

Second Smoking And Pregnancy The Facts

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Abstract

Cigarette smoking during pregnancy can cause serious health problems to an unborn child. Smoking during pregnancy has been linked to premature labor, breathing problems and fatal illness among infants. Smoking during pregnancy is estimated to account for 20 to 30 percent of low-birth weight babies, up to 14 percent of preterm deliveries, and some 10 percent of all infant deaths.

INTRODUCTION

Smoking is a global problem. It is estimated that one in three adults smoke, with over 1 billion people smoking worldwide. The majority of these smokers reside in countries on the low end to the middle of the socioeconomic spectrum. Of this majority, about 80% live in low and middle-income countries. The total number of smokers worldwide is expected to keep on increasing each year.

The worldwide popularity of tobacco use varies by social class, historical era, and culture. Historically, smoking had been a pastime of the rich. However, this trend has changed dramatically in recent decades. It appears that financially advantaged men in wealthier countries have been smoking less in recent times

The World Health Organization has been studying smoking trends and statistical patterns across the globe and has uncovered the following statistics:

1. Eastern Europe has a particularly high rate of smoking, with up to 59% of adult males smoking. Also, significantly more women smoke in Eastern Europe than in East Asia and the Pacific Region.
2. Most people who smoke, begin smoking before they are 25 years old. Worldwide observations suggest that people are starting to smoke at a much younger age. World Health Organization studies reveal that the majority of smokers in affluent countries; begin in their teens

Figure 1



WHAT IS SECOND-HAND SMOKE?

More than 1,000 non-smokers will die this year in Canada due to tobacco use - - over 300 lung cancer deaths and at least 700 deaths from coronary heart disease will be caused by second-hand smoke.

- Second-hand smoke is a combination of poisonous gases, liquids, and breathable particles that are harmful to our health.
- Second-hand smoke consists of mainstream smoke, the smoke inhaled and exhaled by the smoker, and sidestream smoke, the smoke released directly from the end of a burning cigarette.
- Second-hand smoke contains over 4,000 chemical compounds, 50 of which are associated with, or

known to cause cancer.

- Two thirds of the smoke from a burning cigarette is not inhaled by the smoker but enters into the surrounding environment. The contaminated air is inhaled by anyone in that area.
- Second-hand smoke is a “class A” cancer-causing substance. Class A is considered the most dangerous of cancer agents and there is no known safe level of exposure.
- Second-hand smoke has twice as much nicotine and tar as the smoke that smokers inhale. It also has five times the carbon monoxide which decreases the amount of oxygen in our blood.
- Second-hand smoke causes disease and death in healthy non-smokers.
- Exposure for as little as 8 to 20 minutes causes physical reactions linked to heart and stroke disease:
 - The heart rate increases;
 - The heart's oxygen supply decreases; and
 - Blood vessels constrict which increases blood pressure and makes the heart work harder

CHEWING TOBACCO AND SNUFF SAFE ALTERNATIVES TO CIGARETTE SMOKING?

Smokeless (spit) tobacco contains nicotine. The amount of nicotine absorbed is usually more than the amount delivered by a cigarette. Overall, people who dip or chew receive about the same amount of nicotine as regular smokers. The most harmful cancer-causing substances in smokeless tobacco are tobacco-specific nitrosamines (TSNAs), which have been found at levels 100 times higher than the nitrosamines that are allowed in bacon, beer, and other foods.

The juice from the smokeless tobacco is absorbed directly through the lining of the mouth. This creates sores and white patches that often lead to cancer of the mouth.

Smokeless tobacco users greatly increase their risk of other cancers including those of the pharynx (throat). Other effects of smokeless tobacco use include chronic bad breath, stained teeth and fillings, gum disease, tooth decay, tooth loss, tooth

abrasion, and loss of bone in the jaw. Users may also have problems with high blood pressure and be at increased risk for heart disease.

TOBACCO AND SPONTANEOUS ABORTION

A number of studies have shown that tobacco use is a significant factor in spontaneous abortions among pregnant smokers, and that it contributes to a number of other threats to the health of the unborn.¹ Second-hand smoke appears to present an equal danger to the fetus, as one study noted that “heavy paternal smoking increased the risk of early pregnancy loss.”² One of the rotating warnings that cigarettes are required to display notes that smoking can lead to “low fetal birth weight.”

