LIFE STYLE RELATED HEALTH HAZARDS
Parle Milind*, Malik Jyoti, Kaura Sushila
Pharmacology Division, Department Pharm. Sciences, Guru Jambheshwar University of Science and Technology, Hisar, Haryana, India
*Corresponding Author Email: mparle@rediffmail.com

ABSTRACT
Our lifestyle is determined by our normal patterns of living. Life has become fast, ambitious and materialistic now-a-days. Routine day to day activities such as continuous use of Mobiles, long hours at computers/television and late night sleeping habits lead to chronic diseases. These diseases are avoidable and do not result from an acute infection, injury nor do they spread from one person to the other. Bad lifestyle deteriorates the quality of life. The main factors contributing to lifestyle diseases include bad food habits, sedentary lifestyle, wrong body posture, and disturbed biological clock. Younger generation has been found to be afflicted with lifestyle ailments such as Obesity, Depression, Chronic backache, Diabetes, Hypertension, Arthritis, Spondylitis, Atherosclerosis, Angina, Asthma, Hepatitis and Defective Hearing, and Poor Eyesight. However, these lifestyle diseases can be prevented by smart appropriate alterations in the routine lifestyle patterns.

Keywords: Sleep, Diet, Smoking, Computers, Mobiles.

INTRODUCTION
Life has become fast, ambitions and materialistic in the model world today. Common day to day activities (lifestyle) such as continuous use of Mobiles, long hours at computers/television and late night sleeping habits often cause serious health hazards. Our lifestyle is determined by our normal patterns of living, such as, when we eat, how much we eat, when and how much we sleep, what type of physical activity we undertake. All these routine activities contribute to our lifestyle. Bad lifestyle has been found to be in motion chronic diseases such as Diabetes, Hypertension, Arthritis, Atherosclerosis, Angina, Asthma, Hepatitis and Impaired Hearing and Poor Eyesight. These diseases are usually subjective and non-communicable.

What Is Lifestyle??
A lifestyle is the pattern of living that we follow. It includes how and where, we work, what and when we eat, how and when we sleep, how much physical activity we undertake and whether we smoke or not consume alcohol or not. Lifestyle diseases are chronic in nature and do not result from an acute infection or injury. Bad lifestyle consequently results in development of physiological abnormalities in the body at initial stage and pathological changes on long term. Furthermore, they deteriorate the quality of life. In the beginning, they may not be any symptoms but once the disease sets in, there would be a long chain of clinical signs and complaints. Lifestyle diseases have now become common in India. These diseases show higher frequency in the younger or productive age group. Lifestyle diseases are those diseases, whose occurrence is primarily based on the daily habits of people and result from an inappropriate or excessive dependence on these habits. The main factors contributing to lifestyle diseases include bad food habits, physical inactivity, wrong body posture, and disturbed biological clock. A report, jointly prepared by the World Health Organization (WHO) and the World Economic Forum, says India will incur an accumulated loss of $236.6 billion by 2015 on account of unhealthy lifestyles and faulty diet. According to a survey conducted by the Associated Chamber of Commerce and Industry (ASSOC-HAM), 68 % of working women in the age bracket of 21-52 years were found to be afflicted with lifestyle ailments such as obesity, depression, chronic backache, diabetes, arthritis and hypertension. Around 10 % of the adult population suffers from hypertension in India, while the home-country is the world capital of diabetic patients. Three out of every 1,000 people suffer from stroke. The number of deaths due to heart attack has increased to 2 million in 2010. Since, these are chronic conditions; they are a financial burden for lifetime. Therefore, there is an increasing concern now-a-days about prevention of these lifestyle diseases. Majority of the lifestyle factors associated with development of such diseases are modifiable like food habits, physical activity level, addiction (smoking, drinking), computer/mobile use etc.

