National population-based studies suggest a strong correlation between alcohol consumption (particularly heavy drinking) and tobacco use. In a 2005 United States study, 60.6 percent of heavy drinkers aged 12 or older (defined as drinking at least five drinks on the same occasion, on at least five days in the previous 30 days) smoked cigarettes in the previous month. In contrast, only 20.4 percent of non-binge drinkers (binge use was defined as drinking at least five drinks on the same occasion at least once in the previous 30 days) and 16.7 percent of people who did not drink alcohol in the previous month were current smokers.

Tobacco use and heavy alcohol use are associated with a number of health problems. Heavy drinkers are at increased risk of alcohol-related liver disease, injury, neurological problems, hypertension, stroke, and gynecological problems. Smokers are at increased risk of cancer, cardiovascular disease, and chronic and obstructive lung disease. The concurrent use of alcohol and tobacco enhances the risk of certain cancers, particularly those of the oral cavity.

Pregnant women are advised to abstain from using alcohol and tobacco. Alcohol use during pregnancy is associated with fetal alcohol-related liver disease, injury, neurological problems, hypertension, stroke, and gynecological problems. Smokers are at increased risk of cancer, cardiovascular disease, and chronic and obstructive lung disease. The concurrent use of alcohol and tobacco enhances the risk of certain cancers, particularly those of the oral cavity.

The 2004 and 2005 California Women’s Health Surveys (CWHS) asked about:
- Previous 30-day alcohol consumption (included whether or not respondents drank at all, how much they drank on average, and whether or not they had ever consumed five or more drinks at one time)
- If there was “ever a time when you felt your drinking had a harmful effect on your health”
- If respondents had “ever gone to anyone – a physician, AA, a treatment agency, anyone at all – for a problem related in any way to your drinking”

Based on their answers, respondents were classified as abstainers (consumed no alcohol in the previous 30 days), moderate drinkers (consumed alcohol in the previous 30 days, but did not consume five or more drinks on at least one occasion), and binge drinkers (consumed five or more drinks on one or more occasions in the previous 30 days). A past alcohol problem was defined as reporting harm to health from drinking and seeking help for a drinking problem.

Women were also asked about tobacco use. Smoking status was classified as having smoked in the previous 30 days, being a former smoker, or never having smoked.

This report is based on 2004 and 2005 data (N = 9180) and examines the relationship between alcohol and tobacco use among women in two general areas:
- The association between smoking and current drinking or past alcohol problems

The strong correlation between binge drinking and smoking affirms the importance of ensuring that programs for treating alcohol-related problems can also address smoking, especially in programs serving pregnant and parenting women. Smoking cessation programs, particularly stage-based strategies that begin by preparing smokers to become ready to quit followed by other interventions, are promising and may enhance long-term sobriety.
Alcohol and Tobacco Use Among Pregnant and Nonpregnant Women

Highlights of the study are as follows:

**Alcohol and Tobacco Use**

- A strong relationship was found between binge drinking and tobacco use.
  - Rates of current smoking were significantly higher among binge drinkers (31.0 percent) than moderate drinkers (12.2 percent) or abstainers (9.9 percent).
  - Rates of past smoking were slightly higher among both binge drinkers (22.9 percent) and moderate drinkers (26.6 percent) compared to women who did not drink in the previous month (17.7 percent).
  - The proportion of women who had never smoked was highest among women who had not consumed alcohol in the previous month.

