



## **Risks of smoking on health: Long-term impact**

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### **Abstract**

Risk of smoking is increasing day by day; cigarettes contain toxic chemicals affect negatively on body's health. The unawareness of severe impacts for smoking after long time by adults and teenagers produces health effects whether for respiratory and non-respiratory, probability of lung cancer infection increases for smokers who start smoking at an early age. This research will highlight the long-term effects of smoking on health including: lung diseases, cancers, cardiovascular and diabetes, effects on blood chemistry and smoking impact on pregnancy. Finally the conclusion includes benefits of smoking cessation.

**Keywords:** Smoking, risk, health, long-term effects.



## **1 Introduction**

Tobacco mixture contains more than 7,000 poisons substances. These chemicals cause harm during the passage through human tissues. Every time of smoking human body tries to repair the damage. Continuous damage with time can cause illness. In the inhale; toxic chemicals of tobacco get to the lungs rapidly and reach all organs in the body, it pass from lungs to blood directly, arteries bring blood with toxic substances to tissues. Body cells are subject to damage by continuous smoking of tobacco, immune system will work more time while smoking. Increasing number of white blood cells is one of smoking results and effects on immune system; whereas body generates white blood cells to fight infectivity, damage, and cancers. The continuous work increase stress which cause infection in smoker's body. Infection and diseases occur suddenly; unexpected coagulate of blood, strokes and attacks of heart. Long time of smoking brings more injure. (U.S. Department of Health and Human Services, 2010)

Over 25 infections occur as result of cigarette smoking, infections comprise lung's cancer, severe bronchitis, heart diseases; in addition to cancers of pancreas, urinary bladder, and larynx. Besides that, smoking also bring other bad health circumstances: teeth lossing, reduction in fertility, decrease count of sperm, osteoporosis, diabetes, blindness, weakness, cataracts, asthma, fungal eye disease, early menopause, ulcers of stomach, lung growth reduction, and atherosclerosis. The risk of early death increases within smokers more than non-smokers.



Second-hand smokers also are subject to these health illusions because of the active smokers. (O. Egbe, Petersen and Meyer-Weitz, 2016)

## **2 Long-Term and Short-Term Impacts**

The impact of smoking on health is divided in to short-term impact and long-term impact. Short-term effects include: ulcers, faintness and sickness, problems in breath, teeth's bad color, cavities, mouth sores, increasing in blood pressure, obsession of gingivitis, effect on taste and smell senses. Long-term effects include; cancer of: pharynx, stomach, mouth, larynx, pancreas and esophagus; heart disease which incorporate stroke attack & heart; Leukoplakia disease: causing oral injury on the cheeks and white areas appear on the mouth; and losing bone and tooth. (Utah Department of Health, 2008)

## **3 Lung Diseases**

Performance and size of lungs are abnormal for persons who start smoking from teenage years, during the growth age lungs keep growing, smoking affect the lungs and reduce speed of the growth; this problem raises the COPD risk in coming smoker's years. COPD causes shortage in oxygen level which hurts airways and leads to die lingeringly, so it is considered as the third cause of death disease. Smoking is a source of 8 of 10 COPD patients. This infection cause increased risks and has no cure yet, risk level now is equal for both men and women. Asthma disease cause an obstruction to air flow and closes airways, studies proposed that childs who smoke is threatened with asthma in future. Lung cancer is the most risky type of cancer and the



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main cause of it is smoking, 9 of 10 lung cancer happen because of smoking. (Center for Disease Control and Prevention, 2014)

Work of lung is decreasing with age, smoking decreases the work of lung rapidly, it also decrease the stretch ability of blood vessels, this leads to supply insufficient amount of oxygen to tissues then destroying tissues which damages lung. Fighting infections by lungs is reduced because of smoking, and this will generate cancer cells. (Naveed and Abid, 2015)

#### **4 Smoking and Cancer**

Smoking is reason of cancer; receiving a combination of toxic substances by lungs and carrying it via bloodstream to all body's organs, these toxic substances destroy DNA, reproduction of cells and its tasks are disciplined by DNA. Cells will hysterically grow and change if DNA destroying occurs, and this will lead to cancer. (Center for Disease Control and Prevention, 2014)

Liver Cancer; the major factor of hepatocellular carcinoma (HCC) is drinking alcohol, researchers in this disease presented that smoking impact extends to hepatitis B (HBV) and increases the cancer of liver danger. Smoking is one of factors play role to increase the liver cancer for women. (U.S. Department of Health and Human Services, 2014)

