



Smoking Before, During, and After Pregnancy in Arkansas Women Who Had Live Births: PRAMS, 2009 – 2011

One out of every three women in Arkansas who had a live birth from 2009-2011 smoked three months before they got pregnant. Even worse, for the same period, one out of every five pregnant women in Arkansas smoked cigarettes during the last three months of pregnancy. Smoking before, during, and after pregnancy can cause health problems for the baby as well as problems with the pregnancy for the mother.

Smoking dramatically increases the chances that a woman will have a low birth weight baby (less than 5 ½ pounds), which is the leading cause of fetal (unborn infant) and neonatal (1 to 28 days old) death.¹ The U. S. Public Health Service has estimated that if all pregnant women quit smoking, the number of late fetal death rates would be reduced by 11% and early neonatal mortality would be reduced by 5%.²

There is a common myth about smaller babies being more desirable because they are easier to deliver and that low birth weight is not harmful to the baby. To the contrary, there are many health problems associated with low birthweight.

Effects of Smoking on Babies

Babies born to women who smoke *during* pregnancy:

- Have more problems with their lungs, heart, brain, intestines, and eyes.³
- Have a greater chance for problems such as birth defects like cleft palates.³
- Are more likely to die from sudden infant death syndrome (SIDS or crib death), the leading cause of death for infants ages 1 to 12 months.³
- Are more likely to have health and learning problems as children.³
- Are more likely to have problems with high blood pressure, diabetes, and heart disease.³
- Are more likely to be smokers as adults.⁴

Smoking is the most important preventable behavior that leads to low birthweight babies – a leading cause of infant death.

Arkansas has one of the highest rates in the United States for smoking before, during, and after pregnancy.

One-third of women smoked during the three months before getting pregnant.

One out of every five women smoked during the last three months of their pregnancy.

About one out of every four women smoked after their delivery.

Infants exposed to tobacco smoke *after* birth:

- Are more likely to suffer from asthma, lower respiratory infection (bronchitis and pneumonia), and multiple ear infections, which can cause speech and language development.
- Are more likely to die from SIDS, also known as crib death.³

Effects of Smoking on Women

Women who smoke may have a more difficult time getting pregnant than non-smokers. Also, for pregnant women, cigarette smoking increases the risk of having placenta problems such as:

- Placenta previa (low-lying placenta that covers all or part of the opening of the womb)
- Placental abruption (placenta pulls away from the womb wall).

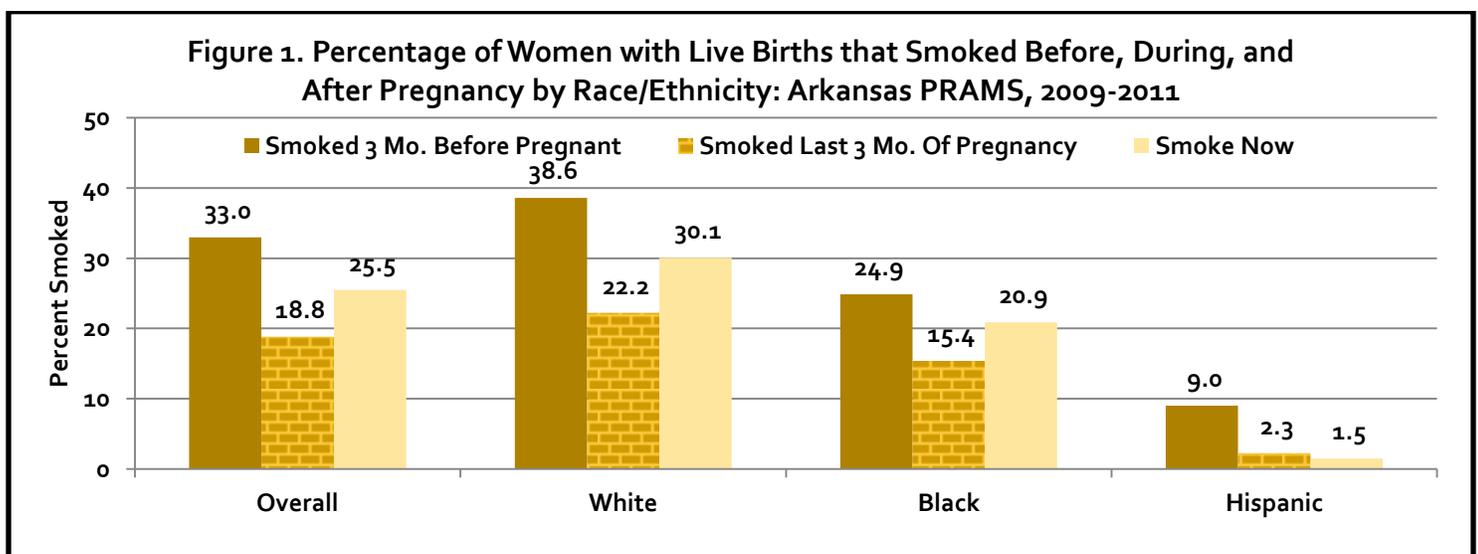
This newsletter summarizes information on women in Arkansas who smoked before, during, and after pregnancy.

