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Cardiovascular Disease Risk Factors Part IV – Smoking

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Your Life Your Health

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The **BIG** three – cardiovascular disease risk factors one, two and three – are inactivity, obesity and now smoking. Here are the facts:

- Men who smoke cut their lives short by 13.2 years.
- Women who smoke lose 14.5 years of life.

When my oldest granddaughter was much younger, she could not say and “m” after at “s.” We still enjoy remembering one of her favorite sayings, “**You are not very smart if you snoke!**”

When you’re twenty years old and feel invincible, the above numbers don’t seem as dreadful as they do when you’re sixty and would give everything for one good breath of air which satisfied your need for oxygen.

The BIG Three Times Two

Cigarette and tobacco smoke, high blood cholesterol, high blood pressure, physical inactivity, obesity and diabetes are the six major independent risk factors for coronary heart disease that you can modify or control. Cigarette smoking is so widespread and significant as a risk factor that the Surgeon General has called it "the leading preventable cause of disease and deaths in the United States."

But, I Don’t Smoke! You are still at risk, if...

But, it is no longer enough simply not to smoke. Non-smokers have to be alert to the presence of environmental smoke produced by others. Consider these facts.

Environmental tobacco smoke (ETS) is a mix of more than 4,000 compounds, over fifty of which are known to cause cancer. ETS consists of two different kinds of smoke:

Approximately 85 percent is **sidestream smoke**, the smoke emitted from the burning cigarette, cigar, or pipe between puffs. The remainder is the **mainstream smoke** exhaled by the smoker.

Although mainstream and sidestream smoke are chemically very similar, undiluted sidestream smoke burns at a lower temperature and, therefore, contains higher concentrations of many of the toxic elements in tobacco smoke, including nicotine, carbon monoxide, benzene, ammonia, 4-aminobiphenyl, and benzo[a]pyrene.

In 1992, the U.S. Environmental Protection Agency (EPA) classified environmental tobacco

smoke as a “Group A” carcinogen which is a substance that produces cancer in humans. ETS from parental smoking can cause children to suffer the following health effects:

- Pregnant women who smoke and nonsmoking pregnant women exposed daily to tobacco smoke are more likely to have low birth weight babies at risk for death and disease in infancy and early childhood.
- Nursing mothers who smoke can pass along harmful chemicals from cigarettes to their babies in breast milk.
- It is estimated that more than one-third (35 percent) of all deaths from Sudden Infant Death Syndrome (SIDS) are due to maternal tobacco use. U.S. Children are three times more likely to die from SIDS caused by maternal smoking than die from homicide or child abuse.
- Children of parents who smoke have a higher prevalence of symptoms of respiratory irritation such as cough, phlegm, and wheeze.
- An estimated 1.67 million physician visits for cough each year in the United States are due to involuntary smoking.
- Exposure to ETS substantially increases the risk of lower respiratory tract infections, and is responsible for an estimated 350,000 cases of bronchitis and 152,000 cases of pneumonia annually or 16 percent of all lung infections in U.S. children under the age of five.
- Involuntary exposure to tobacco smoke is responsible for an estimated 1.2 million ear infections each year in the United States, or approximately 7 percent of the total.
- Children exposed to household smoking are at greater risk of requiring surgery for recurrent ear infections or tonsillitis; an estimated 86,000 tube insertions (14 percent of the total) and 18,000 tonsillectomies/adenoidectomies (removal of the tonsils or adenoids 20 percent of the total) each year in the United States are attributable to ETS.
- ETS exposure is associated with higher risk of developing asthma and more frequent and severe asthma attacks in children who already have the disease.³ Each year in the United States, an estimated 11 percent of all asthma cases and more than half a million physician visits for asthma are due to smoking in the home.
- Exposure to the smoking of one or both parents has also been shown to be a highly important predictor of smoking among adolescents.
- It is difficult to quantify the exposure of nonsmokers to ETS. Smoking in confined spaces, such as in a small enclosed room or a car, can greatly increase concentrations of environmental tobacco smoke.
- It takes more than three hours to remove 95 percent of the smoke from one cigarette from the room once smoking has ended.
- In general terms, most adults (87 percent) believe people have a right to be free from breathing other people's second-hand smoke.
- Parents who restrict smoking to the outdoors are more likely to be highly educated, older, come from nonsmoking households, and have higher incomes.
- Courts in Canada, the United States, and Australia have begun to consider parental smoking as one of the factors that must be weighed in assessing “the best interest” of the child in custody and access proceedings.

Often what a person will not do for themselves, they will do for their children and/or for children in general. If you smoke, there is no way you can avoid the negative effects on children around you.

Increased Risk of coronary heart disease

Cigarette smoking increases the risk of coronary heart disease by itself. When it acts with other factors, it greatly increases risk. Smoking:

- increases blood pressure,
- decreases exercise tolerance and
- increases the tendency for blood to clot.

Smoking also increases the risk of recurrent coronary heart disease after bypass surgery.

Cigarette smoking is the most important risk factor for young men and women. It produces a greater relative risk in persons under age 50 than in those over 50. Women who smoke and use oral contraceptives greatly increase their risk of coronary heart disease and stroke compared with nonsmoking women who use oral contraceptives.

