



Lifestyle Factors: Causes and Concerns

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Abstract

The growing rate of cancer more in younger generation is an issue of concern. Lifestyle factors like cigarette smoking, alcohol drinking and caffeine, heavy user of cell phone, illicit drug use, and exposure to different kind of toxicants available in environment through eating, drinking, have been found a cause of concern. The networkings of lifestyle factors are very broad and effective for the human health. This may cause infertility, neurodegeneration, different type of cancers, and more frequency obesity. The study mainly focused to explore the possible mechanism of causes and concerns based on cell phone use, cigarette smoke and alcohol drinking. These lifestyle factors are more common in society and effecting human health solely and silently.

Introduction

The most demanding issues of concern in 21st century is an influencing lifestyle factors and human health. Lifestyle factors mostly concerned with show-off things in the society. Cigarette smoking, alcohol drinking, heavy use of cell phone or electronic gadgets, eating mostly fast food, passionate to adopt modern culture including late night parties etc. are some of most defined causative lifestyle factors in teenagers and adults. This article mainly discuss about three concerning factors, 1) cell phone use and 2) cigarette smoking, and 3) alcohol drinking, because these are equally responsible for causing diseases like cancer or infertility. This article explores the existing mechanism and possible pathway of causing diseases through the Brain, liver, lung and testis. Lifestyle factors may indirectly affect the enzyme and hormonal changes and cause cancer progression as presented in figure 1. The networkings of lifestyle factors are very broad and effective for the human health. Therefore, this study mainly focus on the following factors as.

Cell phone use

Teenagers and adults are mostly heavy users of cell phone. Using cell phone for longer period has causative impact on brain as well as other body organs. The most common concerns include impaired sperm quality [1-5], liver [6,7], neurological dysfunctions [8-10,7] and histopathological changes such as cell injuries [7,11-15]. Therefore, Radiofrequency Electromagnetic Field (RF EMF) and Extremely Low Frequency Magnetic Field (ELF MF) were classified as a 'possibly carcinogenic to humans' (group 2B) by the International Agency for Research on Cancer [16, 17]. Also at higher frequency level, International Commission on Non-Ionizing Radiation Protection reported that the Specific Absorption Rate (SAR) of mobile phones is legally limited to 2.0 W/kg [18]. In the USA, Canada and Australia, the maximum Specific Absorption Rate (SAR) level is limited to 1.6 W kg⁻¹ and 2.0 W kg⁻¹ in Europe [19], but most have an average SAR of ~1.4 W/kg [5].

The use of cell phone at various position also matters, as if keeping cell phone in trouser pocket may decrease sperm count, keeping cell phone near brain while talking may cause brain related diseases. In the present scenario, cell phone has been found most significant lifestyle factor. The pathway of EMF interaction and possible causes are presented in (Figure 1).

Cigarette smoking cause cancer

Cigarette smoking is another lifestyle factor where about 480,000 premature deaths each year were recorded in the United States due to cigarette smoking and tobacco exposure [20]. Cigarette smoking in teenagers and adults mostly seen as a fashion or show off. In another word, youngsters feels a best way to impress lover. United States Department of Health and Services reported that smoking causes cancers of the mouth, lung, bladder, esophagus, throat, kidney, liver, pancreas, stomach, colon, rectum, and also responsible to cause acute myeloid leukemia, inflammation and impairs immune function [20-22].

The secular trend in lung cancer histology indicates that the proportion or incidence of lung adenocarcinoma has been increasing markedly over the past two decades. Such cancer may partly due to the introduction of filter cigarettes and secondary-smoking because the people are

