

Occupational lifestyle diseases: An emerging issue

Lifestyle diseases characterize those diseases whose occurrence is primarily based on the daily habits of people and are a result of an inappropriate relationship of people with their environment. 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 unhealthy lifestyles and faulty diet. According to the report, 60% of all deaths worldwide in 2005 (35 million) resulted from noncommunicable diseases and accounted for 44% of premature deaths. What's worse, around 80% of these deaths will occur in low and middle-income countries. 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 and hypertension. The study 'Preventive Healthcare and Corporate Female Workforce' also said that long hours and working under strict deadlines cause up to 75% of working women to suffer from depression or general anxiety disorder, compared to women with lesser levels of psychological demand at work. The study cited scientific evidence that healthy diet and adequate physical activity - at least 30 minutes of moderate activity at least five days a week - helped prevent NCDs. In KENYA, 10% of adults suffer from hypertension while the country is home to 25-30 million diabetics. Three out of every 1,000 people suffer a stroke. The number of deaths due to heart attack is projected to increase from 1.2 million to 2 million in 2010. The diet [or lifestyle] of different populations might partly determine their rates of cancer. Some of the common diseases encountered because of occupational lifestyle are Alzheimer's disease, arteriosclerosis, cancer, chronic liver disease/cirrhosis, chronic obstructive pulmonary disease (COPD), diabetes, hypertension, heart disease, nephritis/CRF, and stroke. Occupational lifestyle diseases include those caused by the factors present in the vicinity like heat, sound, dust, fumes, smoke, cold, and other pollutants. These factors are responsible for allergy, respiratory and hearing problems, and heat or cold shock. So, A healthy lifestyle must be adopted to combat these diseases with a proper balanced diet, physical activity and by giving due respect to biological clock. Kids spending too much time slouched in front of the TV or PCs, should be encourage to find a physical sport or activity they enjoy. Fun exercises should be encouraged into family outings. A pizza-and-video evening should be replaced for a hike and picnic. Kids who do participate in sport, especially at a high competitive level, can find the pressure to succeed very stressful. To decrease the ailments caused by occupational postures, one should avoid long sitting hours and should take frequent breaks for stretching or for other works involving physical movements.

INTRODUCTION

People are predisposed to various diseases based on their way of living and occupational habits. They are preventable, and can be lowered with changes in diet, lifestyle, and environment. Lifestyle diseases characterize those diseases whose occurrence is primarily based on daily habits of people and are a result of an inappropriate relationship of people with their environment. The onset of these lifestyle diseases is insidious, they take years to develop, and once encountered do not lend themselves easily to cure. The main factors contributing to the lifestyle diseases include bad food habits, physical inactivity, wrong body posture, and disturbed biological clock. The diet [or lifestyle] of different populations might partly determine their rates

of cancer, and the basis for this hypothesis was strengthened by results of studies showing that people who migrate from one country to another generally acquire the cancer rates of the new host country, suggesting that environmental [or lifestyle factors] rather than genetic factors are the key determinants of the international variation in cancer rates

A report, jointly prepared by the World Health Organization and the World Economic Forum, account of unhealthy lifestyles and faulty diet. The resultant chronic diseases - heart disease, stroke, cancer, diabetes and respiratory infections - which are ailments of long duration and slow progression, will severely affect people's earnings.

According to the report, 60% of all deaths worldwide is as a result of non-communicable diseases and accounted for 44% of premature deaths. What's worse, around 80% of these deaths will occur in low and middle-income countries. Almost half of those who die from chronic diseases will be in their productive years. The report also points to the fact that countries like Brazil, China, Russia and India currently lose more than 20 million productive life-years annually to chronic diseases. And the number is expected to grow by 65% by 2030. The figure is estimated to exceed 3.6 billion in 2020. The cost to employers of morbidity attributed to non-communicable diseases is increasingly rapidly. Workplaces should make possible healthy food choices and support physical activity. Unhealthy diets and excessive energy intake, physical inactivity and tobacco use are major risk factors for non-communicable diseases

According to a survey conducted by the Associated Chamber of Commerce and Industry (ASSOCHAM), 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 and hypertension.

The study 'Preventive Healthcare and Corporate Female Workforce' also said that long hours and working under strict deadlines cause up to 75% of working women to suffer from depression or general anxiety disorder, compared to women with lesser levels of psychological demand at work. Women employed in sectors that demand more time such as media, knowledge process outsourcing and touring jobs are unable to take leave when unwell, and force themselves to work mainly due to job insecurity, especially during the current financial meltdown, the report said.

