Smoking Cessation in Pregnancy

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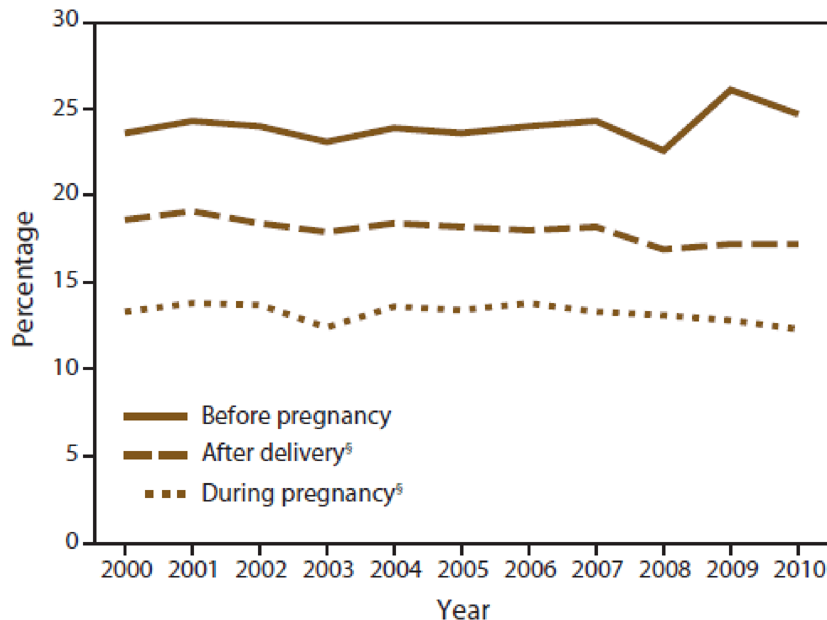
Tobacco Cessation in Pregnancy: Objective

1. Overview of the negative effects of tobacco abuse in pregnancy
2. Review behavioral counseling recommendations and for smoking cessation
3. Understand the evidence for medications in smoking cessation in pregnancy
4. Synthesize recommendations for your practice

Tobacco Abuse in Pregnancy

- The good news:
  - Rates of smoking during pregnancy are on the decline (less so for adolescents, non-Hispanic whites and American Indian women)
  - Pregnancy seems to motivate women to quit
    - Teens are more likely to quit, but also higher risk of resuming after pregnancy
    - Less likely to quit if white and no more than high school education



Tobacco Abuse in Pregnancy

- The bad news:

Risk to Pregnancy	Intrauterine growth restriction Placental abruption PPROM Preterm labor Perinatal mortality Cleft lip and palate
Risks to Children born to smokers	Asthma Acute otitis media Sudden infant death syndrome Childhood obesity

Behavioral Counseling Interventions

“The USPSTF recommends that clinicians ask all pregnant women about tobacco use, advise them to stop using tobacco, and provide behavioral interventions for cessation to pregnant women who use tobacco”

(A recommendation)

Behavioral Interventions

- Effective forms of interventions:
  - Counseling, feedback, health education
  - Incentives
  - Social support
- Shown to increase smoking cessation in pregnant women by 11 -15%
- Modest increase in mean birth weights and some studies with decrease in pre-term birth rates
- Pregnancy specific counseling increased cessation rates
  - Include the effects of smoking on maternal and fetal health
  - Smoking cessation at any point in pregnancy has a health benefit, but earlier cessation has the greatest benefit

Behavioral Interventions

- In data from non -pregnant adults
  - Even minimal interventions (<3 minutes) is effective in increasing cessation rates
  - Dose-response relationship, but plateaus at 90 minutes
  - Various providers have been shown to be effective: physicians, nurses, psychologists, social workers and designated cessation counselors
  - Telephone counseling with at least 3 calls
  - Printed materials (beyond just describing the health effects of smoking) improves smoking abstinence

Behavioral Interventions

"The 5 A's of Smoking Cessation"

1. Ask
2. Advise
3. Assess
4. Assist
5. Arrange

Behavioral Interventions: The 5 A's

1. **Ask** the patient about tobacco use and first prenatal visit and on follow -up by asking her to choose from the following:
   a. I have NEVER smoked or have smoked LESS THAN 100 cigarettes in my lifetime
   b. I stopped smoking BEFORE I found out I was pregnant, and I am not smoking now
   c. I stopped smoking AFTER I found out I was pregnant, and I am not smoking now
   d. I smoke some now, but I have cut down SINCE I found out I was pregnant
   e. I smoke regularly now, about the same as BEFORE I found out I was pregnant

   And maybe..

   f. I smoke regularly now, and have been smoking MORE since I found out I was pregnant

Behavioral Intervention: The 5 A’s

2. **Advise** the patient to quit by providing information about the risks of smoking to the woman, the fetus and the newborn

3. **Assess** the patient’s willingness to attempt to quit smoking

4. **Assist** the patient who is interested in quitting

- Provide pregnancy-specific self-help smoking cessation materials
- Refer for smoking cessation counseling as available by other providers or through the smoker’s quit line (1-800-QUIT-NOW)

5. **Arrange** follow-up visits and track the progress of the patient’s attempts

Pharmacotherapy

"The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of pharmacotherapy interventions for tobacco cessation in pregnant women"

(I recommendation)

Pharmacotherapy

Nicotine Replacement Products

- Conflicting evidence on if nicotine replacement helps pregnant women quit
  - Some studies show decrease in preterm birth and low birth weight infants
  - 2 trials showed slightly higher stillbirth rates in the NRT groups , but underpowered and larger studies did not show this
  - Survival without impairment and respiratory problems and 2 years were lower in NRT group but not statistically significant
- Does not increase abstinence rates post-partum
- Some smaller studies showed increased rates of cesarean delivery in NRT group
- One large RCT showed small increase in diastolic blood pressure in NRT group