How Diet Affects Health?
Healthy diet comprises of minimally processed food items, and is dense in natural nutrients, rich in fiber and vitamin content. This diet, when eaten in moderation at fixed hours in a day, sustains growth, helps in wear and tear of body cells, maintains the body functions and promotes longevity. A balanced diet provides adequate nutritional needs and allows for unexpected energy demands providing a cushion as and when needed. Deficiency of nutrients in diet lead to malnutrition whereas, excessive fat intake results in overeating or obesity. Eating and drinking are paramount to maintaining life, but unfortunately, are also linked with a multitude of potential fatal health risks. These risks are not to be taken lightly, as evident by the current increase in obesity related diseases in the developed world. World Health Organization (WHO) defines obesity as a condition in which excess body fat has accumulated to such an extent that normal physiology of the body is adversely affected. The body weight is also expressed in terms of Body Mass Index (BMI); this is the ratio of weight in kilograms to the square of height in meters. The BMI is used to label a person's body weight as underweight (BMI less than 18.5), normal weight (BMI 18.5-24.9), overweight (BMI 25–29.9), or obese (BMI greater than 30). Being overweight/obese can lead to a range...
of diseases such as hypertension, dyslipidemia, gall bladder disease, sleep apnea, osteoarthritis, rheumatoid arthritis, lower back pain, diabetes mellitus and indigestion. Obesity greatly increases the risk for bladder cancer, colorectal cancer and coronary artery disease. Central obesity/tummy bulging has been associated with metabolic syndrome like Type 2 Diabetes, high triglyceride levels, high cholesterol levels, and insulin resistance. The condition is strongly atherogenic and predisposes to an elevated risk of diabetes and cardiovascular diseases. Gout is a fall out of higher intake of added sugars, sweetened drinks or purine - rich foods (e.g. red meats, sweet breads, vegetables like asparagus, broccoli or artichokes) resulting in higher blood levels of uric acid, or hyperuricemia. Potential food allergens (including dairy products, wheat, corn, preservatives, and food additives) and refined foods (such as white breads, pastas) should be eliminated from diet. In general, meat or seafood consumption (high-purine foods) increases the risk of gout attacks, while dairy food consumption seemed to reduce the risk. Breakfast skipping for reducing body weight or attaining slim figure by girls particularly has resulted in unpredicted weight changes. The prevalence of obesity in Punjabi community is found to be higher in middle aged women particularly compared to South Indian women owing to their food habits. Furthermore, higher incidence of Type 2 Diabetes and Cardiovascular diseases is observed in urban population as compared to rural population owing to junk food consumption and stressed life in urban areas.

**Why Refrain From Smoking?**
According to National Family Health Survey (NFHS) the prevalence of smoking in men was 33 %, whereas in women it was found to be only 2 %. In the context of using tobacco in other forms the prevalence in males was 57 % and females 11 %. In the Indian context tobacco is consumed in the form of pan masala, gutkha, tambaku, cigarettes or bidis. Smoking is a major cause of lung cancer, oral cancer, cardiovascular diseases, asthma and chronic obstructive pulmonary disease (COPD). Research indicates that smoking can reduce life expectancy by seven to eight years.

**How Harmful Is Drinking Liquor?**
Alcohol consumption has been steadily increasing in developing countries like India and decreasing in developed countries recently. Unfortunately, drinking liquor has become a fashion now days. Beer, whisky, rum, gin are commonly consumed in parties, marriage functions and get together functions as social drinks by youngsters unaware of its adverse effects. All alcoholic beverages contain the same agent, ethyl alcohol, though in varying proportion. Generally, men drink much more than women do. Often drinking of liquor is resorted to forget the setbacks of life. The mean age of initiation of alcohol use has decreased from 34 years to 15 years in 2013. Alcohol abuse has produced family break-ups and bankruptcy among the rural as well as urban population. Alcohol is a depressant drug that slows down the activity of the brain, induces vomiting, and does not help relieve tension or solve problems. It contains absolutely no nutrients. Alcohol needs no digestion and is absorbed rapidly into the blood stream. Cold showers or coffee do not remove the effect of alcohol from the body. Alcohol users develop alcohol dependence and become addicts soon. Anybody can become an alcoholic; Age, education, intellect or socio-economic status has nothing to do with it. After the first drink, the person usually increases the quantity and frequency of drinks and continues drinking even though alcohol causes problems to his health, work- life, family or social relationships. With proper counseling, treatment and family support, it is possible to give up drinking totally and live without alcohol. However, as with other diseases, the earlier the help is sought, the lesser the damage and better the recovery. Alcohol is a toxic substance that can affect each and every organ of the body. The major health problems associated with excessive alcohol intake are listed below.

