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SMOKING: facts you should know

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SMOKING: facts you should know

Until recently, smoking was something you could take or leave. It appeared to be no obvious hazard to life or health. If one wanted to smoke for one reason or another, why shouldn't he? Then physicians and other scientists began to suspect possible hazards which are now thought to be significant. The controversy continues.

HIDDEN COSTS OF SMOKING

People who smoke usually realize that their habit is costly and often is a threat to life. Numerous deaths occur each year from burns and suffocation due to falling asleep while smoking. To this, add forest fires and explosions when cigarettes are lit in the wrong place at the wrong time. To the cost of cigarettes, add the cost of repairing marred furniture, burned sofas and rugs, and holes in clothing. And finally, add the possible damage to a priceless possession—your health.

SUSPECTED HEALTH HAZARDS

Skilled research personnel say that tobacco smoking, and particularly cigarette smoking, shortens life expectancy. It is alleged to cause cancer of the lungs and bladder, increase the frequency of such circulatory diseases as coronary heart disease, heart muscle damage, arterial disease, and possibly high blood pressure. It contributes to chronic bronchitis, emphysema, and to other obstructive lung diseases, and is related to a host of other health problems. It reduces the oxygen-carrying ability of the blood. Physicians and researchers who believe these observations to be correct say, "Don't smoke! If you do smoke, quit. If you don't smoke, don't start."

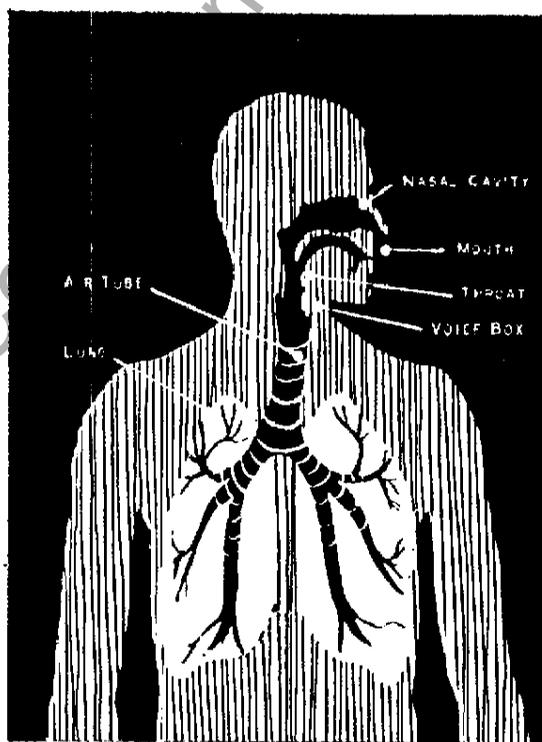
Some equally competent physicians and research personnel are less sure of the effect of cigarette smoking on health. They believe the increase in these diseases can be explained by other factors in our complex environment. They advise "Smoke if you feel you should, but be moderate."

An individual can try to reach a solution to his own smoking problem by studying the evidence, making a rational decision, and acting on it. Let us review some of the evidence that has accumulated from the research of many investigators during the last few decades.

PHYSIOLOGICAL EFFECTS OF SMOKING

What is smoke?

Smoke, a product of combustion, is a mixture of gases, various vaporized chemicals, and millions of minute particles of ash and other solids. These are drawn into the nose, throat, and lungs during smoking. The smoke includes some vaporized nicotine, a toxic substance found in tobacco, although much of it is destroyed by heat. It contains tars and other products from the partial burning and distillation of the tobacco. Both the nicotine



and the tars are partly deposited onto the cold portion of tobacco between the point of combustion and the mouth, only to be revaporized when the fire reaches them. Thus, a smoker gets more nicotine and tar if he smokes to a short butt. A significant amount of carbon monoxide is also produced which is quickly picked up by the oxygen-carrying hemoglobin of the blood and blocks its oxygen-carrying ability. Drawing air through burning tobacco reduces the oxygen content of this air since combustion converts much of the oxygen into carbon dioxide and carbon monoxide.

EFFECT ON THE RESPIRATORY SYSTEM

As smoke is drawn into the breathing passages and the air sacs of the lungs, the cooling of the smoke permits vaporized chemicals to settle onto the surrounding membranes. The point of greatest concentration is where a large air tube divides into two smaller ones. Interestingly, this point of division is where most lung cancer begins.

Pathologists, physicians skilled in the microscopic anatomy of disease, consistently find that the lining membranes of the air passages of smokers are thickened. The hairlike cilia on these membranes become damaged and are less effective in removing the toxic and irritating chemicals introduced by inhalation of smoke.

Pathologists also have found that smoking not only thickens the lining membranes of the air passages and obstructs them with secretions, but also stimulates a contraction of the muscles in the air passage walls which narrows them and further reduces air flow. The increased effort used to exhale breaks down the delicate walls of the air sacs and may ultimately lead to emphysema, a disabling lung disease. There is considerable evidence that a single cigarette will markedly reduce the air flow of even an experienced smoker.