Smoking Before, During and After Pregnancy in Arkansas

From 2009-2011, 1 out of every 3 women in Arkansas who had a live birth smoked 3 months before their pregnancy (Figure 1). This is one of the highest rates of the 40 states surveyed by PRAMS. Arkansas also had one of highest rates of smoking during pregnancy; nearly 1 out of every 5 pregnant women smoked during the last three months of their pregnancy. Only 43% of women surveyed stopped smoking during their pregnancy; however, half of the women who quit smoking resumed smoking after delivery.

Who smoked before, during and after pregnancy? (Figure 1).

- Overall, 33% of women smoked three months before becoming pregnant.
- Almost 19% smoked during the last three months of pregnancy.
- Almost 26% of the women smoked after their delivery. (Smoke now)
- White women were more likely than Black and Hispanic women to smoke during each of these time periods.

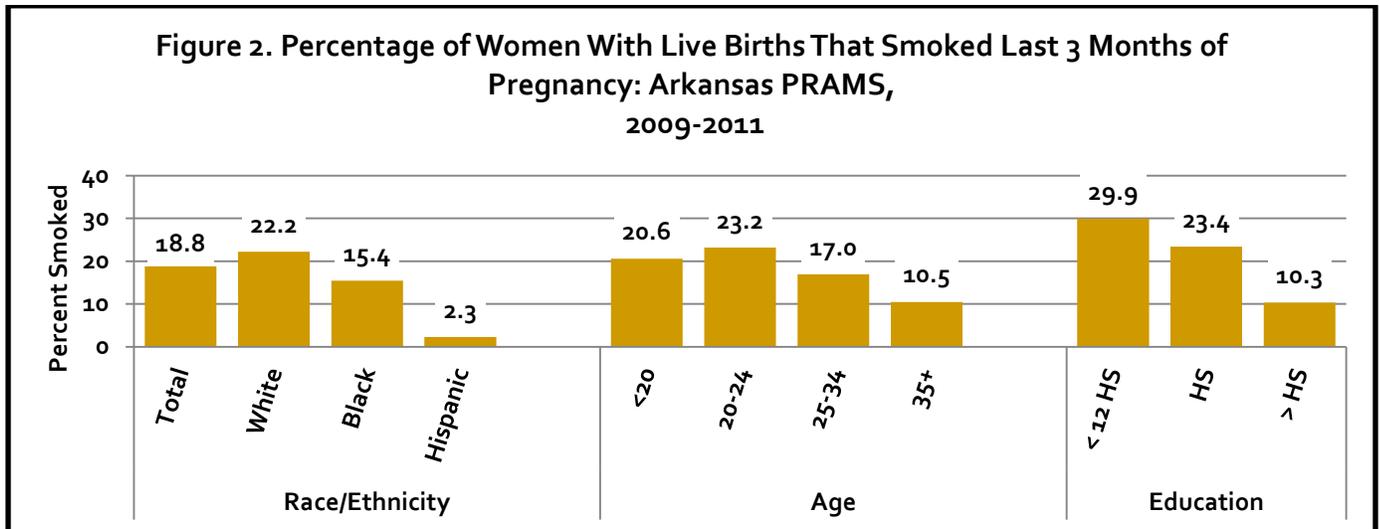


Selected characteristics of women who smoked during the last three months of pregnancy

Figure 2 below shows the characteristics of women who smoked during the last three months of pregnancy by race/ethnicity, age, and education.