Smoking decreases HDL (good) cholesterol. Cigarette smoking combined with a family history of heart disease also seems to greatly increase the risk.

What about cigarette smoking and stroke and peripheral arterial disease?

Studies show that cigarette smoking is an important risk factor for stroke. Inhaling cigarette smoke produces several effects that damage the cerebrovascular system. Women who take oral contraceptives and smoke increase their risk of stroke many times. Smoking also creates a higher risk for peripheral arterial disease and aortic aneurysm.

What about cigar and pipe smoking?

People who smoke cigars or pipes seem to have a higher risk of death from coronary heart disease (and possibly stroke), but their risk isn't as great as that of cigarette smokers. This is probably because they're less likely to inhale the smoke. Currently, there's very little scientific information on cigar and pipe smoking and cardiovascular disease, especially among young men, who represent the vast majority of cigar users.

Smoking – The Bad News

As many as 30% of all coronary heart disease (CHD) deaths in the United States each year are attributable to cigarette smoking, with the risk being strongly dose-related.

Smoking also nearly doubles the risk of ischemic stroke. Smoking acts synergistically with other risk factors, substantially increasing the risk of CHD. Smokers are also at increased risk for peripheral vascular disease, cancer, chronic lung disease, and many other chronic diseases.

Cigarette smoking is the single most alterable risk factor contributing to premature morbidity and mortality in the United States, accounting for approximately 430 000 deaths annually.

Stopping Smoking – The Good News

Numerous prospective investigations have demonstrated a substantial decrease in CHD mortality for former smokers compared with continuing smokers. This decrease in risk occurs relatively soon after cessation of smoking, and increasing intervals since the last cigarette smoked are associated with progressively lower mortality rates from CHD.

Similar rapid decreases in risk with smoking cessation are also seen for ischemic stroke. Benefits from quitting are seen in former smokers even after many years of heavy smoking. Investigations also have demonstrated benefits from cessation for smokers who have already developed smoking-related diseases or symptoms. Persons with diagnosed CHD experience as much as a 50% reduction in risk of reinfarction, sudden cardiac death, and total mortality if they quit smoking after the initial infarction. Furthermore, the patient who has recently developed a clinical illness is very motivated to change, and several studies have shown that intervention in this "teachable moment" can be very effective. Thus, the provision of smoking cessation advice is associated with a 50% long- term (more than 1 year) smoking cessation rate in patients who have been hospitalized with a coronary event and even modest telephone-based counseling can increase this percentage to 70% in a particularly cost-effective manner.

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American Heart Association (AHA) Recommendations

The AHA Statement to Healthcare Providers concludes with the following statement:

“There is overwhelming evidence demonstrating both the cardiovascular hazards of smoking and the prompt benefit that occurs with smoking cessation. The provision of advice alone significantly increases the smoking cessation rate, and even minimal counseling yields a further benefit. Intervention with patients who have already suffered a cardiac event yields particularly striking benefits.

The smoking status of all patients should be assessed and appropriate intervention offered to those who smoke. Physicians should be trained in counseling techniques and the use of nicotine replacement therapy. The importance of ensuring the delivery of smoking cessation counseling was recognized when smoking counseling assessments were incorporated into version 3 of HEDIS, the Health Plan Employer Data Information Set of the National Committee for Quality Assurance.

Equally important components of appropriate medical care are development of supportive office systems and multicomponent intervention programs and links with smoking cessation specialists and community resources. The universal application of these modalities will contribute to the continued decline of smoking and subsequent CHD events in the United States.”

What Does All of this mean for you?

- If you don't smoke, avoid other people who do!
- You smoke and you love your children, stop smoking!
- It is never too late to stop!
- If you want to stop smoking and need help, ask your healthcare provider for counseling!
- If you are a healthcare provider, ask every patient at every visit if they smoke and help them stop if they do!
- Don't forget, **if you smoke you're not very smart!!**

If you don't believe me, then believe the cigarette manufacturers who have discovered the way to avoid lawsuits about smoking: *they tell the truth about the health hazards of smoking*. The Philip Morris website says:

“(We) agree...that cigarette smoking causes lung cancer, heart disease, emphysema and other serious diseases in smokers...There is no safe cigarette...(We) agree...cigarette smoking is addictive...the public should be guided by the conclusions of public health officials regarding the health effects of secondhand smoke in deciding whether to be in places where secondhand smoke is present, or if they are smokers, when and where to smoke around others. Particular care should be exercised where children are concerned, and adults should avoid smoking around them.

...the conclusions of public health officials concerning environmental tobacco smoke are sufficient to warrant measures that regulate smoking in public places...where smoking is permitted, the government should require the posting of warning notices that communicate public health officials' conclusions that secondhand smoke causes disease in non-smokers.”

Does Philip Morris care about your health? Absolutely not! If they did, they would stop selling cigarettes, but they don't want you to wake up with lung cancer one day and sue them. The solution? Wake up right now and stop smoking.

Remember, it is our life and it is your health.