



Focus on

Alcohol Use and Binge Drinking

Among Maryland Women Giving Birth 2001-2008

April 2010*

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.

No known level of alcohol use 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 two questions:

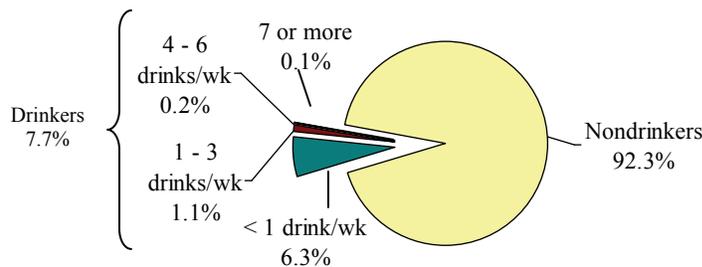
1) During the last 3 months of your pregnancy, how many alcoholic drinks did you have in an average week?

2) During the last 3 months of your pregnancy, how many times did you drink 5 alcoholic drinks or more in one sitting?

(A drink is 1 glass of wine, wine cooler, can or bottle of beer, shot of liquor or mixed drink).

Prevalence of Alcohol Use During Late Pregnancy

Figure 1. Number of Alcoholic Drinks Consumed by Mothers During the Last Three Months of Pregnancy, 2001-2008

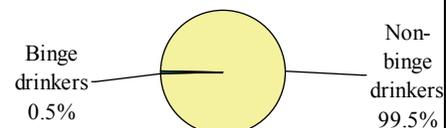


Nearly 8% of Maryland women reported drinking during the last 3 months of pregnancy (Figure 1). Of those who consumed alcohol during pregnancy, the vast majority (80%) reported that they had less than one drink per week ("light drinkers"). The remaining 20% consumed one or more drinks per week ("regular drinkers").

Prevalence of Binge Drinking During Late Pregnancy

Less than 1% of those surveyed reported one or more episodes of binge drinking, defined as five or more drinks on one occasion, during the last three months of pregnancy (Figure 2).

Figure 2. Binge Drinking During Last 3 Months of Pregnancy, 2001-2008



* Replaces May 2007 Focus on Alcohol Use

Maternal Characteristics Associated with Prenatal Alcohol Use and Binge Drinking

Figure 3. Mothers Who Reported Alcohol Use Last 3 Months of Pregnancy, 2001-2008

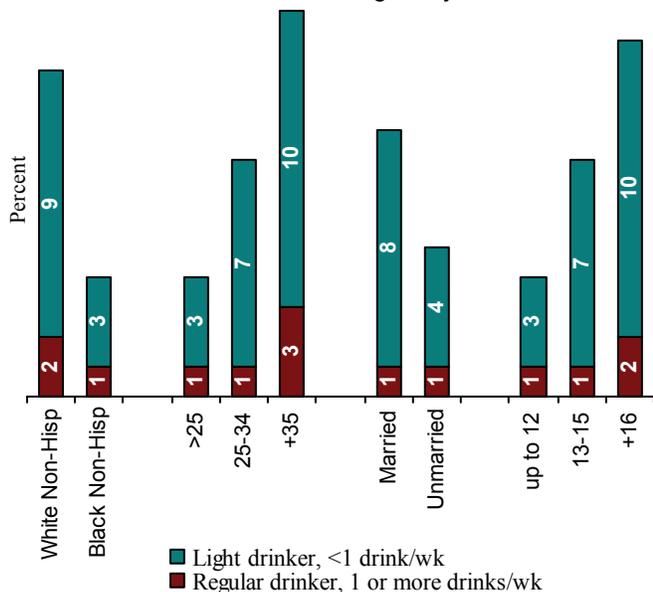
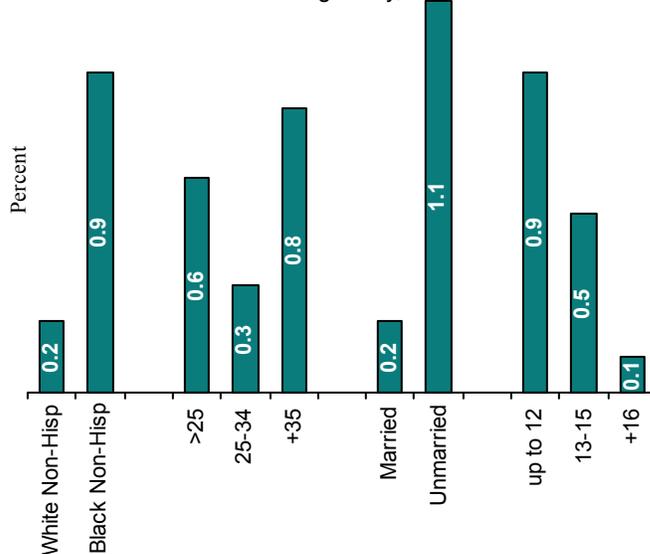


