

Smoking - Hazardous to our health: 'an overview'

Babu Lal,

Department of Pharmacy,
 Tirupati College of Polytechnic & Pharmacy,
 Sardulgarh Road, Ratia, Dist. Fatehabad (Haryana), Pin-125051
 lab_85@rediffmail.com



ABSTRACT

The word of smoking, drinking smoke is very famous all over the globe. The practice of Dhumrapana is common in human beings from the last two thousand year's to induce consciousness. Soon, the recreational use of tobacco became a part of the elite culture throughout the world and shows remarkable value in large scale productivity (multibillion dollar business) ^[1]. Botanically, tobacco is achieved from the dried leaves of *Nicotiana tobacum* Linn (var. *macrophyll*, *N. chinensis* Fisch), commercially cultivated on small scale to large extent in China, United States and India. The tobacco contains pyridine-piperidine type of alkaloids, among which the most prominent is nicotine. Nicotine, well known as natural botanical insecticide weighs 0.6-3.0% of dried leaves which is synthesized in roots and accumulated in the leaves. Smoking was practiced by early priests to diagnose, heal the bizarre persons and to fend off evil spirits. As time passes, smoking tobacco becomes more than just a ritualistic comportment. However, the pattern has now been endorsed to the growing numbers of ailments, birth defects, and deaths. Worldwide, approximate 4.9 million and alone in United State (US), smoking is the reason for 434,000 deaths per year ^[2] and every day 14,000 peoples die because of smoking-related diseases. Today, medical studies have proven that smoking tobacco is among the leading sources of lung cancer, heart attacks, chronic obstructive pulmonary disease (COPD), and erectile dysfunction and can also lead to teratogenic effect. Moreover, active smokers are not the only ones in severe danger but people lives around them, bystander's or passive smoker affected much more accumulating the health-related effect brought about by the emitted dangerous chemicals (smoke) from a cigar or cigarettes. In fact, 33 percent of the nonsmoker population in the US is exposed with environmental cocktail of tobacco smoke ^[3].

Keywords: Smoking, Culture, Mortality, Campaign

INTRODUCTION

In the 19th century the practice of smoking opium became common. Previously it had only been eaten, and then primarily for its medical properties. In modern era, most common method of smoking today is through cigarettes (like gold flake, four square, red & white etc.) but also hand-rolled from loose leaves and rolling paper. Other smoking implements include pipes, cigars, hookahs, bidies,

vaporizers, and bongs. People had used these things in their own ways, either by chewing, drinking as a tea, or inhaling as a powder. Cigarette is a common teratogen, an agent that causes damage to the developing organism during pregnancy. Nicotine is the principal alkaloid reported (1.5%) in commercial cigarette, which rises quickly during a smoke and peak label at the completion of smoking. The rapid absorption of nicotine from cigarette

How to cite this article: B Lal, Smoking - Hazardous to our health: 'an overview', 2014, 2(2), 141-146

smoke through the pulmonary respiration, due to the huge surface area of the alveoli and small airways, and dissolution in the fluid in the human lung facilitates transfer across membranes. After a puff, high levels of nicotine reach the brain in just 10–20s, faster than with intravenous administration, producing rapid behavioral reinforcement ^[4]. The California Environmental Protection Agency (CAL/EPA) has identified tobacco smoke contain nicotine, a chemical substances which is oily, pale yellow substance and turns brown when in contact with oxygen. It can be used as an insecticide that is harmful to unborn children. Comparatively tobacco is more common drug for smoking then cannabis and opium, a highly addictive as well as poisonous. Some of the substances are classified as hard narcotics, like heroin, but the use of these is very limited as they are often not commercially available. In the developing world, however, tobacco consumption continues to rise at 3.4% in 2002 ^[5]. In Africa, smoking is in most areas considered to be modern, and many of the strong adverse opinions that prevail in the West receive much less attention ^[6]. A massive increase in tobacco smoking in China was more or less directly prompted by the British trade deficit with Qing dynasty, China. Today Russia leads as the top consumer of tobacco followed by Indonesia, Laos, Ukraine, Belarus, Greece, Jordan, and China. The 2/3rd tobacco market is controlled by Britain, America and Japan.