During the last three months of pregnancy, the women most likely to smoke:

- Were white
- Were less than 25 years of age
- Had less than a high school education.



What moms wrote about smoking:*

“My baby boy was three pounds and twelve ounces. They said because I smoked cigarettes, which is true.”

“When I am present she [Grandma] and the 3 other smokers in the house smoke in a separate room and have the front door cracked open to let the smoke go out. I am still very uncomfortable with this.”

“I think that drs. & nurses should not just hand a brochure or pamphlet on why to not smoke, drink, or do drugs when they are pregnant. I have heard to many mothers to be tell others they smoke b/c everyone tells them their babies were fine and that marijuana doesn't hurt a baby.”

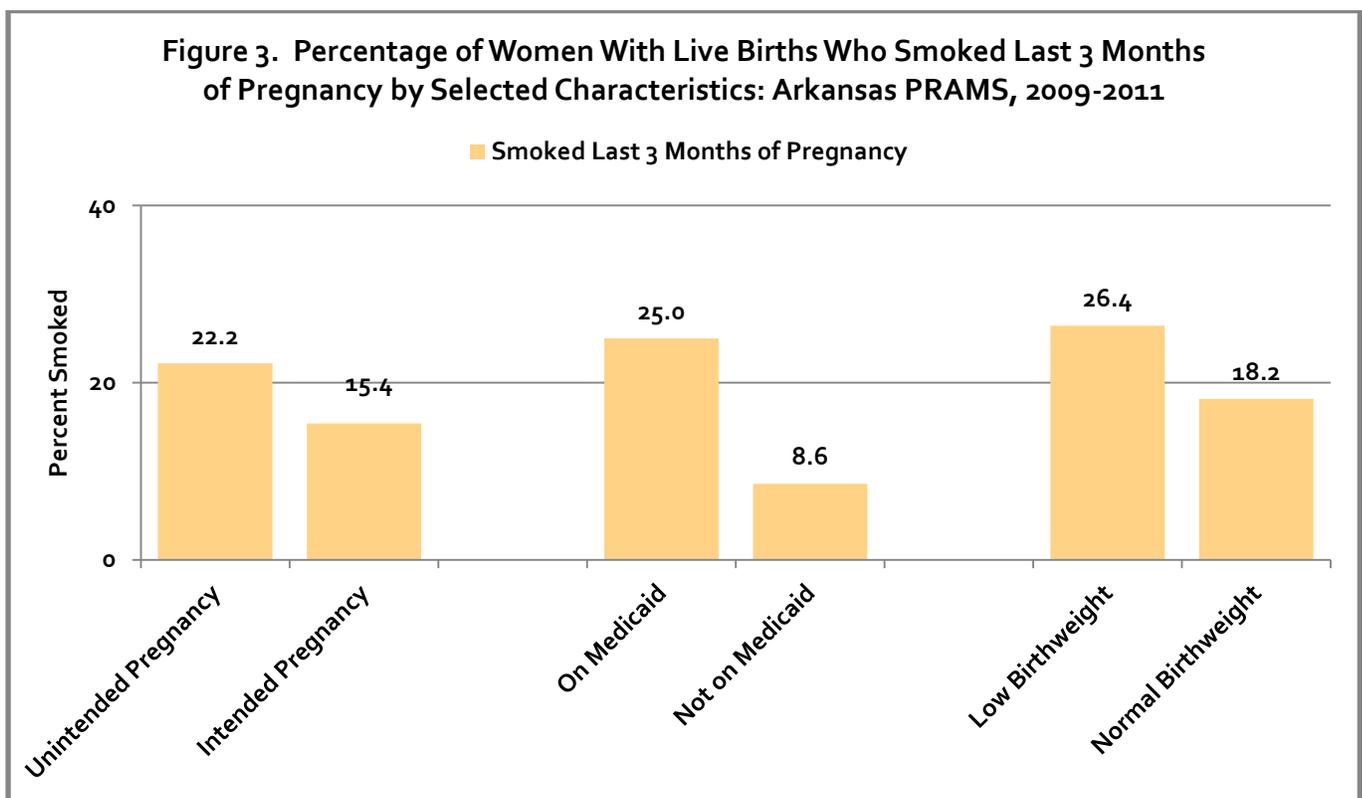
***Note: Per CDC guidelines, mothers' comments are written verbatim and without corrections.**

What is PRAMS?