Smoke also affects the membranes lining the larynx or voice box. A pathologist identifies a smoker's larynx by the thicker, often swollen vocal cords. The changes in the voice box are similar to those that occur in the air passages and in the lungs. These irritations cause swelling and increased secretion and result in smoker's cough, which, in turn, breaks the walls of the finer air sacs and contributes to emphysema.

EFFECT ON THE CIRCULATORY SYSTEM

Smoking affects the heart and blood vessels. Nicotine, if injected or taken in tobacco smoke, stimulates that part of the nervous system that controls the heart, blood vessels, and other internal organs that function almost automatically. For years, smoking has been known to be related to Buerger's disease, a constriction of the small arteries in the hands and feet that can lead to gangrene and necessitate amputation. So-called tobacco heart or tobacco angina is a combination of chest discomfort,

fast heart beat, extra heart beats, and shortness of breath which disappear when a person quits smoking. Smokers also have a higher death rate from coronary heart disease than do nonsmokers.

Among other effects of smoking are those of an apparent tobacco allergy in some sensitive persons, aggravation of gastric ulcers, and a form of blindness called tobacco amblyopia. Patients with these conditions are almost always advised not to smoke.

EFFECTS OF DIFFERENT TYPES OF SMOKING

While all tobacco smoking affects health and life expectancy, cigarette smoking appears to have a much greater effect than smoking cigars and pipes. Among the reasons offered is that cigar and pipe smokers often do not inhale and that the smoke, traveling farther, is cooler and less irritating when it reaches the mouth.

Filters and denicotinization of tobacco in cigarettes are alleged to reduce the hazards. However, denicotinization has no effect on the kind or amount of tar in the smoke.

PSYCHOLOGICAL AND SOCIAL ASPECTS OF SMOKING

That smoking is related to psychological and social situations is well known not only in the reasons people give for smoking, but also in other obvious reasons which they don't give. Young people often start smoking in imitation of older people who smoke or as an expression of a subconscious wish to be like them. Older children and youth want to be accepted by their friends and associates. Often friends dress alike, talk alike, and have other behavior in common. Smoking may be part of this attempt to conform. Not smoking could also be part of a group pattern.

As a means of relaxation, the mechanical aspects of smoking are recognized. Under tension or during an awkward lull in activity, smokers probably do relax by taking out a package of cigarettes, choosing one, getting matches, lighting the cigarette, and handling it.

Some authorities suggest that a cigarette represents a reward that a smoker can offer himself whenever he wishes, or that the act of smoking

represents a means of self-expression. In young people, it may represent freedom to do as one pleases, or be an act of rebelliousness against adult authority. Other authorities believe that people smoke because of the need for oral activity to fulfill an unsatisfied suckling reflex.

Recent studies have shown that youngsters whose parents smoke will also tend to smoke. If older brothers and sisters smoke, the younger ones are more likely to become smokers.

WHAT DO AUTHORITIES SAY ABOUT SMOKING?

Physicians, other scientists and many health agencies have studied the relationship of smoking to health and most are in general accord.

The most extensive examination of smoking was published in January, 1964, by the Advisory Committee to the Surgeon General of the U.S. Public Health Service.¹ The Committee reported that the magnitude of the effect of cigarette smoking far outweighs all other factors in relation to lung cancer in men. Although the data for women are less extensive, they point in the same direction.

The longer you smoke and the more you smoke, the greater the risk of developing lung cancer. If you quit smoking, the risk is diminished.

Pipe smokers run more of a risk of developing lung cancer than nonsmokers, but much less risk than cigarette smokers.

Cigarette smoking is also a significant factor in laryngeal cancer in men. It is the most important cause of chronic bronchitis in the United States and is closely related to pulmonary emphysema. Coughing, spitting, or both are more frequent among cigarette smokers than among nonsmokers.

WHAT CAN BE DONE ABOUT SMOKING?

Manufacturers are trying to reduce the hazards of smoking by modifying tobacco, reducing nicotine content, and filtering the tars. The long-range effects of these efforts are not now known. It seems that to be safe, tobacco smoke must be reduced to warm air—hardly acceptable to smokers.

¹ *Smoking and Health, U.S. Department of Health, Education, and Welfare, Washington, D.C.*

Research has been initiated to find and isolate or refine harmful substances so that those who smoke may continue to smoke safely. Thus far, the results have been discouraging and an early breakthrough is unlikely. However, the American Medical Association is sponsoring a large-scale study to determine what human ailments may be caused or aggravated by smoking, what elements in smoke may be harmful, and how these elements can be eliminated.

To smoke or not to smoke is, of course, a matter of individual choice. Most authorities agree that never to smoke is preferable. Further, they would agree that evidence, statistical or otherwise, is accumulating which indicates the desirability for the heavy smoker to cut down the smoking habit to the point of moderation. Medications are being sold which are intended to keep the smoker from smoking. Unfortunately, these have not been successful. Anti-smoking clinics are being continually developed and may help many smokers. Persons who contend that smoking helps them control their weight by decreasing their appetites can find more healthful controls.

If you haven't started the habit, you should carefully consider all the facts concerning your future health before doing so.