However, it said, factors such exposure to industrial pollutants and environmental toxins, poor quality of sleep, lack of exercise, sunlight exposure, poor nutrition, excessive intake of alcohol etc. might play a confounding role and are the priority areas for further research. Highlighting the fact that women play vital and multiple roles, especially those employed, the report stressed on the need for a balance at home and workplace. "Ignorance of healthcare can have multiple implications on her surrounding environment such as her family, workplace and social network," said the study. Over 77% of respondents said they avoided routine check-ups," the report stated, indicating that the hectic schedule of balancing workplace and home, along with balancing between social and personal requirements lead to women ignoring their health. The report further stated that 47% of respondents spent less than Rs. 500 on healthcare in a year, while 22% spent in the range of Rs. 500-Rs. 5,000 as they suffered ailments such as obesity, depression and spondylosis. Over 29% respondents were found to be spending between Rs. 5,000-50,000 on

healthcare annually. However, most of these respondents were found to be afflicted with high or low blood pressure, diabetes, heart diseases, asthma, urinary infection and arthritis.

The study cited scientific evidence that healthy diet and adequate physical activity, at least 30 minutes of moderate activity at least five days a week, helped prevent NCDs. Three out of every 1,000 people suffer a stroke. The number of deaths due to heart attack is projected to increase from 1.2 million to 2 million in 2010.

DISCUSSION

According to a research there is corroborative evidence that diet and lifestyle is playing a major role in predisposition to various diseases like cancer. In many countries, peoples' diet changed substantially in the second half of the twentieth century with increase in consumption of meat, dairy products, vegetable oils, fruit juice, and alcoholic beverages, and decrease in consumption of starchy staple foods such as bread, potatoes, rice, and maize flour. Other aspects of lifestyle also changed, notably, large reductions in physical activity and prevalence of obesity.

In the 1970s it was noted that people in many western countries had diets high in animal products, fat, and sugar, and high rates of cancer of the colorectum, breast, prostate, endometrium, and lung; by contrast, individuals in developing countries usually had diet which were based on one or two starchy staple foods, with low intakes of animal products, fat, and sugar, and low rates of these cancers.

With advancement of our lifestyle we have become dependent on technology and gadgets which directly have an impact on our health. Heavy computer use could be linked to glaucoma, especially among those who are short-sighted. Glaucoma is caused by increased fluid pressure within the eye compressing the nerves at the back, which can lead to blindness if not treated. Workers who are heavy computer are more likely to be long-sighted (hypermetropia) or short-sighted (myopia). Heavy computer use, suspected glaucoma and short-sightedness appeared to be interlinked. Regular spending of lot of time in front of computer may lead to neck and back pain because body is going to begin to change and adapt to take on this frequent activity.

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 neck also is a common problem along with headache, fatigue and exhaustion. Wrong sitting or standing posture while working gives strain to the backbone and gives a chronic back pain. The heat generated by laptops kept on the lap of males cause decrease in sperm count. Other extensively used gadget is mobile phone which is supposed to be a culprit for a number of diseases and ailments, although its adverse effects on humans are yet to be established and validated.

People working in night shifts witness a disturbed biological clock leading to insomnia, indigestion, acidity, loss of appetite, headache, irritability, hypertension, mood fluctuations and body pain. Those having late night parties also experience the same with some additional effects of untimely munching, drinking and smoking. Alteration in the circadian rhythm of a person compromises his immunity, further leading to various opportunistic diseases.

Transportation and faulty office postures rides for quite a long time can lead to a chronic back pain. Most people suffering from backache are users of public transport and spend two to five hours in front of the computers. Bumpy ride shakes our body too much and the impact generated is so high that it damages the vertebra with time. It may cause spinal cord injury, which is still incurable. Many people develop spondylolysis, which generally occurs due to breaking down (dissolution) of a part of vertebra, leading to localized back pain. People dealing with huge weights are predisposed to slip disk and sciatica.

Occupational lifestyle diseases include those caused by the factors present in the vicinity like heat, sound, dust, fumes, smoke, cold, and other pollutants. These factors are responsible for allergy, respiratory and hearing problems, and heat or cold shock. Those occupations, in which there is a huge temperature or pressure difference, cause a disturbed homeostasis leading to disease. Similarly people working in high temperatures face problems related to BP, metabolism, and organ failure due to shock. Extreme cold working condition causes hypothermia and shock. People in the fishing or shipping industry face seasickness or motion sickness along with other risk factors contributing to a diseased condition.

All the contributing factors have significant effect on various diseases alone as well as in combination with other factors. Some of the common diseases encountered because of occupational lifestyle are Alzheimer's disease, arteriosclerosis, cancer, chronic liver disease/cirrhosis, chronic obstructive pulmonary disease (COPD), diabetes, hypertension, heart disease, nephritis/CRF, and stroke.

Kids aged 14-17 years who have Syndrome X (caused by obesity), a precursor to diabetes. Obesity was found to be the major cause of other problems. Children who grow up to be obese could suffer from diabetes, stroke, liver diseases, infertility, hypertension, arthritis and cancer. Obese children also have a high risk of development of early heart diseases, high levels of C-reactive protein, increased triglycerides (blood fat) levels and low HDL (good cholesterol) levels, children with Syndrome X are one step away from diabetes and two steps away from heart disease and junk food aggravates the problem. The results show an alarming trend of obesity and related diseases.