GLOBAL EFFECT OF SMOKING

Smoking is one of the leading causes of unnecessary death globally. In the United States about 500,000 deaths per year are attributed to smoking-related diseases and a recent study estimated that as much as 1/3rd of China's male population will have significantly shortened life-spans due to this bad habit ^[7]. Male and female smokers lose an average of 13.2 and 14.5 years of life, respectively ^[8]. As compare with non-smoker, at least half of all lifelong smokers die

earlier as a result of smoking ^[9]. The risk of dying from lung cancer before age 85 is 22.1% for a male smoker and 11.9% for a female current smoker, in the absence of competing causes of death. The corresponding estimates for lifelong nonsmokers are a 1.1% probability of dying from lung cancer before age 85 for a man of European descent, and a 0.8% probability for a woman ^[10]. Smoking one cigarette a day results in a risk of heart disease that is halfway between that of a smoker and a non-smoker. The non-linear dose response relationship of smoking explains the effect on platelet aggregation ^[11].

GLOBAL STATISTICS FOR SMOKING

Most tobacco smokers instigate smoking during adolescence or early adulthood. Smoking has elements of risk-taking and rebellion, which often appeal to young people. The presence of high-status models and nobles may also encourage smoking. Study show that 9 out of 10 tobacco users start smoking before they reach 18. There are a variety of reasons for that bad habit in youth. 1 out of 8 youth boys will say that, smoking is “cool” while 2 out of 8 youth girls use it to keep them slim. Others (1 in 5) start smoking due to their smoker friends and it really influences them to do so. Globally about 0.8-1.0 lac children every day start to smoke and about half (50%) of young teens assumes to begin this in the age of 15 -20 years. Most of the teenager smokers believe that they have a very strong ritualistic bonding with other smokers (friends, relatives or social persons) and feel happiness with swirl and ring chain of smoke. Smokers often experience that cigarettes helps them to get rid of stress. However, the stress levels of adult smokers are slightly higher than those of nonsmokers. A global study estimated 1/3rd of male adult population significantly smokes. Globally, one in ten adults has been killed by smoking-related disease or causes 4 million deaths. If trend continues, 1 in 6 people will die in 2030.

Adolescent smokers report increasing levels of stress as they develop regular patterns of smoking and smoking cessation leads to reduced stress level. Far from acting as an aid for mood elevation, nicotine dependency seems to worsen stress. This is confirmed in the daily mood patterns described by smokers, with normal moods during smoking and worsening moods during small interval between cigarettes. Thus, the apparent relaxant effect of smoking only reflects the reversal of the tension and irritability that develop during nicotine depletion. Tobacco (Nicotine) causes addiction and addictive smokers need nicotine to remain feeling normal^[12]. Because teenagers are influenced more by their peers than by adults^[13], attempts by parents, schools, and health professionals at preventing people from trying cigarettes are often ineffective.

QUIT SMOKING & IDENTIFY A SMOKER

For those who do not smoke, these might sound like futile explanations behind smoking. Because, they are well aware from the hazards of that evil habit like;

* Cigarette smoke lefts an unpleasant smell on everything around the smoker (clothes, car & home).

* A nagging cough and discomfort breathing may bother whole day.

* A feeling of dizziness, severe headache and occasional migraines after smoking too much cigarettes.

* Cigarettes smoker shows flaunted yellow skin, tooth and fingernails.

* A smoker felt lot of phlegm, which may force him to clear voice regularly and sometimes we may lose our voice in middle of a sentence.

* Some other disorders are hypertension, anxiety, nausea lingering colds and bronchitis.

* The person, who smokes feel inadequacy, restlessness and dependence of smoking.

* Lack of motivation as well as the energy to do anything in smoker is very common.

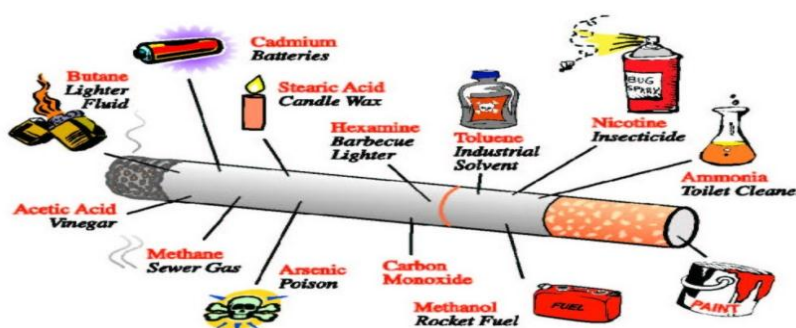
* The sense of smell and taste are diminished.

* Above of all, there is wastage of hard earned money with our health.

Surely, the consecutive bad impacts outnumber the prosaic and speak more prudently. Also, they should provide the reasons enough to leave this dangerous habit at the earliest.