The Pregnancy Risk Assessment Monitoring System (PRAMS) is an on-going, population-based surveillance system sponsored by the Centers for Disease Control and Prevention (CDC). The PRAMS survey asks mothers who recently had a live birth about maternal behaviors and experiences that occurred before, during, and after pregnancy that might affect the health of their babies. This information can be used to reduce infant deaths and help mothers to have healthier babies. For more information about PRAMS, visit the Arkansas PRAMS webpage at www.healthy.arkansas.gov/programsServices/healthStatistics/Pages/Prams.aspx or CDC's webpage at www.cdc.gov/prams.

Figure 3 shows smoking status during the last three months of pregnancy by pregnancy intention, Medicaid status, and birth weight for 2009-2011.

- Smoking rates during the last three months of pregnancy were higher for women who had unintended pregnancies (22%) than for those whose pregnancies were intended (15%). Higher smoking rates for women with unintended pregnancies is the norm. In Arkansas, this trend is especially problematic, because half of pregnancies in Arkansas are unintended (50%).
- Women on Medicaid (25%) were more likely to smoke during the last three month of pregnancy than women not on Medicaid (9%).
- The smoking rate for women with low birthweight babies (26%) was higher than that for women whose baby was not low birthweight (18%).



Women who quit smoking while pregnant

- Almost 43% of women who smoked three months before pregnancy quit by the last three months of pregnancy.
- Only 38% of women on Medicaid quit smoking by the last three months of pregnancy compared to 60% of women not on Medicaid.
- Women who stopped smoking were more likely to have incomes over \$50,000 and to be married.
- Women who quit were also less likely to have low-birth weight babies, (7%) compared to women who continued to smoke (11%).

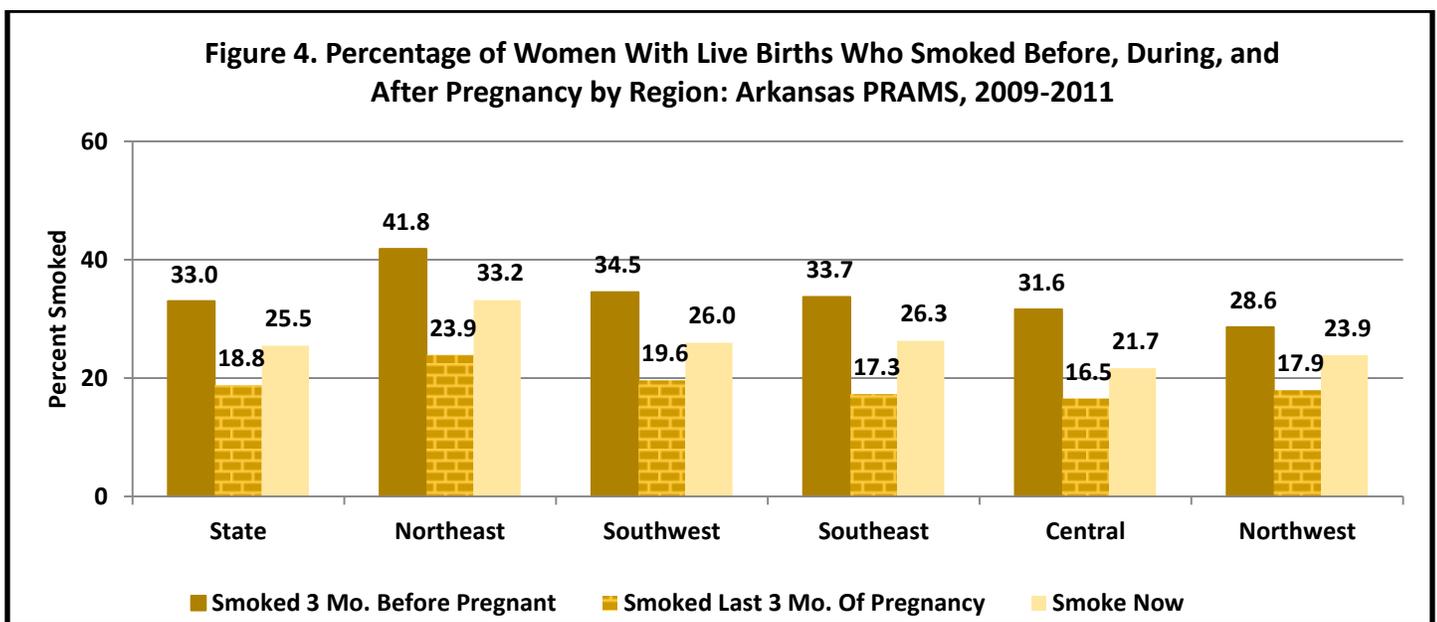
Women who quit smoking during pregnancy and resumed smoking after delivery