- An earlier examination of the 2004 CWHS data found that binge drinkers were more likely than moderate drinkers or abstainers to report past harm to their health because of drinking (34 percent vs. 17 percent and 13 percent, respectively) and to report seeking help for a drinking problem (7 percent vs. 3 percent and 2 percent).\(^\text{11}\)

- The combined 2004 and 2005 CWHS data showed that smoking rates were higher among women with indicators of alcohol-related problems.
  - Women who felt their drinking had a harmful effect on their health were more likely to be current smokers than women who reported no harmful effects from drinking (23.3 percent vs. 10.4 percent).
  - Women who felt their drinking was harmful to their health were also more likely to be former smokers (32.3 percent vs. 20.0 percent).
  - Women who had sought help for an alcohol-related problem were more likely to be current smokers than women who never sought help for an alcohol-related problem (38.5 percent vs. 11.7 percent).
  - Women who had sought help for an alcohol-related problem were also more likely to be former smokers than women who never sought help for an alcohol-related problem (32.8 percent vs. 21.7 percent).

**Alcohol and Tobacco Use During Pregnancy**

Because of the risks associated with alcohol consumption during pregnancy, the national Healthy People 2010 goal is to increase abstention during pregnancy from any alcohol use to 94 percent and from heavy drinking to 100 percent.\(^\text{12}\)

The combined 2004 and 2005 CWHS data showed:

- Most pregnant women (93.7 percent) abstained from alcohol consumption; of the remaining 6.3 percent of women, most consumed some alcohol, and some reported binge drinking in the previous 30 days. This is generally consistent with earlier data from the California Women’s Health Survey\(^\text{13}\) and similar national studies.\(^\text{14}\)

- Women who were trying to get pregnant had a similar rate of moderate drinking as women who were not trying to become pregnant (45.4 percent vs. 42.1 percent, respectively).

- Women trying to get pregnant had lower rates of binge drinking than women who were not trying to become pregnant (6.8 percent vs. 12.5 percent, respectively).
Most respondents who were pregnant reported abstaining from both alcohol and tobacco use (90.4 percent), leaving 9.6 percent of pregnant women reporting use of alcohol, tobacco or both in the previous 30 days.

No significant differences were found for alcohol and/or tobacco use in the previous month between women who were trying to become pregnant and those who were not (56.5 percent and 59.2 percent, respectively).

**Women’s Current and Past Smoking Habits by Drinking Status**

- **Abstainer**:
  - Current Smoker: 9.9%
  - Past Smoker: 17.7%
  - Never Smoked: 72.3%

- **Moderate Drinkers**: Current Smoker: 12.2%, Past Smoker: 26.6%

- **Binge Drinkers**: Current Smoker: 31.0%, Past Smoker: 22.9%
  - Never Smoked: 46.1%

Source: California Women’s Health Survey, 2004-2005

**Alcohol Consumption by Pregnancy Status**

- **Currently Pregnant**:
  - Abstainer: 93.7%
  - Drinker: 5.2%

- **Trying to get Pregnant**:
  - Abstainer: 47.8%
  - Drinker: 45.4%

- **Not Pregnant/Trying**:
  - Abstainer: 45.4%
  - Drinker: 42.1%

Source: California Women’s Health Survey, 2004-2005

**Alcohol and Tobacco Consumption in the Previous Month, by Pregnancy Status**

- **Currently Pregnant**:
  - No Smoking/Drinking: 90.4%
  - Smoking, No Drinking: 2.6%
  - Drinking, No Smoking: 6.2%

- **Trying to get Pregnant**:
  - No Smoking/Drinking: 43.4%
  - Smoking, No Drinking: 4.0%
  - Drinking, No Smoking: 7.8%

- **Not Pregnant/Trying**:
  - No Smoking/Drinking: 40.7%
  - Smoking, No Drinking: 4.4%
  - Drinking, No Smoking: 45.1%

*Estimate is not significantly different from 0.

Source: California Women’s Health Survey, 2004-2005
Alcohol and Tobacco Use Among Pregnant and Nonpregnant Women

California Department of Alcohol and Drug Programs


Submitted by: Laurie Drabble, Ph.D., California Department of Alcohol and Drug Programs and San Jose State University, School of Social Work, (408) 924-5836, ldrabble@sjsu.edu and Joan Epstein, California Cancer Registry, (916) 779-2663, JEpstein@ccr.ca.gov.