

Nicotine



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Nicotine, an oily liquid substance found in tobacco leaves that acts as a stimulant and also contributes to smoking addiction. It has an acrid, burning taste. Nicotine is a very powerful poison, and it forms the base of many insecticides. Nicotine has various effects on the body. In small doses nicotine serves as a nerve stimulant, entering the bloodstream and promoting the flow of adrenaline, a stimulating hormone. It speeds up the heartbeat and may cause it to become irregular. It also raises the blood pressure and reduces the appetite, and it may cause nausea and vomiting. The known health risks associated with cigarette smoking, such as damage to the lungs and lung cancer, are thought to be caused by other components of cigarettes such as tars and other by-products of smoking, and by the irritating effects of smoke on the lung tissue. Addiction to smoking is caused by nicotine itself. Stopping smoking produces withdrawal symptoms within 24 to 48 hours, which commonly include irritability, headaches, and anxiety, in addition to the strong desire to smoke. Tar, in a cigarette, invades the organs and tissues of smokers and non-smokers, adults and children, born as well as unborn, and causes cancer, emphysema, heart disease, fatal growth retardation and other problems during pregnancy. The harm inflicted by all other addictions combined pales in comparison. Smoking-related illness, for example, claims in a few days as many victims as cocaine does in a whole year. Hence, disease is in a cigarette. The initial symptoms of carbon monoxide poisoning are similar to the flu (but without the fever). They include, Headaches, Fatigue, and Shortness of breath, Nausea, and Dizziness. Many people with carbon monoxide poisoning mistake their symptoms for the flu or are misdiagnosed by physicians, which sometimes results in tragic deaths. About 90 percent of all lung cancer occurs in current

or former smokers. The American Cancer Society estimates that 164, 000 new cases of lung cancer are diagnosed annually in the United States. An estimated 157, 000 people die from the disease each year, making lung cancer the leading cause of cancer death in both sexes. According to the Canadian Cancer Society, 20, 500 new cases of lung disease are diagnosed in Canada annually, and the disease causes 17, 400 deaths a year. Cigarette smoking is the single greatest cause of lung cancer. Up to 90 percent of lung cancer patients are smokers, and most of the remainder have been exposed to secondhand smoke. The great majority of lung cancer cases could be prevented and thousands of lives could be saved each year if people quit smoking. Some studies indicate that women are twice as likely as men to develop lung cancer. Researchers have found a gene called GRPR that causes abnormal cell growth in people exposed to cigarette smoke. The gene is more active in women than in men and it may explain why females are more susceptible to lung cancer. According to the American Cancer Society, 41 percent of people diagnosed with lung cancer survive one year after diagnosis; only 14 percent survive five years. If the cancer is discovered while still localized, the five-year relative survival rate is about 50 percent, but only 15 percent of lung cancers are discovered at this stage. Bronchitis, acute or chronic inflammation of any part of the bronchi and bronchial tubes. The bronchi are large delicate tubes in the lungs that are attached to the trachea and carry air to smaller tubes in the lungs. Acute bronchitis is characterized by fever, chest pain, severe coughing, and often the secretion of sputum (mucous material coughed up from the respiratory tract). The disease may be caused by the inhalation of irritant vapors or dust or develop from an upper respiratory infection. Acute bronchitis affects the branches of

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the bronchi and may develop into bronchial or lobular pneumonia. Chronic bronchitis, a serious and incurable disorder, may result from repeated attacks of acute bronchitis. Smoking is the main cause of chronic bronchitis and also has been found to cause acute bronchitis. Emphysema, progressive respiratory disease characterized by coughing, shortness of breath, and wheezing, developing into extreme difficulty in breathing, and sometimes resulting in disability and death. Although the exact cause is unknown, bronchial spasm, infection, irritation, or a combination of the three seem to be contributory. The highest degree of occurrence is among heavy cigarette smokers, especially those exposed to pollute air. Children who suffer from bronchitis or asthma are also susceptible. In recent years emphysema has become a serious public health problem in terms of rapidly increasing numbers of disabilities and deaths. In the course of the disease the passages leading to the air sacs of the lungs become narrowed. Air is trapped in the sacs, and the tissues of the lungs lose their natural elasticity and undergo destructive changes. Symptoms akin to the common cold or asthmatic wheezing may result. As the disease progresses the volume of residual air trapped in the lungs increases, and the volume of each breath decreases. The lungs increase in size, and in severe cases the patient develops a characteristic "barrel chest." The lungs become unable to supply enough oxygen to the body tissues. This reduction in oxygen intake causes the heart to pump faster; consequently, the heart becomes strained. Excessive carbon dioxide in the blood gives the patient a bluish skin color. Although the deterioration in the lungs brought about by emphysema is permanent and irreversible, treatment can give relief and increase functioning capacity. Abstention from smoking is essential, and change of occupation or residence

may be necessary if air pollution or occupational pollution aggravates the condition. Bronchial dilators, special breathing exercises, and antibiotics are also helpful. Therapy is most successful in instances when the disease is diagnosed at an early stage. The term emphysema is also used to describe infiltration of air into connective tissue and between air cells of the lungs.