



Health Statistics and Surveillance

PREGNANCY AND ALCOHOL USE IN ALABAMA

Alcohol use by mothers during pregnancy can have serious effects on the fetus. Because of this it is important to know which mothers are more likely to drink alcohol so that intervention efforts to reduce the prevalence of drinking and its adverse effects can be more effectively focused.

Alcohol is a known teratogen, meaning that it can produce birth defects in fetuses before birth. Researchers have found a wide range of effects of alcohol on the fetus. The effects vary by the amount of alcohol and when during the pregnancy the alcohol was consumed by the mother. Drinking early in pregnancy can have serious effects because this is the period when most of the fetus' major organs develop.

Drinking in binges (five or more drinks at a time) can have more serious consequences than drinking fewer drinks. Heavy drinking by the mother can cause extensive organ malformations especially in the brain. This could result in reduced intelligence and hyperactive or antisocial behavior. Alcohol is a leading cause of mental retardation and developmental delays.

In many studies, maternal alcohol use has been found to be associated with lower Intelligence Quotient (IQ) scores, behavioral problems (especially in school), and developmental delays. In infants with fetal alcohol syndrome, the child has observable birth defects (especially of the head and face), problems with the functioning of the central nervous system, and defects of major organs.

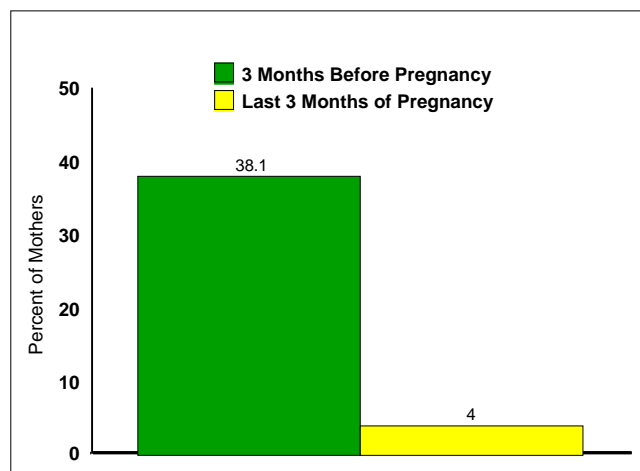
While many infants of mothers who drink appear to be perfectly healthy, no safe level of drinking during pregnancy has been found. As a result, the Surgeon General, the American College of Obstetricians and Gynecologists, and the American Academy of Pediatrics recommend that women abstain from drinking during pregnancy.

Data from the Pregnancy Risk Assessment Monitoring System (PRAMS) survey were used to assess alcohol use by pregnant women in Alabama. This ongoing survey asks new mothers whether they consumed alcoholic beverages and how much they drank in an average week during the three months prior to conception and in the last three months of pregnancy. The questionnaire also seeks to collect information on binge drinking by asking the mother how

many times she had 5 or more alcoholic drinks at one sitting in the 3 months before and in the last three months of pregnancy. Since many women, especially those with unplanned pregnancies, do not know that they are pregnant for some time after conception, it is likely that those drinking in the three months before pregnancy were also drinking in the first few weeks of pregnancy, the critical stage for fetal development.

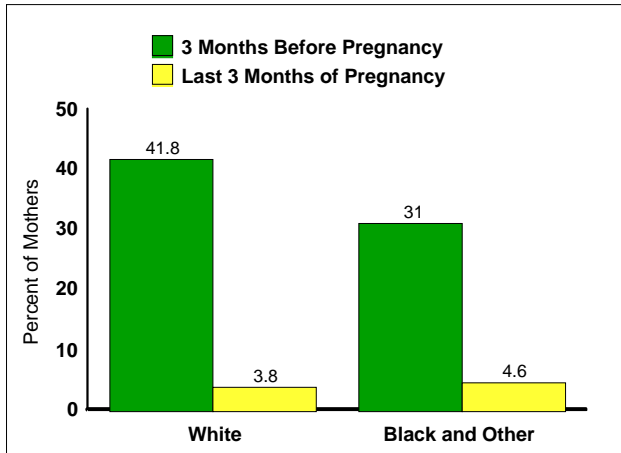
Almost 40 percent (38.1) of all new mothers indicated they drank in the three months before pregnancy. In the last three months of pregnancy, only four percent of mothers reported drinking, a decrease of nearly 90 percent. Although, it appears most mothers realize that drinking during pregnancy can have detrimental effects on their babies and curtail their consumption of alcohol, mothers of approximately 2,400 babies continued to use alcohol.