**Alcohol**
- Slows down functioning of the stomach and interferes with digestion
- Irritates the lining of the food pipe and stomach
- Causes gastritis and ulcers
- Increases incidence of stomach cancer as well as lung cancer
- Lead to fatty liver and alcoholic hepatitis (jaundice- like symptoms)
- Damages the liver permanently causing cirrhosis
- Depresses the brain, impairs memory and concentration
- Causes loss of inhibitions and affects judgment and coordination
- Triggers psychiatric problems
- Damages brain cells permanently
- Interferes with normal heart rhythm
- Alcohol can reduce the excretion of uric acid by the kidneys.
- Excessive alcohol use can damage blood vessels and weaken heart muscles
- Alcohol produces Neuritis, tingling sensation, tremors in hands and feet
- Pancreatitis (painful inflammation of the pancreas)
- Degeneration of muscles due to protein loss
- Malnutrition leading to many problems ranging from tiredness to poor memory
- Sexual performance: Alcohol increases the sex drive but takes away the performance.
- Teratogenicity: Alcohol crosses the placental barrier producing retarded babies.

**LONG TERM COMPUTER USE**
Computers have not only made our life easy, but have also complicated it by introducing new diseases such as Carpal tunnel syndrome, strenuous eyes, spondylitis, back pain and neck injuries. However, these health risks can be avoided by taking certain precautions as regards posture and maintaining good distance from the monitor of the computer to eyes. Do not spend long hours at computers, but take short breaks after every hour. Humans were not meant to sit for 6 to 12 hours at stretch staring at the display screen. The heat generated by laptops kept on the male’s lap causes reduction in sperm count.

**Carpal tunnel syndrome**
It is described as “swelling inside a narrow “tunnel” formed by bone and ligament of the wrist. This tunnel surrounds nerves that conduct sensory and motor impulses to and from the hand. Swelling in this tunnel leads to pain, tingling, and numbness. Of all the conditions that could be linked to computers, this syndrome is the most noteworthy.

**Eye Strain**
Another problem caused by computers, is eye strain and impairment of vision, which is commonly known as
Computer Vision Syndrome\(^7\). According to optometrists, roughly 10 million patients are found to be associated with vision problems linked to Video Display Terminals (VDTs). Common vision problems include eye strain, blurred vision, double vision, headaches and dry/irritated eyes. To combat these problems, experts again advise regular breaks to minimize strain on the eyes. Increasing the size of the display or text to avoid strain, and maintaining an optimal distance from the screen to the eyes are some simple precautionary measures.

Back and Neck Injuries
Laptops have been responsible for shoulder, back, and neck injuries. Slinging a laptop bag over the shoulder for carrying it to work-place or home imposes a burden on the back/shoulder. Laptops today weigh beyond 20 pounds. Young executives underestimate the risks involved with slingling heavy objects onto their shoulders. Consider carefully lifting the laptop and not just slingling it like a common backpack. It is better to use specially designed laptop bags. Injuries in the neck, back and wrists are caused by frequent repetition of the same activity over a long period of time\(^6\). A human body is just not designed to stare at the computer screen for long hours. The front neck muscles will slowly grow shorter and tighter, while the muscles in the back of the neck will grow longer and weaker. The stiffening of the neck is also a common problem along with headache, fatigue and exhaustion. Wrong sitting or standing postures, while working strains the backbone and gives a chronic back pain. The best way to prevent these injuries is to take frequent breaks and stretch out your body after every 30 minutes.

Dry eye syndrome
It is a complex of symptoms in which eye complaints increase due to situations such as air conditioning, wind etc leading to increased vaporization of tears. Long-hours reading and computer use may lead to a decreased blinking reflex.

Correct Posture
Appropriate posture is the key in preventing many injuries associated with computers. Proper posture includes sitting straight, using a footrest, periodical breaks and proper typing stance.