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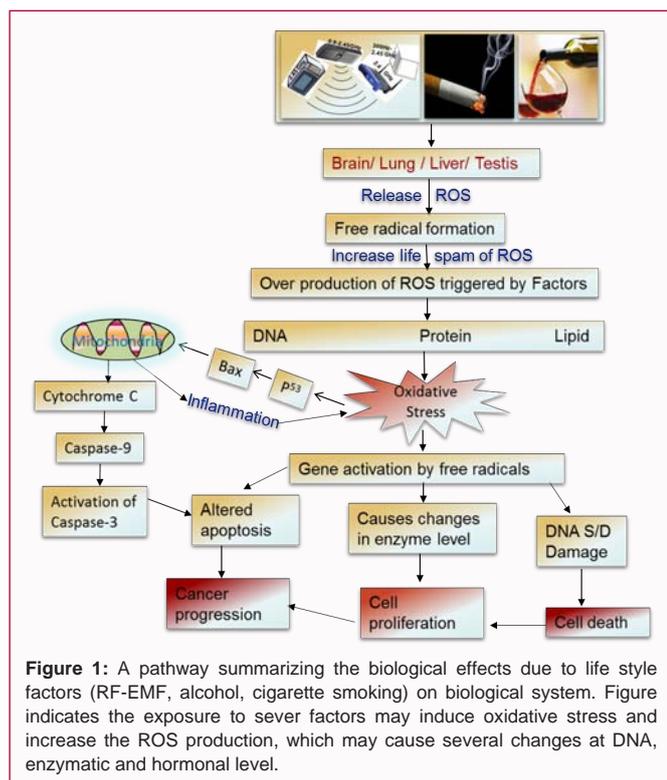
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more exposed to higher amounts of nitrogen oxides, nitrosated compounds, and lung-specific smoke carcinogens [23, 24]. The smoke of cigarette induce the oxidative stress and cause several level of biological changes. Issue of concern is especially for the people who are chain smoker as they are more prone to cancer disease. This is very dangerous for our new generation, in which it may developing as fashionable lifestyle factor. The networking of pathway of cigarette smoking and their effects are presented in (Figure 1).

Drinking alcohol

Alcohol drinking is the fifth leading cause of disease freight and injury [25]. Alcohol drinking may linked with many diseases such as cardiovascular diseases, different types of cancer, infections and liver disease [26], pathological changes in the brain [27]. Kiiianmaa et al. [28] reported that an increased blood alcohol concentration might contribute in coordination and reaction speed decline and sleepiness, impairment in memory, loss of consciousness and even death. Consumption of alcohol in limited way has always less chances of cancer development, however, the greatest risks are observed with heavy, daily or long-term use [29]. According to the world health organization, each year approximately 3.3 million deaths worldwide result from the harmful use of alcohol [30]. Alcohol is also considered as a lifestyle factor especially in youngsters where survey demonstrates that 12% to 14% of adults have a current alcohol use disorder and that 29% have had at some point in their lifetime [31, 32]. World Cancer Research Fund/American Institute for Cancer Research (AICR) and International Agency for Research on Cancer (IARC) has assessed the evidence to be convincing that drinking alcohol was a cause of cancers of the oral cavity, pharynx, larynx, esophagus, breast, liver and colorectum (in men)[33,34]. Why the consumption of alcohol linked to social status in our lifestyle or work pressure? Pressures of one's work life might also encourage alcohol drinking as an attempt to cope with work-related stress reported by Heikkila et al. [35]. This is very strange misconception about alcohol and cigarette that the

use of these may decrease the stress level. Several researches shows that heavy use of cigarette, alcohol or cell phone may increase the stress level and lead to cancer or associated diseases also indicated in (Figure 1).

Conclusion and Future perspectives

The evidences show that the lifestyle factors are highly effective and concerned to the teenagers and adults. Smokings, drinking alcohol or heavy use of cell phone are directly connected to the different type of cancers. Study concludes based on evidences that the limited use of any lifestyle factors have less chances of cancer development however, the greatest risks are observed with heavy, long-term use either they are chain smoker, daily alcohol drinker or cell phone user. Radiation is a big area of concern in 21st century, due to drastically increase in technology. The future perspectives suggest to work on the factors simultaneously to see the effect size individually as well as together. This will give us preliminary data on the most responsible factor of causing cancer or associated diseases. It will be highly interesting to see the comparative data presenting the effect size based on different parameters. This will provide us to upgrade the already existing guidelines.

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