Figure 4. Mothers Who Reported Binge Drinking Last 3 Months of Pregnancy, 2001-2008



Both light and regular drinking during pregnancy were most prevalent among mothers who were 35 or more years of age, college graduates, White non-Hispanic, and married (Figure 3).

In contrast to any alcohol use, binge drinking was most prevalent among mothers who were unmarried, Black non-Hispanic and did not attend college (Figure 4).

Factors Associated with Late-Pregnancy Alcohol Use and Binge Drinking

Table 1. Perinatal Factors Associated with Late-Pregnancy Alcohol Use and Binge Drinking, Maryland 2001-2008

Factor	Self-Reported Alcohol Consumption During Last 3 Months of Pregnancy		
	None %	One or more drinks/week† %	Binge drinking Any # of times %
Folic acid, daily, month pre-pregnancy	31	28	*7
Unintended pregnancy	42	42	*66
First trimester prenatal care	76	71	*54
Tobacco use, last 3 months pregnancy	9	*25	*36
Abuse, during pregnancy	4	*10	*18
Postpartum depression	16	*28	*34
Infant low birth weight	8	*12	*17
Premature delivery	10	14	*20

† Data on <1 drink/week is not presented

* Prevalence differed significantly from non-drinkers, p<0.05

Regular alcohol use (one or more drinks/week)

Prenatal tobacco use, abuse and postpartum depression were significantly more prevalent among regular drinkers than non-drinkers. Rates of pre-conception multivitamin use, unintended pregnancy, and early prenatal care initiation did not vary significantly between regular drinkers and nondrinkers.

Binge drinking

All unhealthy behaviors (non-daily folic acid use, unintended pregnancy, prenatal care initiation after the 1st trimester, cigarette smoking, abuse, and postpartum depression) were significantly higher among binge drinkers than non-drinkers.

Delivery Outcomes

Low birth weight infants were significantly more prevalent among mothers who were regular and binge drinkers. Premature births were significantly more prevalent among mothers who binged.

Note: Confounding factors (age, race, education, income level) may be responsible for these associations.

Prenatal Provider Screening and 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”

Twenty-eight 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 (2001-2003 only) 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.

“...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



Summary

Nearly 8% of Maryland mothers reported alcohol consumption during pregnancy. Although a substantial number of women continued to drink during pregnancy, 30% of Maryland mothers reported that they were not counseled about alcohol during their prenatal visits and 19% reported that they were not asked how much they drank.

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.

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.*

“They said I could have a drink after the 3rd trimester...”

“My ob/gyn did not speak to me about alcohol ... because she knows my religious beliefs.”

PRAMS Mothers





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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 12,611 Maryland mothers who delivered live born infants between January 30, 2001 and December 31, 2008 and were surveyed two to nine months after delivery.

Limitations of Report

The Maryland PRAMS data on binge drinking and heavy (7 drinks/week) 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 866-STOPFAS (786-7327)

Maryland Fetal Alcohol Spectrum Disorder Coalition
www.FASDMD.org 410-767-6713

National Association Against Fetal Alcohol Syndrome (NOFAS)
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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