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### Best estimates indicate that 13–22% of pregnant women smoke during pregnancy<sup>1</sup>

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#### Risks associated with smoking in pregnancy<sup>1,2</sup>

- Preterm birth
- Low birth weight (LBW)
- Premature rupture of membranes (PROM)
- Perinatal mortality (stillbirth and neonatal death)
- Intrauterine growth restriction (IUGR)
- Placenta previa
- Abruptio placentae
- Sudden infant death syndrome (SIDS)

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#### Smoking and Prematurity

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- A review of twenty studies revealed that pregnant women who smoke are approximately 27% more likely to deliver preterm than those who don't smoke<sup>3</sup>. This is consistent with the findings of the 2001 Surgeon General's Report on women and smoking<sup>1</sup> (see the Medical Perspectives *Mission-Related Concepts from the Surgeon General's Report on Women and Smoking-2001*).
- A review of several studies showed that pregnant women who quit smoking are 17% less likely to deliver preterm than women who continue to smoke throughout pregnancy<sup>4</sup>.

#### What this means

Smoking is a risk factor for preterm delivery. Risk factors are factors that are statistically associated with disease, though not necessarily independent causes of the disease.

#### What this doesn't mean

One cannot conclude from the above data that if all pregnant women quit smoking, we would eliminate 17% or 27% of premature birth or decrease the preterm birth by these amounts.

#### If all pregnant women quit smoking, how much could we expect the preterm birth rate to drop?

The answer is, we don't know. Prematurity is complex and there are many factors which, in varying combinations, can cause preterm birth. Thus, it's hard

to calculate this number, called the attributable risk (the amount of prematurity that is attributable to smoking and could be eliminated if smoking was eliminated).

The Surgeon General's 1990 report *The Health Benefits of Smoking Cessation* suggests that, "the elimination of smoking during pregnancy could prevent ... about 8 percent of preterm deliveries in the United States."<sup>5</sup>

The exact number is unknown.

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#### The 5 A's Approach

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The "5 A's" refers to an approach to smoking cessation counseling, performed for 5-15 minutes by a trained clinician, which can improve cessation rates by 30% to 70% amongst pregnant smokers<sup>6</sup>.

#### The 5 A's are:

1. **A**sk about tobacco use
2. **A**dvice to quit
3. **A**ssess willingness to make a quit attempt
4. **A**ssist in quit attempt
5. **A**rrange follow-up

#### The 5 A's approach is endorsed by:

- American Academy of Pediatrics (AAP)  
[www.aap.org](http://www.aap.org)
- American College of Obstetricians and Gynecologists (ACOG)  
[www.acog.org](http://www.acog.org)
- Association of Women's Health, Obstetrics and Neonatal Nurses (AWHONN)  
[www.awhonn.org](http://www.awhonn.org)
- March of Dimes (MOD)  
[www.marchofdimes.com](http://www.marchofdimes.com)
- The National Partnership to Help Pregnant Smokers Quit  
[www.helppregnant smokersquit.org](http://www.helppregnant smokersquit.org)

#### More information about the 5 A's program is available at:

[www.acog.org](http://www.acog.org) and click on *Smoking Cessation*

## Access to smoking cessation services is aided by:

- Preconception care
- Prenatal care
- Insurance coverage
- Availability of telephone quit lines

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## Medical Therapy (Pharmacotherapy)<sup>2</sup>

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- Pharmacologic smoking cessation aids help to manage nicotine withdrawal symptoms. They include gum, patches, inhalers and certain antidepressants.
- Due to insufficient testing, there is not enough evidence to determine the efficacy and safety of pharmacologic aids in pregnant patients.
- If a patient is unable to quit using nonpharmacologic strategies such as the 5 A's, she and her clinician should weigh the risks of using pharmacotherapy against the risks of continuing to smoke, and consider the likelihood of quitting using pharmacotherapy.

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## Health Benefits

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### Ways in which smoking cessation can improve health:

- Improved pregnancy outcomes (low birth weight, perinatal mortality)
- Improved childhood outcomes (otitis media, cough, asthma, bronchitis, SIDS)
- Improved women's health overall (decrease heart disease, cancer, lung disease)

## References

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- <sup>2</sup> ACOG Educational Bulletin. Smoking Cessation During Pregnancy. The American College of Obstetricians and Gynecologists. Number 260, September 2000.
- <sup>3</sup> Shah NR, Bracken MB. A systematic review and meta-analysis of prospective studies on the association between maternal cigarette smoking and preterm delivery. *Am J Obstet Gynecol* 2000;182:465-72.
- <sup>4</sup> Lumley J, Oliver S, Waters E. Interventions for promoting smoking cessation during pregnancy. *Cochrane Database Syst Rev* 2000;(2):CD001055.
- <sup>5</sup> U.S. Department of Health and Human Services. *The Health Benefits of Smoking Cessation*. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. DHHS Publication No. (CDC) 90-8416, 1990.  
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- <sup>6</sup> Melvin CL, Dolan-Mullen P, Windsor RA, Whiteside HP, Goldenberg RL. Recommended cessation counseling for pregnant women who smoke: a review of the evidence. *Tobacco Control* 2000;9(Suppl III):iii80-iii84.

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