- About 49% of the women who quit smoking during pregnancy resumed smoking after delivery.
- Black women (62.9%) were more likely than White women (48.0%) to resume smoking after delivery.

- Of the women under 25, 58% who quit smoking during pregnancy resumed afterwards.
- Women who had a high school education or less, were more likely to resume smoking after delivery (54%) than women with more than a high school education (40%).
- Almost 60% of women with a family income of \$15,000 per year or less resumed smoking afterwards.

Women Who Smoked by Arkansas Public Health Region (Figure 4).

- Women in the Northeast region were more likely to smoke before, during, and after pregnancy than women in the other four regions.
- Women in the Central and Southeast regions were most likely to quit smoking during pregnancy (49%) (Not shown).
- The Southeast region had the highest percentage of women who resumed smoking (58%) (Not shown).

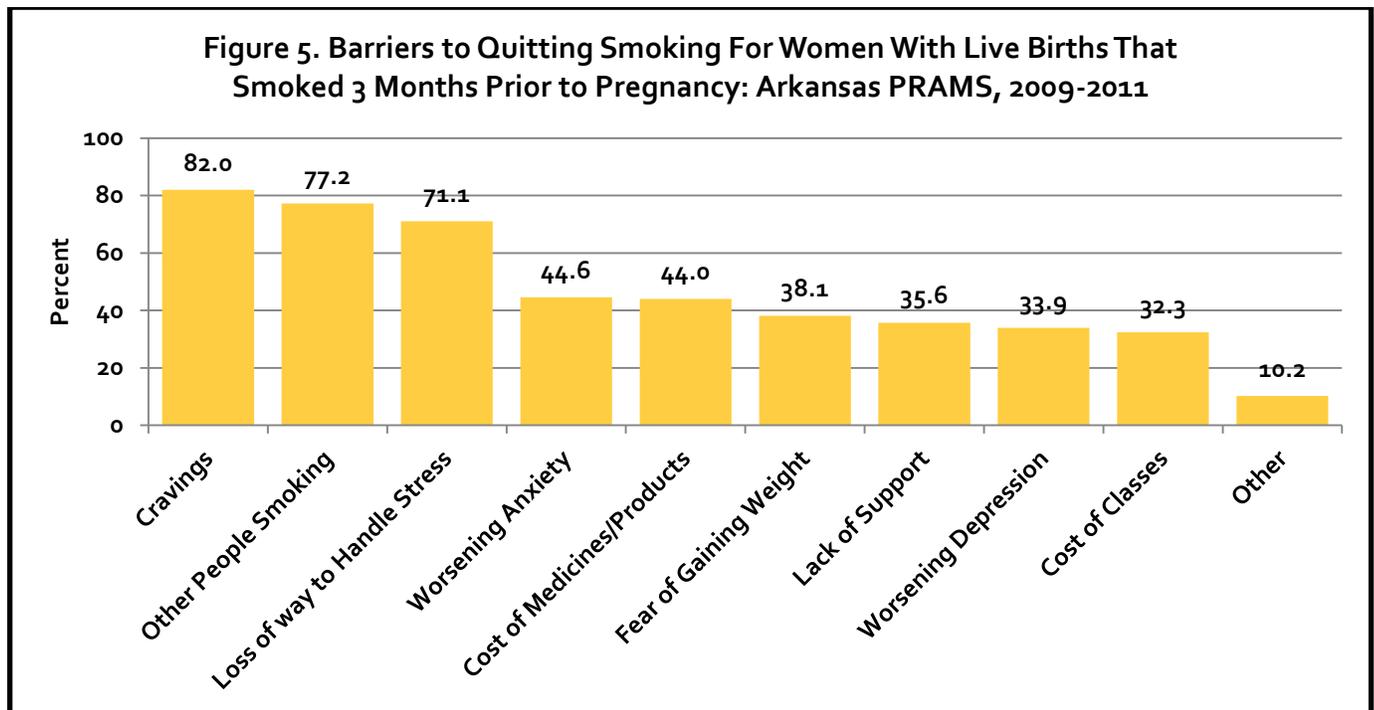


What Makes it Difficult to Quit Smoking (Figure 5)?

Women who indicated they smoked three months before pregnancy were given a list of 10 things that make it difficult to quit smoking. They were asked to check all of the reasons they felt applied to them.

The top three reasons for not being able to quit smoking were:

- Cravings for a cigarette
- Other people smoking around you
- Loss of way to handle stress



ENDS (Electronic nicotine delivery devices) including e-Cigarettes

Some women in Arkansas may be under the impression that using e-cigarettes or vaping devices during pregnancy is safe for the mother and her unborn child. This has not been proven to be true. There are now data that e-cigarettes release many of the same harmful ingredients as regular cigarettes including nicotine, cancer causing compounds, and other toxins like formaldehyde.⁵ "To protect mothers and their babies, and until such time when science proves that it is safe, it is recommended that pregnant women not use e-cigarettes or vaping devices."

Recommendations