EXCESSIVE MOBILE USE
Human exposure to radiofrequency radiation has increased dramatically during recent years from widespread use of mobile phones. Radiofrequency radiation has been found to have a carcinogenic effect\(^6\). Animals studies have established a number of adverse effects attributable to excessive mobile phone use like infertility, reduction in attention, poor memory, slow reflexes, leakage in blood-brain barrier, irritability, hormonal imbalance, sleep disturbances, headache and hearing disturbances. Non-ionizing radiation, with long wavelength and low frequency, does not break chemical bonds, but has sufficient energy to move electrons and heat body tissue, leading to harmful effects on the body\(^6\). The majority of studies examining biological effects of cell phone radiation have focused on the potential of cell technologies to cause cancer, nervous system disorders, and adverse reproductive effects. When smart phones are used for 10 years or longer, and when these were used mainly on one side of the head, the risk of malignant brain tumor\(^6\) is doubled for adults and is even higher in younger generation with first use before the age of 20 years. There is a direct statistically significant, association between cell phone use and migraine. Whether it’s the increased use of cell phones by children, or the overall increase in cell phone use by adults, human exposure to electromagnetic radiation is happening in ways never dreamed of before. Very young children are using them, teenagers live on them and some even sleep with them on their pillows, as cell phones also serve as alarm clocks. As the science has matured, electromagnetic radiation emitted by mobile phones has been found to affect pregnant women and their fetuses adversely. Brains and vital organs of young children are shown to be adversely affected due to the excessive use of mobile phones at tender age.

Ocular Effects
Thermal effects from microwave radiation have been reported to cause cataracts and harm retina, cornea and other ocular systems. Electromagnetic fields from microwave radiation have been shown to have a negative impact on the eye lens. One study warns, “High frequency microwave electromagnetic radiation from mobile phones and other modern devices has the potential to damage eye tissues, but its effect on the lens epithelium is unknown at present.\(^{11}\)

Addiction liability of smart phones
The addictive nature of cell phones has become a major cause of concern to psychologists. Recently, psychologists have warned that smart-phone users are especially at risk for becoming addicted to their devices. In a recent study, subjects checked their phones 34 times a day. People may check their phones out of habit or compulsion, but habitual checking can be a way to avoid personal interaction with people. Teenagers can experience withdrawal symptoms such as anxiety, insomnia, and depression, when they are without their smart-phones. Messaging, using the internet or talking on cell phone while driving increases the risk of accidents. Teens are at the greatest risk of such accidents.

Lack of Exercise / Sedentary Life-Style
Adequate physical activity has been shown to be beneficial for health and has a direct, independent role in reducing cardiovascular diseases and mortality. However, the degree of physical activity has been declining due to increased dependence on electronic gadgets. In urban settings, public transport replaces the traditional pattern of walking long distances, and urban employment usually entails far less physical labor than rural employment. In the cities, high crime levels prevent people from moving about freely. In the urban settings, 62 percent of men and 83 percent of women led a sedentary lifestyle, whereas this was the case for only 22 percent of men and 50 percent of women in the rural areas\(^12\). Obesity is the first outcome of reduced physical activity followed by abnormal waist-to-hip ratio, tummy bulging, high blood pressure, low insulin levels, high low-density lipoprotein (LDL) cholesterol in men and type-II diabetes. Sedentary lifestyle includes television viewing, extensive table work, spending long hours on computers, internet and playing video games. Sedentary lifestyle/lack of exercise results in several chronic diseases such as hypertension, obesity, Type-2 diabetes, Angina, Atherosclerosis, Heart attacks Spondylitis and rheumatoid arthritis\(^13\). Several allopathic medicines such as metformin (anti-diabetic agent), enalapril (anti-hypertensive agent) and statins (cholesterol lowering agents) are unable to produce

their therapeutic effects in the absence of exercise. The patients are advised to undertake regular exercise such as walking, running, swimming, dancing, stretching and / riding a bicycle, all of which are aimed at reducing the body weight. 