Pharmacotherapy

Varenicline (Chantix)

- Acts on the brain nicotine receptors
- Several small studies without evidence of teratogenicity
- No data on efficacy in pregnancy

Bupropion

- No known teratogenicity or adverse pregnancy outcomes
- No data on efficacy in pregnancy

Pharmacotherapy

Both Varenicline and Bupropion…

- Are transmitted in breast milk
- Carry an FDA warning regarding psychiatric symptoms and increased risk of suicide

Electronic Nicotine Delivery Systems

“E-cigarettes” or “Vaping”

- There is little to no safety data in the general population or in pregnant women
- Perceived to be “safer”, and many smokers believe it will aid in smoking cessation efforts
- In one study, 14% of pregnant women reported using e -cigs to help quit
- No evidence that ENDS aids in smoking cessation

Take Home Points

1. Smoking is bad for pregnant women and their babies
2. Pregnancy is a motivator to quit
3. Create systems in your practice to guide behavioral interventions
   - Screen for tobacco use at prenatal intake
   - Use motivational interviewing techniques (like the 5 A’s) to offer a brief intervention
   - Have pregnancy-specific self-help materials available
   - Follow-up on use at subsequent visits
4. Consider medications in high risk patients, but weigh risks and benefits

The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

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Tobacco, Alcohol, Dru

- Why is smoking dangerous during
- How can smoking during pregnancy
- Why should I avoid secondhand sm
- Are e-cigarettes safe to use during
- Why is drinking alcohol dangerous
- Is there an amount of alcohol that i
- What is illegal drug use?
- How can my drug use affect my fetu
- How can my drug use affect my bab
- Recreational marijuana is legal wh
- I use medical marijuana. Can I kee
- What are opioids?
- Can I take prescription opioids duri
- What is opioid addiction?
- How can opioid addiction affect my
- Why should I seek treatment for op

El Embarazo • SP170

El tabaco, y el emba

Durante el em marihuana o drog recetados. Evitar son importantes

Si usa estas sustancias, puede recibir consejos para car esta conducta. Si tiene dificultad para dejar de consumir alcohol, marihuana o drogas ilegales, hay tratamiento di También se dispone de tratamiento si usa indebidamente medicamentos con receta. Esta ayuda a menudo se obtie

Smoking and Pregnancy

Smoking can cause problems for a woman trying to become pregnant or who is already pregnant, and for her baby before and after birth.

Effects on Women

- Difficulty getting pregnant
- Placenta separates from the womb too early, causing bleeding
- Placenta covers the cervix, causing complications
- Water breaks too early
- Pregnancy occurs outside of the womb

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Quitting Smoking Can Be Hard, But It Is Woman Can Protect Herself and Her Bab

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

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Patient Information *Series*

Smoking and Pregnancy

In the United States, approximately 11.4% of all women who are pregnant smoke. Women who smoke often have a more difficult time becoming pregnant. Pregnant women who quit smoking when they find out that they are pregnant (or at least in the first three months of their pregnancy) increase their chances of having a healthy full-size baby. Quitting, especially during pregnancy can be challenging, so stopping before you get pregnant is very important. Quitting may not be easy but there are things you can do to help you quit; talk to your health care provider, join a local cessation program or call a smokers' quitline. These are all helpful ways to support your efforts in quitting.

How does smoking during pregnancy impact my baby and me?

Smoking cigarettes during pregnancy is considered the number one cause of harmful results for babies. During pregnancy, mothers provide oxygen and nourishment to their babies. They can also pass on unhealthy chemicals. For example, when pregnant women smoke, they pass on the 7,000 toxic and cancer-causing chemicals contained in cigarettes to their unborn child. Babies born to mothers who smoke are often born prematurely, smaller, and less healthy than other infants whose mothers do not smoke. Underweight, unhealthy babies are

previa (the placenta grows in the lowest part of the uterus and covers the opening of the uterus making delivery difficult). These conditions can lead to severe bleeding, shock and sometimes death for the mother and infant.

Babies born to mothers who smoke are more likely to die of Sudden Infant Death Syndrome (SIDS). Babies of smoking mothers also have lower lung function at birth and later in life, and more often have asthma and other lung diseases than babies born to non-smoking mothers. These babies often have more deformities, lung diseases, and middle ear infections when born to mothers who smoke. In addition, these children may have more learning disorders and behavior problems, and are more likely to start smoking when they get older.

What are some tips to help me quit smoking?

Resources

1. Colman GJ, et al. Trends in smoking before, during and after pregnancy in ten states. *American Journal of Preventive Medicine 2003;24:29-35.*
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6. Fiore MC, et al. Clinical practice guideline- treating tobacco use and dependence: 2008 update. US Department of Health and Human Services; 2008

Resources

1. Patnode CP, Behavioral Counseling and pharmacotherapy interventions for tobacco cessation in adults, including pregnant women: a review of reviews for the US Preventive Services Task Force. Evidence SYnthesis no. 134. AHRQ publications no. 14 -05200-EF-1. Rockville, Md.: Agency for Healthcare Research and Quality; 2005.
2. Smoking Cessation During Pregnancy. ACOG Committee Opinion: Number 721; October 2017
3. Siu AL. Behavioral and pharmacotherapy interventions for tobacco smoking cessation in adults, including pregnant women: US Preventive Services Task Force Recommendation Statement. U.S. Preventive Services Task Force. *Annals of Internal Medicine 2015;163:622-34.*