Help pregnant women quit smoking and prevent relapse.

Clinicians should offer effective smoking cessation intervention to pregnant smokers at the first prenatal visit and throughout pregnancy, because pregnant women who have received brief smoking cessation counseling are more likely to quit smoking.

Free help and support are available for pregnant women and others who want to quit for good.

- The Arkansas Tobacco Quitline is available seven days a week, 24 hours a day. Counseling services are available from 7 a.m. to 2 a.m. Services are available in English, Spanish and additional languages as needed, including Marshallese. The Quitline number is **1-800-QUIT-NOW** (1-800-784-8669). Additional information is available at www.stampoutsmoking.com.
- Find tips on quitting smoking, visit <http://www.smokefree.gov/>
- Learn quitting tips from http://www.marchofdimes.com/pregnancy/alcohol_smoking.html

References

- ¹ Carissa Lau, Namasivayam Ambalavanan, Hrishikesh Chakraborty, Martha S. Wingate, and Waldemar A. Carlo. 'Extremely Low Birth Weight and Infant Mortality Rates in the United States.' *Pediatrics*, 2013; DOI: [10.1542/peds.2012-2471](https://doi.org/10.1542/peds.2012-2471).
- ² *The health consequences of smoking: a report of the surgeon general*. US Department of Health and Human Services, Center for Disease Control and Prevention Atlanta (GA) 2004. http://www.cdc.gov/tobacco/data_statistics/sgr/2004/pdfs/chapter5.pdf page 587.
- ³ See *Preventing Smoking and Exposure to Secondhand Smoke Before, During, and After Pregnancy* at: www.cdc.gov/nccdphp/publications/factsheets/prevention/pdf/smoking.pdf
- ⁴ U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2012.
- ⁵ Kosmider, L., Sobczak, A., Fik, M., Knysak, J., Zaciera, M., Kurek, J., Goniewicz, M. 'Carbonyl Compounds in Electronic Cigarette Vapors – Effects of Nicotine Solvent and Battery Output Voltage' *Nicotine & Tobacco Research* published May 15, 2014, doi: 10.1093/ntr/ntu078.

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