Sleep Related Disorders

Sleep is the best form of rest, and is necessary for maintaining homeostasis and healthy physiological functions. Insomnia is a condition in which the individual is unable to sleep during night time. Sleeping sickness is excessive sleepiness. During sleep, consciousness declines, motor output decreases and responsiveness to the environment is minimal. Sleep can be distinguished from coma or anesthesia by its rapid reversibility into wakefulness. Sleep can be classified broadly into rapid eye movement (REM) sleep and non-rapid eye movement (NREM or non-REM) sleep with distinct electrophysiologic wave forms in electroencephalogram (EEG) and electromyogram (EMG) signals. Narcolepsy is a profound example of fragmented sleep characterized by multiple disjointed and abbreviated sleep and wake episodes rather than continuous and long episodes of sleep and wakefulness. Obstructive sleep apnea, a condition characterized by repeated arousals from sleep and intermittent hypoxemia, is seen in patients with chronic kidney disease (CKD). Obstructive sleep apnoea is associated with reduced quality of life, excessive daytime sleepiness and reduced functional capacities, increased risk for cardiovascular diseases (CVD), including hypertension, left ventricular hypertrophy and coronary artery disease. Cognitive impairment risk increases with fragmented sleep. Sleep disturbances can trigger depressive episodes as well. Disturbed sleep causes several disease conditions such as hypertension, insulin resistance, excessive daytime sleepiness, coronary artery disease and cognitive impairment and mood disorders. Sleep related breathing disorders (SRBD) are disorders of breathing during sleep characterized by prolonged partial upper airway obstruction, intermittent complete or partial obstruction (obstructive apnoea or hypopnoea), that disrupts normal ventilation during sleep, normal sleep patterns, or both.

Advisory Note

- Exercise Regularly
- Use chair-style instead of lift or escalator.
- Never over-eat.
- Avoid processed and packaged foods or Maida.
- Eat whole grains like Cereals, Pulses, Millets (jawar, bajra)
- Eat at least 500 g of seasonal fruits and vegetables daily.
- Drink plenty of water.
- Practice yoga or meditation to avoid stress in life.
- Participate in Outdoor games / Physical activities.
- Avoid long hours at Computers/ Television.
- Take sound sleep at fixed hours every night.
- Quit Smoking and Drinking as early as possible.

Table 1: Lifestyle Related Disorders

<table>
<thead>
<tr>
<th>Life Style</th>
<th>Related Diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep</td>
<td>Insomnia, Sleeping Sickness, Insulin Resistance, Obstructive Sleep Apnea, Excessive Day-time Sleepiness, Hypertension, Cognitive Impairment, Mood Disorders, Depression, Impaired Executive Functions.</td>
</tr>
<tr>
<td>Use of Computer</td>
<td>Dry Eye Syndrome, Backache, Eye Strain, Obesity, Stiffening of Neck, Headache, Spondylitis, Decrease in Sperm Count, Blurred Vision, Double Vision, Carpal Tunnel Syndrome</td>
</tr>
<tr>
<td>Use of Mobiles</td>
<td>Brain Cancer, Intracranial Tumors, Low Fertility, Poor Memory, Slow reflexes, Sleep Disturbances, Headache, Hallucinations, Hearing Disturbances, Schizophrenia etc.</td>
</tr>
<tr>
<td>Tobacco Use</td>
<td>Oral Cancer, Lung Cancer, Cardiovascular Diseases, Chronic Obstructive Pulmonary Disease (COPD), Cancers, Asthma, Hypertension, Poor Memory</td>
</tr>
<tr>
<td>Alcoholism</td>
<td>Gastritis, Ulcers, Cancer, Alcoholic hepatitis, Liver cirrhosis Depression, Poor Memory and Concentration, Muscle incoordination, Damaged blood vessels, Phocomelia, Heart Attacks.</td>
</tr>
<tr>
<td>Diet</td>
<td>Obesity, Congestive Heart Failure, Angina, Atherosclerosis, Hypertension, Diabetes, Indigestion, Vomiting, Cancer of the colorectum, Arthritis, Asthma, Urticaria, Gout</td>
</tr>
<tr>
<td>Lack of Exercise</td>
<td>Obesity, Congestive Heart Failure, Angina, Atherosclerosis, Hypertension, Diabetes, Insulin resistance.</td>
</tr>
</tbody>
</table>