Figure 1.
Percent of Mothers Consuming Alcohol
by When Drinking Occurred
Alabama PRAMS, 1996



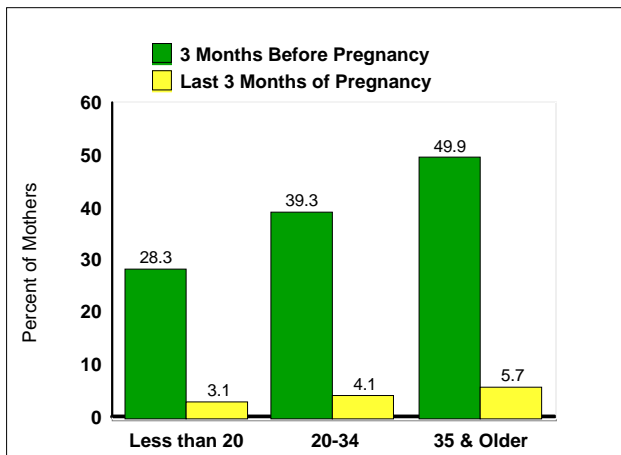
White mothers were more likely to report drinking before pregnancy than black and other race mothers. For whites, 41.8 percent reported drinking before pregnancy compared to 31 percent of black and other race mothers. However, in the last three months of pregnancy, black and other race mothers were more likely to drink than white mothers, though drinking declined significantly for both groups and the difference was not statistically significant.

Figure 2.
Percent of Mothers Consuming Alcohol
by When Drinking Occurred and Race of Mother
Alabama PRAMS, 1996



Alcohol use during both time periods increased progressively with age. Mothers 35 and older were the most likely to drink before and during pregnancy with nearly one half (49.9 percent) drinking during the three months prior to conception. Almost a third of teen mothers drank before pregnancy in spite of the fact that these mothers are too young to legally buy alcohol in Alabama. The decline in drinking during the last three months of pregnancy was constant at approximately 90 percent for all age groups.

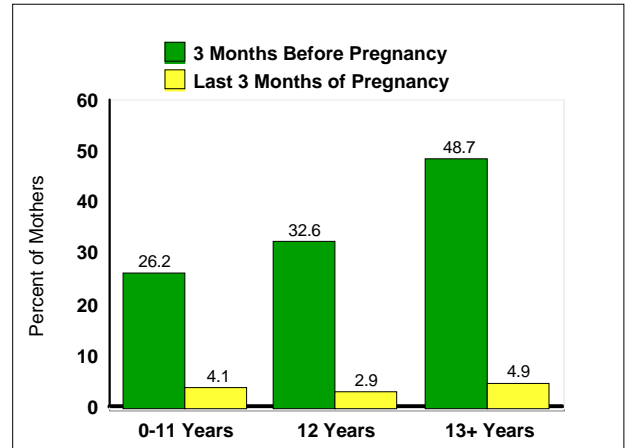
Figure 3.
Percent of Mothers Consuming Alcohol
by When Drinking Occurred and Age of Mother
Alabama PRAMS, 1996



Alcohol use also increased by educational attainment. Almost half (48.7 percent) of mothers with one or more years of college reported drinking alcohol in the three months before pregnancy with almost five (4.9) percent continuing to drink in the last three months of pregnancy.

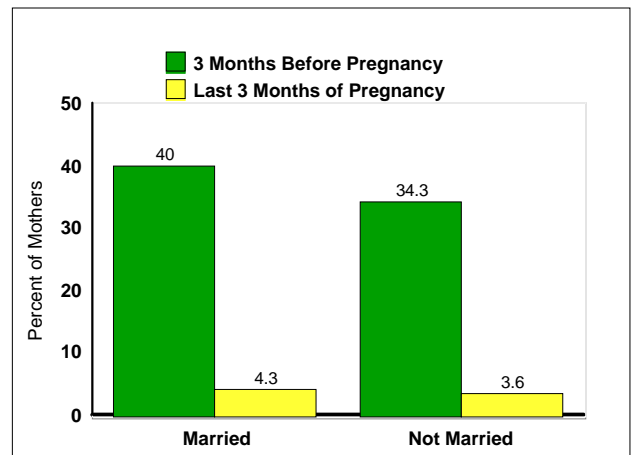
About a third of mothers with 12 years of schooling drank and over a quarter of the least educated mothers.