Oropharyngeal Cancer; in general oropharyngeal cancer patients have a 5-year survival and 50% maximum. For smokers oral cancer occurs to the soft palate, the mouth ground and the ventrolateral tongue surface. Rate of oropharynx and oral cavity cancer is increasing to about 5 -



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25 times for persons who smoke heavily. Cancer risk for patients who smoke and drink a lot is 35-time the risk for persons who did not smoke and did not drink. Symptoms of disease are not very distinctive, cancer of squamous cell causes ruddy to tissues appearance, it might appear high< 1 mm or low, surface can be grainy or flat. Cancer cells may also have unharmed outside epithelium, without induration, without ulcerate and with no flow of blood. Smoking and drinking of alcohol extremely increase the danger of oral cancer. (American College of Prosthodontists, 2015)

## **5 Cardiovascular Diseases and Diabetes**

High blood pressure is one of the heart diseases which happen as a result of smoking, in addition to diabetes disease, reducing the amount of oxygen carried by blood and thinning the vessels of blood both increase the heart rate. Smoking increases the risk of heart disease depending on amount of smoked cigarettes. Diabetes rising increases with smoking, elevated triglycerides levels and inferior good-cholesterol levels in the blood happen when smoking damages the lenience of glucose. Coronary heart disease is more likely infects women with diabetes than women have no diabetes. The risk of heart strokes for smoker is twice the risk for non-smoker. (Centre for Addiction and Mental Health, n.d.)

Atherosclerosis, reducing flexibility and narrowing arteries, happens to the walls of arteries after accumulation of cholesterol and fat in the blood which make plaque. This prevents flow of blood to body organs. Production of blood vessels' plaque is increasing with smoking. Death because of enduring brain damage occurs because strokes, strokes dangers are growing



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with smoking, deaths rate as reason of strokes in smokers is higher than non-smoker. Decreasing of supplied blood to peripheral organs such as hands and legs because of narrowing the blood vessels causes Peripheral Arterial Disease, which can lead to organ removal in severe cases. Abdominal Aortic Aneurysm, the aorta part in the abdomen suffers from a swelling or destabilized. The aorta mainly carries saturated blood with oxygen to all body parts. Smoking harms the aorta of abdominal and causes an aneurysm. The risk of death because of Abdominal Aortic Aneurysm is higher for smoker. (Center for Disease Control and Prevention, 2014)

## **6 Effects on Blood Chemistry**

Smoking of cigarette causes a considerable oxidant stress. A number of 1015 oxidant radicals appear in a smoke's breathe and spread uniformly between atoms and gases. Smoking cigarette excites the releasing of extreme radicals' levels by alveolar macrophages, which improve the illnesses of chronic emphysema, inflammatory and bronchitis. Increasing stress of oxidant leads to reduce antioxidants of intracellular in lung through smoking. Long-term smoking modifies the non-enzymatic and enzymatic antioxidant protection systems of aged smokers, changing the reactions of peroxidation and antioxidant status for long-term smokers will lead to accelerate and cause harmful changes in the smoker's body. (D<KEN et al., 2001)

## **7 Smoking and Pregnancy**

The main ecological risk of the unborn happens when the mother smokes cigarettes during pregnancy period; it is most significant preventable reasons of bad pregnancy results. The



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increasing numbers of short and long term illness and death for infant and mother occur because of the exposure to smoking, whereas smoking is most harmful for pregnant and unborn. Consumption of cigarettes during and before pregnancy causes many of undesirable pregnancy effects. Imbalance between the oxidant and antioxidant system happens as result of mothers' smoking, this imbalance affects negatively on cellular intensity and the hereditary of fetus and mother, and leads to a lot of infections in the unborn baby. Decreasing the fetal and motherly morbidity is very important by help, hold up and develop education. Public health precedence must control and limit smoking. (Mund et al., 2013)

## **8 Conclusion**

The main damage of health comes from smoking, impact of smoking on health is divided to short-term impact and long-term impact; short-term impact includes health problems which happen at the beginning, long-term impact includes disease and severe problems happen after long time of smoking such as respiratory diseases, cardiovascular illnesses, diabetes, cancers, in addition to bad effects on pregnancy leading to problems for the fetal health. Stopping smoking will prevent all health impact caused by toxic chemicals in tobacco. Many benefits of stopping smoking including: improving the physical and mental health, maintain the balance of blood, decreasing the probability of serious diseases caused by smoking such as lung cancer, coronary heart disease, heart strokes, for pregnancy stopping smoking will absolutely prevent health's problems related to the unborn.

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