Table 2: Vitamins Deficiency Disorders

<table>
<thead>
<tr>
<th>Vitamins</th>
<th>Symptoms Of Deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin A (Retinol)</td>
<td>Night Blindness, Xerophthalmia, Decreased Immunity</td>
</tr>
<tr>
<td>Vitamin B1 (Thiamin)</td>
<td>Beri-Berti, Weakness, Fatigue, Psychosis</td>
</tr>
<tr>
<td>Vitamin B2 (Riboflavin)</td>
<td>Cheilosis, Corneal Opacity, Dermatitis</td>
</tr>
<tr>
<td>Niacin or B3 (Nicotinic Acid)</td>
<td>Pellagra, Chick Dermatitis, Loss of appetite, Skin lesions, Mental imbalance</td>
</tr>
<tr>
<td>Vitamin B5 (Pantothenic Acid)</td>
<td>Pellagra, Fatigue , Numbness, Tingling, Burning pain in the feet</td>
</tr>
<tr>
<td>Vitamin B6 (Pyridoxine)</td>
<td>Megaloblastic anemia, Dermatitis, Neuropathy, Insomnia</td>
</tr>
<tr>
<td>B8 (Inositol)</td>
<td>Scaly desquamation, Muscle pains, Hair loss</td>
</tr>
<tr>
<td>B9 or Folic Acid (Folacin)</td>
<td>Anemia, Osteoporosis, Acne , Cancer of the bowel and cervix</td>
</tr>
<tr>
<td>Vitamin B12 (Cyanocobalamin)</td>
<td>Pernicious anemia, Ataxia, Weight loss, Hepato-spleno-megaly, Hallucinations Personality disorders</td>
</tr>
<tr>
<td>Vitamin C (Ascorbic Acid)</td>
<td>Scurvy, Decreased Immunity, Bleeding gums Easy bruising, Gingivitis, Rough, dry and scaly skin, Swollen and Painful joints</td>
</tr>
<tr>
<td>Vitamin D (Calciferol)</td>
<td>Rickets, Osteomalacia, Osteoporosis, Insomnia, Impaired Visual</td>
</tr>
<tr>
<td>Vitamin E (Tocopherol)</td>
<td>Infertility, Fragile red blood cells, Wrinkles, Age spots, Dry hair or loss of hair Muscular weakness</td>
</tr>
<tr>
<td>Vitamin K (Phylloquinone)</td>
<td>Impaired blood clotting, Excessive bleeding, Osteoporosis</td>
</tr>
</tbody>
</table>
CONCLUSION

Our lifestyle is determined by our normal patterns of living. Life has become fast, ambitions and materialistic now-a-days. Routine day to day activities such as continuous use of Mobiles, long hours at computers/televisions and late night sleeping habits lead to chronic diseases. Lifestyle diseases are those diseases, whose occurrence is primarily based on daily habits of citizens. These diseases result from an inappropriate or excessive use of these habits. Lifestyle diseases have now become common in India and show higher frequency in the younger or productive age group. A common man, who is busy earning his bread and butter, needs to be informed about these lifestyle related hazards, because they can be avoided, by following simple precautionary measures given as Tips in this article. Bad lifestyle has been found to result in development of chronic diseases such as Diabetes mellitus, Hypertension, Arthritis, Atherosclerosis, Angina, Asthma, Gout, Hepatitis, Defective Hearing, Poor Eyesight and Spondylitis. The ultimate fallout of bad lifestyle is reduction in the life expectancy of the affected individuals. Therefore, people are advised to undertake regular exercise like walking, running, swimming, dancing, stretching and / riding a bicycle. They need to avoid spending long hours at computers and restrict the continuous use of mobile phones.

Further, one must quit smoking and drinking habits as early as possible. Rather he/she must take a balanced diet along with sound sleep. Hence, citizens are advised to upgrade their lifestyle, for healthy and peaceful life.

REFERENCES


Cite this article as:

Source of support: Nil, Conflict of interest: None Declared