* 10(4):105-10. Winter 2005.

Overall

A review article in a peer reviewed journal advises that any woman contemplating their first induced abortion early in their reproductive life should also be informed of two major long-term health consequences. First, their risk of subsequent preterm birth, particularly of a very low birth weight infant, will be elevated above their baseline risk in the current pregnancy. Second, they will lose the protective effect of a full-term delivery on their lifetime risk of breast carcinoma. Increased rates of placenta previa and the disputed independent risk of induced abortion on breast cancer risk warrant mention as well. The authors conclude: "Failure to provide this information is a direct threat to maternal autonomy, diminishing a woman's ability to give informed consent." Thorp JM, Hartmann KE, Shadigian E. Long-term physical and psychological health consequences of induced abortion: review of the evidence. Obstet Gynecol Surv. 2003 Jan; 58 (1):67-79.

• Abortion is NOT, as is often claimed, safer than childbirth.

A new study of the medical records for nearly half a million women in Denmark reveals significantly higher maternal death rates following abortion compared to delivery.

By linking records from Denmark's fertility and abortion registries to death registry records, the researchers examined death rates following the first pregnancy outcome (eliminating the potential confounding effect of unknown prior pregnancy history) for all women of reproductive age in Denmark over a thirty year period. The cumulative risk for death was adjusted for maternal age and year of birth.

The adjusted odds ratios indicated that compared to a first pregnancy ending in a 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. Reardon DC, Coleman PK. Short and long term mortality rates associated with first pregnancy outcome: Population register based study for Denmark 1980-2004. *Med Sci Monit* 2012; 18(9):PH 71 – 76.

Further record-linkage analysis of Danish pregnancy outcome and mortality data across 25 years has found that a single induced abortion increases the risk of maternal death by 45 percent compared to women with no history of abortion (after controlling for other reproductive outcomes and last

pregnancy age.) Women who had two abortions were 114 percent more likely to die during the period examined, and women had three or more abortions had a 192 percent increased risk of death.

The finding that each additional abortion or other pregnancy loss contributed to a rising death rate is an indication that the observed effects are more likely to be causal than incidental.

Decreased mortality risks were observed for women who had experienced two and three or more births compared with no births. Coleman PK, Reardon DC, Calhoun BC. Reproductive history patterns and long-term mortality rates: a Danish, population-based record linkage study. *Eur J Public Health*, first published online September 5, 2012.

Record linkage studies of the population of Finland and of low income women in California have also found higher death rates associated with abortion. Gissler M, Berg C, Bouvier-Colle MH, Buekens P. Pregnancy-associated mortality after birth, spontaneous abortion or induced abortion in Finland, 1987-2000. *Am J Ob Gyn* 2004; 190:422-427; Reardon DC, Ney PG, Scheuren F, Cougle J, Coleman PK, Strahan TW. Deaths associated with pregnancy outcome: a record linkage study of low income women. *South Med J* 2002 Aug; 95(8):834-41.

The alternate view that abortion is safer than childbirth has traditionally been based on death certificates alone or on voluntary reporting to government agencies, rather than record linkage studies.