CHEMICALS INVOLVED IN CIGARETTE

Think before picking up a cigarette? It is better to know about the toxic ingredients present in cigarette i.e. Acetic Acid (vinegar), Ammonia (floor and toilet cleaner), Arsenic (poison), Butane (cigarette lighter fluid), Cadmium (rechargeable batteries), Carbon Monoxide, DDT (dichlorodiphenyltrichloroethane as insecticide), Ethanol (alcohol), Formaldehyde (preserver for bodies and tissues), Hydrogen Cyanide (gas chamber poison), Methane (swamp gas), Methanol (rocket fuel), Naphthalene (mothballs) and Nitrobenzene (gasoline additive) with below mentioned image.



SMOKING - DANGEROUS TO BODY

Among the various diseases, vascular stenosis, COPD, lung cancer ^[14] and heart attacks ^[15] are very common. Smoking during pregnancy may cause ADHD (attention deficit hyperactivity disorder) to a fetus ^[16] and a risk factor in Alzheimer's disease ^[17]. Moreover, fifteen (15) cigarettes per day have been shown to exacerbate the symptoms of Crohn syndrome-an inflammatory bowel disease ^[18]. Smoking has been shown to actually lower the prevalence of ulcerative colitis ^[19]. Moreover, in our respiratory system, smoking cause many diseases like; chronic bronchitis, asthma, tuberculosis and pneumonia.

RELATIONSHIP BETWEEN SMOKING AND PREGNANCY

With the modernization of cigarette production with the increased life expectancies during the 1920s, adverse health related effects began to become more prevalent. Smoking during pregnancy is associated with many adverse effects outcomes for children as well as negative consequences for child health and development. Early in pregnancy, increases risk of certain rare abnormalities, including malformation of the limbs and the urinary tract.

RELATIONSHIP BETWEEN SMOKING AND CANCER

Smokers are more likely to develop cancer; in lungs, throat, esophagus and mouth. It is approximated that 90% of lung cancer cases are associated with smoking. A lengthy study conducted in order to establish the strong association necessary data for legislative action. In the UK and the USA, an increase in lung cancer rates, formerly "among the rarest forms of disease", was noted by the 1930s, but its cause remained unknown and even the credibility of this increase was sometimes disputed as late as 1950. For example, in Connecticut (southernmost state in the northeastern region of the United States known

as New England), reported age-adjusted incidence rates of lung cancer among males increased 220% between 1935–39 and 1950-54. In the UK, the share of lung cancer among all cancer deaths in men increased from 1.5% in 1920 to 19.7% in 1947. In India, approximately 275 million tobacco users are present and it is estimated that around 1.5 million tobacco-related deaths annually by 2020 ^[20].

ANTISMOKING ACTIVITIES

Many governments are trying to safe people life from smoking with anti-smoking campaigns in mass media stressing the harmful long-term effects of smoking. California's Tobacco Education and Media Campaign (TEMC), one of the largest tobacco control programs implemented by the state government. In recent years, California invested approximately \$25 million annually in the TEMC, about 20.1 percent of the total expenditures of the tobacco control program. It aims at changing to Passive or secondhand smoking, which affects people in the immediate vicinity of smokers, is a major reason for the enforcement of bans. This is a law enforced to stop individuals smoking in indoor public places, such as bars, pubs and restaurants. The idea behind this is to discourage smoking by making it more inconvenient, and to stop harmful smoke being present in enclosed public areas. A common concern among legislators is to stop smoking among minors and many states have passed laws against selling tobacco products to underage customers (establishing a smoking age). Many developing countries have not adopted anti-smoking policies, leading some to call for anti-smoking campaigns and further education to explain the negative effects of environmental tobacco smoke in developing countries. Tobacco advertising is also sometimes regulated to make smoking less appealing. Despite the many bans, European countries still hold 18 of the top 20 spots, and according to the ERC (a market research

company), the heaviest smokers are from Greece, averaging 3,000 cigarettes per person in 2007^[21]. Rates of smoking have leveled off or declined in the developed world but continue to rise in developing countries. Smoking rates in the United States have dropped by half from 1965 to 2006, falling from 42% to 20.8% in adults^[22].

The effects of addiction on society vary considerably between different substances that can be smoked and the indirect social problems that they cause, in great part because of the differences in legislation and the enforcement of narcotics legislation around the world. Though nicotine is a highly addictive drug, its effects on cognition are not as intense or noticeable as other drugs such as, cocaine, amphetamines or any of the opiates (including heroin and morphine).