GETTING TO MOTHERS OF INFANTS

An attempt to use infants' cotinine levels was completely without effect,^{3, 4} as a warning to mothers to reduce or stop smoking in a RCT where the physician telephoned the mother to report the urinary cotinine result and explain its meaning.

SMOKING CESSATION IN PREGNANCY

Because maternal smoking is associated with increased foetal risk and low birth weight, trying to prevent pregnant women smoking has top priority. One RCT⁵ compared an immediate 20-minute intervention by a practice nurse with an evening class providing guidance on a self-help program for two hours on a group basis. Smoking cessation was confirmed by urinary cotinine measurement.

None of the women randomised to the intensive evening class attended, compared with 93% assigned to the immediate intervention. Rates of smoking cessation immediately after intervention, at 36 weeks gestation and postpartum were about 6% for the former and 14% for the latter.

However, there is one study which shows some success. Again, this was an RCT begun in early pregnancy, with randomisation between standard obstetric care and an intervention with self-help materials on smoking cessation in addition

SMOKING, PREGNANCY AND BIRTH

Smokers have a greater risk of ectopic pregnancy (a pregnancy outside the uterus)⁶ and miscarriage. This risk is four times greater in smokers than non smokers, and six times greater in women who smoke more than 20 cigarettes a day. Smokers have a higher risk of having a premature

baby.⁷ Smokers are more likely to have complications during the birth.⁷ Smokers are more likely to have a low weight baby.^{8,9,10} Babies born with a lower than average birth weight are at more risk of infection and other health problems. If you quit in the first 3 months of pregnancy, your risk of having a low-weight baby will be similar to that of a non-smoker.

PASSIVE SMOKING

Every time someone smokes around you or your children, you are all smoking too. This is called passive smoking. Exposure to environmental tobacco smoke (ETS) can affect the health of children.¹¹

Young children have smaller, more delicate lungs than adults. This means that they are more affected by tobacco smoke and the chemicals it contains.

Babies of smokers are more likely to suffer from asthma and other respiratory infections.

STRATEGIES TO REDUCE CHILDREN'S EXPOSURE TO ETS

The WHO's consultation document on ETS and Child Health identifies two principal approaches: legislation and education. Legislation includes all regulatory approaches to controlling where and when people can smoke. Education includes public information, debate and advocacy to encourage behaviour change. These two approaches are complementary.

Evidence from the USA¹² and Australia¹³, where bans or restrictions on smoking in public places are already commonplace, suggests that having smoking bans, with widespread public support, is a prerequisite for the adoption of smoking restrictions in the home. In other words, once people have accepted that non-smoking should be the norm in public places, there is likely to be a greater willingness to voluntarily restrict smoking in the home. Legislation is inappropriate to reduce smoke exposure in the home but educational strategies to raise awareness about the risks to children from passive smoking are more likely to be effective in changing behaviour.

THE AEROSOL ACTION

When a smoker draws from a cigarette, there is a flash of heat (up to 860 C) and then a rapid cooling. This changes tobacco into at least 4,000 different chemicals, taking the

form of tiny air particles in a gas, like an aerosol. Many of these chemicals are poisonous.

Some of these particles are absorbed into the bloodstream and reach the baby only seconds later.

The effect on the baby will depend on the kind and amount of chemicals it takes in. Manufacturers may even add harmful substances to change the flavour of cigarettes or simply to keep them burning. But the usual chemicals such as nicotine, cyanide and carbon monoxide, create the main danger.

The earlier the baby is affected by tobacco poisons, the greater the risk of damage. In the first weeks, the baby's development depends on tiny cells growing and splitting to form its essential shape. The presence of dangerous chemicals now can affect it more than at any other time.

NICOTINE REPLACEMENT THERAPY (NRT)

NRT is less harmful than smoking during pregnancy and breastfeeding, as the mother and the baby receive less nicotine and no exposure to carbon monoxide and other toxic substances.

NRT is beneficial to highly dependent smokers who are likely to have greater difficulty in quitting and who also have a greater risk of developing problems during the pregnancy and birth.

Nicotine replacement therapy (gum, lozenge, sublingual tablet or inhaler) may be considered if a woman is pregnant or breastfeeding and is otherwise unable to quit, but it is very important to discuss this with your doctor

CONCLUSION

Stopping smoking at any time in pregnancy is beneficial, but ceasing right from the time you plan or start your pregnancy is wisest. Any pregnant women can give up smoking, but she will often need sympathetic encouragement, help and support.

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