



# Focus on Alcohol Use During Pregnancy

Among Maryland Women Giving Birth 2001-2005

May 2007

Alcohol consumption during pregnancy increases the risk of alcohol-related birth defects, including growth deficiencies, facial abnormalities, central nervous system impairment, behavioral disorders, and impaired intellectual development.

No amount of alcohol consumption can be considered safe during pregnancy.

Alcohol can damage a fetus at any stage of pregnancy. Damage can occur in the earliest weeks of pregnancy, even before a woman knows that she is pregnant.

The cognitive deficits and behavioral problems resulting from prenatal alcohol exposure are lifelong.

Alcohol-related birth defects are completely preventable.

U.S. Surgeon General  
Advisory on Alcohol Use  
During Pregnancy, 2005

Alcohol use during pregnancy may cause a wide range of harmful effects on the developing fetus. It is the leading preventable cause of mental retardation in the United States and is also associated with many other physical, cognitive, and behavioral disabilities known collectively as Fetal Alcohol Spectrum Disorder (FASD). Adverse outcomes caused by FASD include those of Fetal Alcohol Syndrome (FAS), a disorder marked by growth deficiency, abnormal facial features, and central nervous system abnormalities. In addition to FAS, disabilities associated with FASD include mild to severe deficits in attention, intellect, impulse control, judgment, and memory. Approximately 40,000 babies are born in the U.S. every year with FASD, with the cost for their care estimated to be \$4 billion. Although the risk of FASD is increased with binge drinking and chronic drinking, no known level of alcohol at any time during pregnancy is considered safe. For this reason, the Surgeon General Advisory on Alcohol Use in Pregnancy “urges women

who are pregnant or who may become pregnant to abstain from alcohol”.

The Maryland PRAMS survey includes the following question:

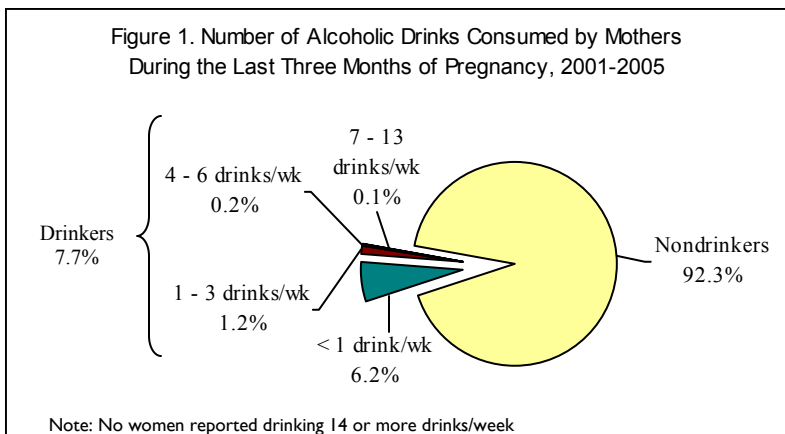
During the last 3 months of your pregnancy, how many alcoholic drinks did you have in an average week? (A drink is 1 glass of wine, wine cooler, can or bottle of beer, shot of liquor or mixed drink).

- a) I didn't drink then
- b) Less than 1 drink a week
- c) 1 to 3 drinks a week
- d) 4 to 6 drinks a week
- e) 7 to 13 drinks a week
- f) 14 drinks or more a week
- g) I don't know

For this report, a woman is considered to be a *nondrinker* if she reported 'I didn't drink then', a *light drinker* if she reported drinking 'less than 1 drink per week', and a *regular drinker* if she reported drinking one or more drinks per week.

