

Research Review

Abel, E.L. (1998). "Prevention of alcohol abuse-related birth effects - I: Public education efforts". *Alcohol and Alcoholism*, 33(4):411-416.

Summary – Renowned Fetal Alcohol Spectrum Disorder (FASD) researcher, Dr. Ernest Abel, in a review of the literature, indicates that awareness of the warning label has not resulted in behavioural changes. Dr. Abel also notes that:

- researchers have expressed skepticism that public education via warning labels or similar health warnings will ever have an impact on alcohol-related birth defects;
- the motivation to comply may be undermined by the fact that warning labels are non-specific and that the perceived risks of ignoring those warnings are low; and
- alcohol-related birth defects tend to be associated with drinking behaviour that has passed the voluntary stage. Drinking, in other words, that is compulsive and less responsive to passive modifications.

Dr. Abel sees labels as harmful. Labels can invoke a 'reactance' (i.e. a reaction that elicits the opposite response to what is intended), which can actually result in an increase in drinking. Because labels are non-specific, they also can lead to undue stress and anxiety during pregnancy.

Abel, Ernest et. al. (1995). "J-shaped Relationship between Drinking During Pregnancy and Birth Weight: Reanalysis of prospective epidemiological data", *Alcohol and Alcoholism*, 30(3):345-355.

Summary – This study reviews the impact of alcohol and other influences on birth weight. It concludes that important variables need to be considered in assessing alcohol's effects on the fetus, including influences of poor nutrition, caffeine, smoking, etc. The study's results, according to the researchers, supports the view that focused prevention for high risk alcohol consumers may be more effective than public health efforts aimed at all women. Warnings provoke stress and that in turn, according to the researchers, may result in stress-related physiological changes that impact on the fetus, where none may have occurred in the absence of warnings.

Duerbeck, N.B. (1997). "Foetal Alcohol Syndrome", *Comprehensive Therapy*, 23(3), 179-183.

Summary – Dr. Norman Duerbeck in his conclusions (page 182) questions whether warning labels on alcoholic beverages will have any impact on the incidence of Fetal Alcohol Syndrome (FAS). He believes that the influence of labels will have no more or less impact on FAS than cigarettes warning labels have had on the incidence of lung cancer, where, he says, the rate has risen in women.

Despite public health pronouncements on television and product labelling on the dangers of alcohol during pregnancy, Dr. Duerbeck believes that physicians, nurses, and other health care professionals are the only ones who actually make contact with

the 'at risk' mother, and that they, therefore, are the only ones who can realistically intervene via education and behaviour modification.

Hankin, Janet R. (2002). "Fetal Alcohol Syndrome Prevention Research", *Alcohol Research on Health*, 26:58-65.

Summary - Dr. Janet Hankin assesses the various Fetal Alcohol Syndrome (FAS) prevention approaches undertaken in the United States: including warning labels; selective prevention targeting those women at greatest risk (all women of child-bearing age who consume alcohol); and indicated prevention measures (women who have previously abused alcohol).

While warning labels have increased awareness over time, evidence exists that this awareness has attenuated. More importantly, results with respect to behavioural changes have been disappointing. Dr. Hankin quotes findings from the U.S. National Institute on Alcohol and Alcoholism that:

- "Unfortunately, many women continue to drink during pregnancy. Further more many of the women the label's impact on drinking during pregnancy are at the highest risk for having children with fetal alcohol syndrome and related problems. Thus, finding potent new ways to reach populations at risk and to influence changes in behaviour remains a challenge for alcohol research".

Although Hankin calls for further study on universal measures, she states that knowledge is not enough to change behaviour and that selective and indicated prevention measures may offer the best hope.

Hankin, Janet R. (1994). "FAS Prevention Strategies: Passive and Active Measures", *Alcohol Health & Research World*. 18(1), 62-66.

Summary – In this study of pregnant women, Dr. Janet Hankin, determined that although "non-risk" or lighter drinkers reduced the amount of alcohol they consumed, the decrease was small (by about .05 ounces of absolute alcohol a week or the equivalent of 1 ounce of beer). Among heavier drinkers, the amount of alcohol consumed did not change. In her conclusions (page 66) Dr. Hankin notes there is a need to go beyond warning labels. She concurs with other researchers who argue for programs tailored to intervene directly with pregnant women who are risk drinkers. "These efforts, and others like them, hold the promise for reducing the incidence of heavy drinking during pregnancy and improving birth outcomes".

Koren, Gideon et. al. (1996) "Mild Maternal Drinking and Pregnancy Outcome: Perceived versus true risks", *Clinica Chimica Acta*, 246:155-162.

Summary - Dr. Gideon Koren, Professor of Pediatrics, Pharmacology, Pharmacy, Medicine, and Medical Genetics at the University of Toronto and Director of the Motherisk Program, indicates that the Motherisk Program advises women to avoid alcohol altogether. At the same time, the issue is more complex with unplanned pregnancies. According to Dr. Koren, the retrospective advice of "do not drink during pregnancy" not only becomes impractical but also unnecessarily alarming, as it may be interpreted as if mild drinking has been proven teratogenic (causing birth defects).

Dr. Koren concludes that “it can be argued that it is safer to err on the conservative side, namely to advise that a chemical is teratogenic, even if existing, albeit incomplete, data do not support this.” However, the tradeoffs for this position are unnecessary anxiety and termination of pregnancy.”

MacKinnon, David et. al. (2000). “The Alcohol Warning and Adolescents: 5-Year Effects”, *American Journal of Public Health*, 90(10), 1589-1594.

Summary – This study examines the effects of the alcoholic beverage warning label on adolescents. While there were increases in awareness, exposure and recognition memory, these effects leveled off a few years after the introduction of the label. There was no beneficial change attributable to the warning either in beliefs or in alcohol-related behaviours.

National Institute on Alcohol Abuse and Alcoholism (NIAAA) (2000). *10th Special to the U.S. Congress on Alcohol and Health*. U.S. Department of Health and Human Services, National Institutes of Health, NIAAA, Washington: June 2000.

Summary – The NIAAA reviews research on three levels of prevention: universal approaches (i.e. warning labels); selective preventive interventions targeting women of childbearing age who drink alcohol; and indicated interventions directed at women drinking at a level likely to produce an FAS child, or who have already delivered a child with FAS.

One universal strategy is the use of warning labels. Some research has found that warning labels have a preventive effect on lighter drinkers, but not on women who are the heaviest drinkers and who thereby are at the greatest risk of bearing a child with FAS. Other studies suggest that women who are the heaviest and most long-term drinkers show the least amount of change in their drinking behaviour once they become pregnant.

In terms of other levels of prevention, the NIAAA indicates that indicated prevention approaches – that is, among the highest risk women (particularly mothers who have previously given birth to an alcohol-impaired child) would eliminate most of the existing FAS problem, because these women account for the majority of FAS cases. The NIAAA in closing notes that progress in the prevention of FAS will need to be with research that establishes baseline information about the prevalence of FAS and identifies more precisely those women who are at the highest risk of bearing an alcohol-affected FAS child.

World Health Organization (2003). *Alcohol: No other Commodity*, Oxford: 2003.

Summary - This World Health Organization (WHO) Report determines that while U.S. warning labels have had an effect on awareness and knowledge, “no direct impacts of warning labels on consumption or alcohol related problems has been reported.” Among youth, the warnings did not increase perceptions of alcohol risk, and may even have made the products more attractive to both drinkers and non-drinkers.