Figure 4.
Percent of Mothers Consuming Alcohol
by When Drinking Occurred and Educational Attainment
Alabama PRAMS, 1996



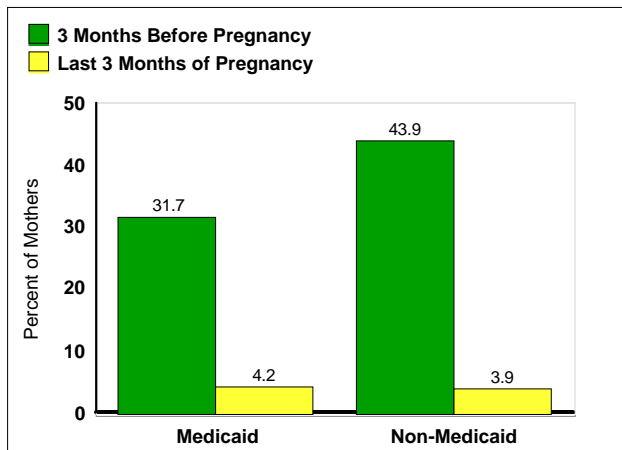
Married mothers were only slightly more likely to drink alcohol than unmarried mothers both before pregnancy and during the last three months of pregnancy.

Figure 5.
Percent of Mothers Consuming Alcohol
by When Drinking Occurred and Marital Status
Alabama PRAMS, 1996



Mothers receiving Medicaid benefits were less likely to use alcohol than mothers whose delivery was not paid for by Medicaid.

Figure 6.
Percent of Mothers Consuming Alcohol
by When Drinking Occurred and Method of Payment
Alabama PRAMS, 1996



The amount of alcohol consumed varied considerably for the two time periods. Mothers who drank three months before pregnancy were heavier drinkers than those who drank in the last three months of pregnancy and were more likely to binge drink (five or more drinks at a time). Of those who drank in the last three months of pregnancy, 74 percent reported drinking less than one drink per week compared to only 56 percent of those drinking in the three months before pregnancy. The most drinks reported per week in the last three months of pregnancy was four, while one percent of mothers drinking in the three months before pregnancy reported drinking 14 or more drinks in a week and 15.4 percent said that they drank 4-13 drinks per week. So, both the frequency and volume of drinking declined from the three months before pregnancy to the last three months of pregnancy.

Mothers were also more likely to binge drink before pregnancy than in the last three months of pregnancy; 35 percent said they had five or more drinks during a sitting one or more times in the three months before they became pregnant. Some reported as many as 15 times where they drank five or more drinks at a time. The highest number of times a mother reported consuming five or more drinks at a sitting in the last three months of pregnancy was four and only 3.6 percent of drinkers reported binge drinking in the last three months of pregnancy. Binge drinking is important because it is the leading cause of fetal alcohol syndrome.

The American College of Obstetricians and Gynecologists (ACOG) recommends that prenatal care providers discuss the effects of alcohol consumption with mothers. In 1996, 84.2 percent of mothers indicated that their prenatal care provider talked to them about the effects of drinking on their babies. Approximately, 9,000 mothers did not receive prenatal counseling about the effects of alcohol. While many of these mothers reported that they did not consume alcoholic beverages, among those who indicated that they consumed alcohol in the 3 months before pregnancy, 17.3 percent did not receive counseling about the possible effects of alcohol.

For more information on statistics related to birth contact the Center for Health Statistics, Division of Statistical Analysis at 334-206-5429. For more information on prenatal care and advice about pregnancy and its effects call the Healthy Beginnings at 1-800-545-1098.

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The following sources are also recommended for additional reading:

The National Institute on Alcohol Abuse and Alcoholism. 1997. The Ninth Special Report to the U. S. Congress on Alcohol and Health from the Secretary of Health and Human Services. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.

Carol Bruce, Melissa Adams, Holly Shulman and Louise Martin. Alcohol Use Before and During Pregnancy. *American Journal of Preventive Medicine* 1993, vol 9(5): 267-273.

Committee on Substance Abuse and Committee on Children with Disabilities. Fetal Alcohol Syndrome and Fetal Alcohol Effects. *Pediatrics* 1993, vol. 91(5):1004-1006.

Paul Sampson, Fred Bookstein, Helen Barr, and Ann Streissguth. Prenatal Alcohol Exposure, Birthweight, and Measures of Child Size from Birth to Age 14 Years. *American Journal of Public Health* 1994, vol. 84(9):1421-1428.

TECHNICAL NOTES

The Pregnancy Risk Assessment Monitoring System (PRAMS) is an ongoing population based surveillance system which collects information on maternal behaviors and attitudes during pregnancy and early infancy. Each month a stratified systematic sample with a random start is used to select approximately 200 mothers who recently had births. A total of 2,513 mothers were sampled in 1996. Of these, 1,894 surveys were completed, yielding a response rate of 75.4 percent. Analysis weights were applied to adjust for selection probability and non-response to obtain estimates for the state. The data used in this report are for calendar year 1996. Since the data are from a sample, they are subject to sampling error. For example, 38.1 percent of mothers drank before pregnancy with a standard error of 1.48. The percent of mothers consuming alcohol in the last three months of pregnancy was 4.0 with a standard error of 0.60. The PRAMS project is funded under a grant from the Centers for Disease Control and Prevention, cooperative agreement number U50/CCU407103-06.

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