## Prevalence of Drinking During Pregnancy

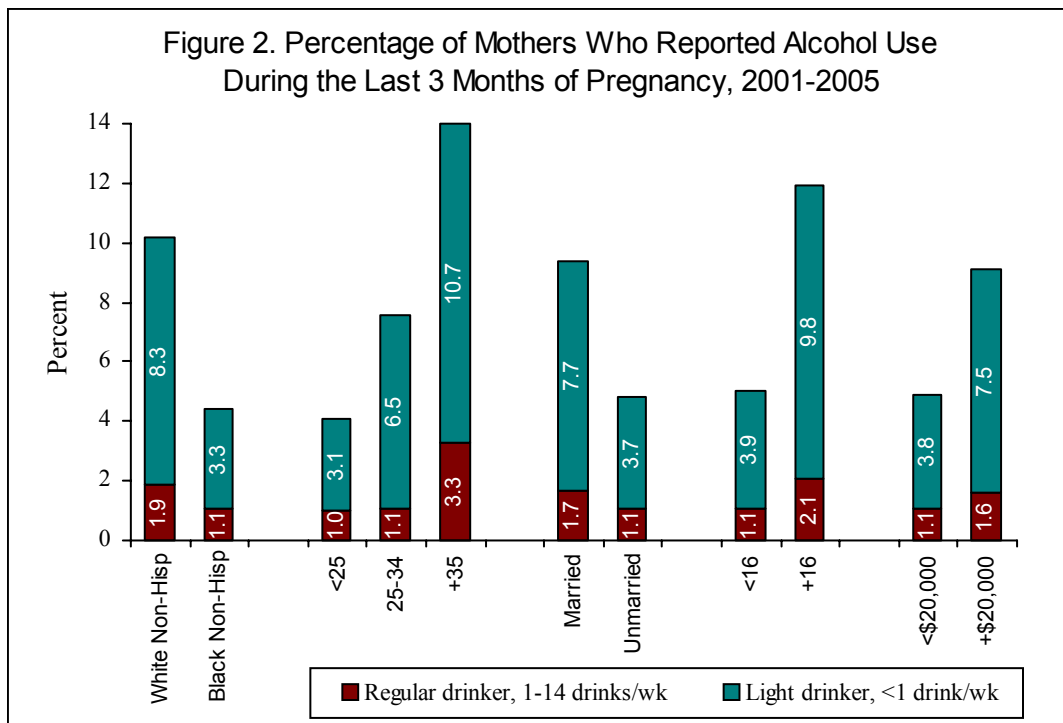
Figure 1. Number of Alcoholic Drinks Consumed by Mothers During the Last Three Months of Pregnancy, 2001-2005



Nearly 8% of women in Maryland reported drinking during the last three months of their pregnancy (Figure 1). Of those who consumed

alcohol during pregnancy, the vast majority (80%) reported that they had less than one drink per week (“light drinkers”). The remaining 20% of women who reported drinking during pregnancy consumed 1 to 13 drinks per week (“regular drinkers”). None of the women surveyed reported drinking 14 or more drinks per week.

### Maternal Factors Associated with Prenatal Alcohol Exposure

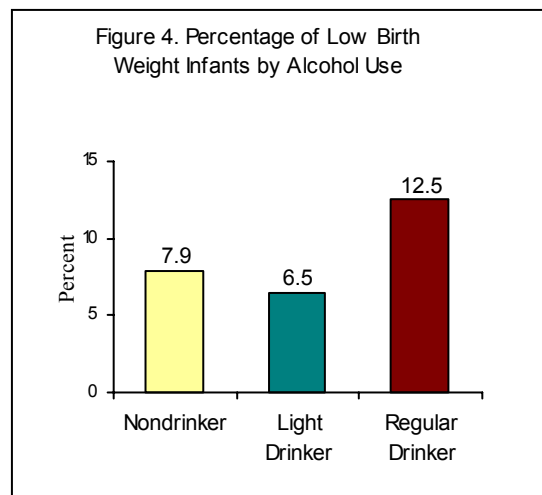
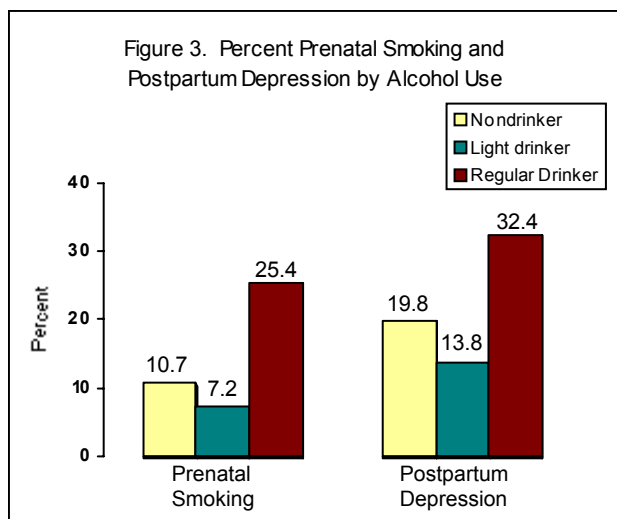


Both light and regular drinking during pregnancy were most prevalent among mothers who were 35+ years of age, college graduates, white non-Hispanic, married, and had annual incomes of \$20,000 or more (Figure 2).

One out of four regular drinkers also reported smoking during pregnancy, a rate more than double that of non-drinkers. One out of three regular drinkers reported feeling at least moderately depressed postpartum, a rate 1.6 times higher than that of non-smokers (Figure 3). Rates of preconceptional multivitamin use, unintended pregnancy, early prenatal care initiation, and breastfeeding did not vary significantly between drinkers and nondrinkers.

### Association with Low Birth Weight

Regular drinkers delivered a higher proportion of low birth weight (<2500 grams) infants than women who did not drink or were light drinkers (Figure 4).



## Binge Drinking During Pregnancy

The Maryland PRAMS survey includes the following question, “During the last 3 months of your pregnancy, how many times did you drink 5 alcoholic drinks or more in one sitting?”

Less than 1% of those surveyed reported one or more episodes of binge drinking during the last three months of pregnancy. The number of binge episodes reported ranged from 1 to 13 per week.