CONCLUSION

Tobacco kills more people every year than human immunodeficiency virus (HIV), illegal drugs, alcohol abuse, accidental crashes, suicides, and murders (combined). Out of 1.2 billion and 1/3 of the adult population can be prevented from smoking by education and consultant by physicians of children and adolescents. Teenagers are influenced more by their peers than by adults while the possible

attempts made by parents, schools, and health professionals for the prevention of smoking are often unsuccessful. It has been found to be effective in decreasing the risk of tobacco use. It should be removed from our culture, message to community in various art forms (*skull with a Burning Cigarette*). The rise of the modern anti-smoking movement by camps in the 20th century did more, than create awareness from hazards of smoking or by e-cigarettes. In the developing world, tobacco free initiative (TFI) in order to reduce rates of smokers and smoking are running very well in professional life. The social life of smoker should be altered more as per view of a village (bullakheri) of jind (Haryana) where smoking and smokers is banned from last 400 years. Like this, remarkable initiative action for rural as well as urban and developed cities to be taken for the sake of our dear young ones and peoples. Smoking should be removed and license issued by antismoking central authority with praise certificate for smoking free environment in various official agencies, physician organizations, schools, colleges, institutes, universities, public, private & government places have put forth guidelines in this regard. It could not be completed without peoples own will power and effective, strong punishment as per law, rule and regulations.

↓ REFERENCES

1. Sander L. Gilman and Xun Zhou, "Introduction" in *Smoke: A Global History of Smoking*; 2004; 20-26
2. Environment Protection Act, Gazette 21.10.2011; 4289
3. Movahed and Milne, "The Effect Of Second Hand Smoking On Chronic Cough And Sputum Production" 2006; 130; 4
4. N. L. Benowitz., *Clinical pharmacology of inhaled drugs of abuse: implications in understanding nicotine dependence*. NIDA Research Monograph, 1990; 99:12–29
5. WHO REPORT on the global Tobacco epidemic 2008; 267–288
6. WHO/WPRO-Smoking Statistics". World Health Organization Regional Office for the Western Pacific; 2009; 01
7. en.wikipedia.org/w/index.php?title=Smoking&oldid=573484516
8. West, Robert and Shiffman, Saul, "Fast Facts: Smoking Cessation" Health Press Ltd. 2007; 28
9. Thun MJ, Hannan LM, Adams-Campbell LL, Boffetta P, Buring JE, "Lung cancer occurrence in never-smokers: An analysis of 13 cohorts and 22 cancer registry studies" *PLOS Med* 2008; 5; 9; 185

10. en.wikipedia.org/wiki/Smoking/cite_note-41
11. Parrott, Andy C., "Does cigarette smoking cause stress" American Psychologist; 1999;54;10; 817-820
12. American Legacy Foundation factsheet on lung cancer; their cited source is: CDC (Centers for Disease Control), The Health Consequences of Smoking: A Report of the Surgeon General 2004
13. Nyboe J, Jensen G, Appleyard M, Schnohr P, "Risk factors for acute myocardial infarction" Copenhagen City Heart Study;European Heart Journal 1989;10;10; 910-6
14. Devereux G, "ABC of chronic obstructive pulmonary disease. Definition, epidemiology, and risk factors". BMJ 2006; 332:1142-1144
15. Braun JM, Kahn RS, Froehlich T, Auinger P, Lanphear BP, "Exposures to environmental toxicants and attention deficit hyperactivity disorder in U.S. children". Environmental Health Perspect; 2006;114;12;1904-9
16. Cataldo, J.; Prochaska, J.; Glantz, S, "Cigarette Smoking is a Risk Factor for Alzheimer's Disease: an Analysis Controlling for Tobacco Industry Affiliation". Journal of Alzheimer's disease;2010;19;2;465-480
17. Cosnes J, et al., "Effects of current and former cigarette smoking on the clinical course of Crohn's disease" Aliment Pharmacol Therapy;1999;13;11;1403-11
18. Calkins BM., "A meta-analysis of the role of smoking in inflammatory bowel disease". Dig. Dis. Sci.;1989;34;12;1841-54
19. Lakatos PL, Szamosi T, Lakatos L, "Smoking in inflammatory bowel diseases: good, bad or ugly" World J Gastroenterol;2007;13;46;6134-9
20. D. Behera, "lung cancer in india" New Delhi; 2012; 401-07
21. Doll et al., "Smoking and carcinoma of the lung. Preliminary report" British Medical Journal 1950;2;4682;739-748
22. gadling.com/2008/05/12/which-country-smokes-the-most