

Our physicians and staff are devoted to providing the best medical care available. Our physicians are very experienced in caring for High Risk Pregnancy, Infertility and minimally invasive (laparoscopic) surgical techniques. We are looking forward to getting to know and caring for you. If you have any questions or comments about our services, please let us know.

## feature of the month

### Smoking in Women Part 1 of 3

This is the first of a three part series on smoking in women. This article will address general health care issues related to smoking. Part 2 will consider the negative impact of maternal smoking on pregnancy outcome and childhood well being. And Part 3 will explore methods of smoking cessation and the benefits gained from quitting (as well as providing a bibliography for further information).

Smoking is a significant health care issue for women. In the United States, one in five women 18 years or older is a current cigarette smoker. In the population under the age of 18 (male and female), 3,000 become smokers every day. One in five high school girls is a current smoker. During pregnancy, the prevalence of smoking, depending on geographic location, is

15% - 30%. Nationwide, the rate of smoking during pregnancy is inversely related to the level of education. According to 2003 epidemiologic statistics, one in four pregnant women in Kentucky smokes. This ranks Kentucky second in the nation for prevalence of smoking during pregnancy.

In 1995, in developed countries, one in eight female deaths between the ages of 35 and 69 was due to smoking. In 1997, 165,000 United States women died of smoking related diseases (lung cancer, other cancers, heart disease, stroke and chronic lung diseases). Smoking is responsible for one in five United States deaths (male and female) each year. Combined health care costs and lost productivity due to smoking totals about \$98 billion per year. Compared to non-smokers, total mortality is increased by 80% - 90% in women smokers and the risk increases with the amount and the duration of

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smoking. Life expectancy in smokers is decreased by 7 to 15 years compared to never smokers. But if a person stops smoking before the age of 50, then compared to continued smokers, that person has half the risk of dying in the next 15 years.

Smoking increases the risk of cancer throughout the body (mouth, pharynx, larynx, esophagus, stomach, colon, rectum, pancreas, liver, bladder, kidney, cervix, lung and some leukemias). Worldwide in 1990, 10% of female cancer deaths resulted from smoking. Cigarette smoking is the major cause of lung cancer in women. In 1950, lung cancer accounted for only 3% of all cancer deaths in women, but by 2000, it accounted for 25%. In the United States, lung cancer has surpassed breast cancer as the leading cause of cancer death among women. In 2000, 27,000 more women died of lung cancer than breast cancer. The risk of lung cancer increases with the duration and the amount of smoking but decreases with time after smoking cessation. Smoking does increase the risk of breast cancer, especially if one has smoked for several decades. And the age of diagnosis of breast cancer is eight years younger in smoking women as compared to non-smoking women.

Smoking increases the risk of chronic obstructive lung diseases (COPD) including emphysema and chronic bronchitis. Lung function, as measured by the forced expiratory volume in one second (FEV1), declines prematurely in smokers compared to non-smoking women. 90% of COPD diagnoses in women is attributed to smoking. The relative risk of COPD in current smokers is 12.8 compared to non-smokers and the risk increases with the number of cigarettes smoked per day.



Smoking increases the risk of cardiovascular disease. The relative risk of coronary heart disease (CHD) in a smoker is greater in younger than older women. For women age 35 to 64, the age-adjusted relative risk for CHD is 3.0. For women 65 or older, it is 1.6. The risk increases with the number of cigarettes smoked per day and with the duration of smoking. Current smokers who began prior to

age 15 have a relative risk of CHD of 9.3 compared to never smokers. Also, smokers are twice as likely to die from a heart attack than non-smokers. Smoking increases the risk of ischemic stroke (blood clot in one of the arteries supplying the brain) and of subarachnoid hemorrhagic stroke (bleeding in the area surrounding the brain). The relative risk of a stroke in a smoker is 1.72 compared to a never smoker. Fifty five percent of cerebral vascular deaths in women younger than 65 is attributed to smoking. Smoking also increases the risk of peripheral vascular disease, carotid atherosclerosis and death from ruptured abdominal aortic aneurysm.

Smoking adversely affects the gastrointestinal system. Smoking decreases the strength of the esophageal valve allowing stomach acids to reflux (flow backward) into the esophagus and thus increasing heartburn. Smoking increases the risk of stomach and duodenal ulcers and inhibits healing once treatment is initiated. Smoking affects the liver's ability to process and remove from the body certain drugs, alcohol and other toxins. Smoking increases the risk of Crohn's disease (inflammation in the lining of the intestine) and increases the risk of relapse after treatment and

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thus the need for repeat surgery. Smoking also increases the risk of gallstones.

Postmenopausal women who smoke have lower bone densities than non-smokers and are at greater risk for hip fractures (relative risk 1.2 - 2). Women who smoke have a greater risk of developing rheumatoid arthritis. Smokers have increased risk of cataract formation and development of age-related macular degeneration (which affects central vision). Smoking and depression are strongly associated. It is uncertain whether smoking effects the etiology of depression, whether smoking is just used as self-medication by depressed women or whether there is a common factor that predisposes women to both smoking and depression. But depression is four times more common in smokers than non-smokers. And studies have shown an increased risk of suicidal tendencies in smokers compared to non-smokers.

Smoking has significant impact on appearance and hygienic issues. It causes premature wrinkling of the skin, especially facial wrinkling. It causes bad breath and stained teeth. It causes yellowing of the fingernails. And it causes bad smelling clothes and hair.

Smoking may also alter menstrual function. It increases the risk of menstrual irregularities



even to the point of developing secondary amenorrhea (the cessation of menstruation). The risk of dysmenorrhea (painful menstruation) is increased. Smokers have increased risk of infertility, both primary and secondary. They may experience delay in conceiving because of decreased fecundity (the probability of pregnancy when no contraception is used). Women

who smoke go through natural menopause at an earlier age (on an average, 1 to 2 years earlier). They may also experience more severe menopausal symptoms.

Smoking increases the risk of oral contraceptive agents (OCA's). Women on DCA's who are older than 35 and smoke have an increased risk of heart attack, stroke and deep vein thrombosis (blood clot in a major vein such as in the leg). Women who smoke while on DCA's have a 20 to 40 times greater risk of coronary heart disease than non-smokers, Although the risk has been decreased with the newer low dose pills, the relative risk in smokers is still greater than that in non-smokers.

Smoking is a significant health care issue for women. In Part 2 of this series, we will address the adverse effects of smoking during pregnancy as well as the effect of environmental tobacco exposure (second hand smoke) on children.

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