## Prenatal Provider Counseling About Alcohol

The Maryland PRAMS survey included the question,

“During any of your prenatal care visits, did a doctor, nurse, or other health care worker talk with you about any of the things listed below?:  
How drinking alcohol during pregnancy could affect your baby”

Thirty percent of women reported that no health care provider had spoken to them during prenatal visits about the effects of alcohol on the baby. This percentage was similar for nondrinkers and drinkers.

The Maryland PRAMS survey included the question\*,

“At any time during your prenatal care, did a doctor, nurse, or other health care worker ask if you were drinking alcoholic beverages (beer, wine, wine cooler, or liquor)?”

Nineteen percent of women reported that no health care provider had assessed whether they drank alcohol during pregnancy. This percentage did not vary significantly by nondrinkers and drinkers.

\*Note: 2001-2003 birth years only

## Summary

**Nearly 8% of Maryland mothers reported alcohol consumption during pregnancy.** Despite the substantial number of women who continue to drink during pregnancy, 30% of Maryland mothers report that they are not counseled about alcohol during their prenatal visits and 19% report that they are not asked how much they drink.

Our Maryland PRAMS data showed that regular drinking (1 or more drinks a week) during pregnancy was significantly associated with prenatal smoking, postpartum depression, and infant low birth weight.

Low birth weight infants are more likely to die or suffer serious health problems than normal weight infants.

Revisiting this analysis when additional years of data are available will further elucidate associations between maternal and infant outcomes with alcohol use, especially that of heavy and binge drinking.

The U.S. Preventive Services Task Force (USPSTF) “recommends screening and behavioral counseling interventions to reduce alcohol misuse by adults, including pregnant women, in primary care settings”. According to the U.S. Surgeon General (2005), “health professionals should inquire routinely about alcohol consumption by women of childbearing age and inform them of the risks of alcohol consumption during pregnancy, and advise them not to drink alcoholic beverages during pregnancy”. In a 1996 testimony to Congress, the Institute of Medicine stated, “Of all the substances (including cocaine, heroin, and marijuana), alcohol produces by far the most serious neurobehavioral effects in the fetus.”

*If you're pregnant, don't drink.  
If you drink, don't get pregnant.*

**“...I drank 7 times a week. I was instructed by my doc to drink one wine cooler every night to relax my cervix and to stop me from going into labor.”**

**PRAMS Mother**



**“I barely drank any alcohol...(just over) one drink per week”**

**PRAMS Mother**





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## PRAMS Methodology

Data included in this report were collected through the Pregnancy Risk Assessment Monitoring System (PRAMS), a surveillance system established by the Centers for Disease Control and Prevention (CDC) to obtain information about maternal behaviors and experiences that may be associated with adverse pregnancy outcomes.

In Maryland, the collection of PRAMS data is a collaborative effort of the Department of Health and Mental Hygiene and the CDC.

Each month, a sample of 200 Maryland women who have recently delivered live born infants are surveyed by mail or by telephone, and responses are weighted to make the results representative of all Maryland births.

This report is based on the responses of 7,513 Maryland mothers who delivered live born infants between January 30, 2001 and November 29, 2005 and were surveyed two to six months after delivery.

## Limitations of Report

The Maryland PRAMS data on binge drinking and heavy (>3 drinks/week) chronic drinking is currently limited due to small numbers in these categories. This, in turn, limits our analysis of heavy or binge drinking and its impact on various maternal behaviors and infant outcomes. For factors such as time of initiation of prenatal care, daily use of multivitamin, duration of breastfeeding, timing of pregnancy, intention of pregnancy, physical abuse, premature births, and other morbidities or life stressors, more data is needed for heavy and binge drinkers in order

to make a meaningful comparison with non-drinkers and light drinkers. The addition of several more years of data will likely yield more comprehensive associations with prenatal alcohol exposure.

This report presents only basic associations between risk factors and pregnancy intention. Interrelationships among variables are not described, and could explain some of the findings of the study. A retrospective survey such as PRAMS is also subject to recall bias.

## Resources

FASD (Fetal Alcohol Spectrum Disorder), Center for Excellence  
 Substance Abuse and Mental Health Services Administration (SAMHSA); U.S. Dept of Health and Human Services  
[www.fascenter.samhsa.gov](http://www.fascenter.samhsa.gov) 866-STOPFAS (786-7327)

Maryland Fetal Alcohol Spectrum Disorder Coalition  
[www.FASDMD.org](http://www.FASDMD.org) 410-767-6713

National Association Against Fetal Alcohol Syndrome (NOFAS)  
[www.NOFAS.org](http://www.NOFAS.org) 202-785-4585/800-66NOFAS (666-6327)



Maryland Department of Health and Mental Hygiene  
 Center for Maternal and Child Health • Vital Statistics Administration

Martin O'Malley, Governor; Anthony G. Brown, Lieutenant Governor; John M. Colmers, Secretary

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