CONCLUSIONS

The western lifestyle, characterized by convenience food, TV and PCs, is taking its toll on children as well as adults, and is producing increased numbers of overweight, passive youngsters with lifestyle diseases. Kids spending too much time slouched in front of the TV or PCs, should be encouraged to find a physical sport or activity they enjoy. Fun exercises should be encouraged into family outings. A pizza-and-video evening should be replaced for a hike and picnic. Kids who do participate in sport, especially at a high competitive level, can find the pressure to succeed very stressful. It's important that parents watch out for signs of psychological strain, as well as physical fatigue from overtraining. Young athletes also have specific nutritional needs that require extra attention. A diet of only junk food, overeating and lack of physical activity are not only responsible for diseases related to nutrition, but also anorexia nervosa, which involves many people starving themselves for maintaining their figure. This type of disease is more prevalent in the fashion and showbiz industry.

A healthy lifestyle must be adopted to combat these diseases with a proper balanced diet, physical activity and by giving due respect to biological clock. To decrease the ailments caused by occupational postures, one should avoid long sitting hours and should take frequent breaks for stretching or for other works involving physical movements. An ergonomic chair should be designed based on the human contour to fit the right sitting posture so that the uneven pressure on joints and muscles may be minimized. In this revolutionized era we cannot stop doing the developmental work, but we can certainly reduce our ailments by incorporating these simple and effective measures to our lives.

Diet, nutrition and the prevention of chronic diseases

The science base of the relationship between diet and physical activity patterns, and the major nutrition-related chronic diseases.

Recommendations are made to help prevent death and disability from major nutrition-related chronic diseases. These population nutrient intake and physical activity goals should contribute to reduce the burden of disease related to obesity, diabetes, and cardiovascular disease, several forms of cancer, osteoporosis and dental disease.

Key findings include:

Obesity: the imbalance between declining energy expenditure due to physical inactivity and high energy in the diet (excess calories whether from sugar, starches or fat) is the main determinant of the obesity epidemic. Increasing physical activity, plus reducing intakes of foods high in fat and foods and drinks high in sugars, can prevent unhealthy weight gain. Taking these simple goals to concrete action requires major social and environmental changes in order to effectively promote and support healthier choices at the individual level.

Diabetes: excess weight gain, overweight and obesity and physical inactivity account for the escalating rates of type 2 diabetes, worldwide. Diabetes leads to increased risk of heart disease, kidney disease, stroke and infections. Increased physical activity and maintaining a healthy weight play critical roles in the prevention and treatment of diabetes.

Cardiovascular diseases: cardiovascular diseases, the major killers worldwide, are to a great extent due to unbalanced diets and physical inactivity. Risk of their main forms, heart disease and stroke, is reduced by eating less saturated and trans fats, and sufficient amounts of (n-3 and n-6) polyunsaturated fats, fruits and vegetables and less salt, as well as by physical activity and controlling weight. Reduction of salt intake helps reduce blood pressure, a major cause of cardiovascular diseases.

Cancer: tobacco is the number one cause of cancer, but dietary factors contribute significantly to some types of cancer. Maintaining a healthy weight will reduce the risk for cancers of the oesophagus, colorectum, breast, endometrium and kidney. Limiting alcohol intake will reduce risk for cancers of the mouth, throat, oesophagus, liver and breast. Ensuring an adequate intake of fruit and vegetables should further reduce risk for oral cavity, oesophagus, stomach and colorectal cancer.

Osteoporosis and bone fractures: fragility fractures are a problem of older people. Adequate intakes of calcium (500 mg per day or more) and of vitamin D in populations with high osteoporosis rates helps to reduce fracture risk, so does sun exposure and physical activity to strengthen bones and muscles.

Dental disease: caries is preventable by limiting the frequency and amount of consumption of sugars and by appropriate exposure to fluoride. Erosion of teeth by dietary acids in beverages or other acidic foods may contribute to tooth destruction.

The crucial role of physical activity as part of nutrition and health is acknowledged. Physical activity is a key determinant of energy expenditure, and thus fundamental to energy balance and weight control. The beneficial effects of physical activity on the metabolic syndrome are mediated by mechanisms beyond controlling excess body weight.

Physical inactivity is already a major global health risk and is prevalent in both industrialized and developing countries, particularly among the urban poor in crowded mega cities. Measures and policies required to promote healthier food consumption patterns and facilitate a physically active life share common grounds and are mutually interactive in determining healthier behaviors.

Healthy diets and physical activity are key to good nutrition and necessary for a long and healthy life. Eating nutrient dense foods and balancing energy intake with the necessary physical activity to maintain a healthy weight is essential at all stages of life. Unbalanced consumption of foods high in energy (sugar, starch and/or fat) and low in essential nutrients contributes to energy excess, overweight and obesity. The amount of the energy consumed in relation to physical activity and the quality of food are key determinants of nutrition related chronic disease.

Not all fats are the same, it pays to know the difference. The scientific complexities of these issues should not obscure the simple messages required to orient and guide consumers. People should eat less high-calorie foods, especially foods high in saturated or trans fats and sugar, be physically active, prefer unsaturated fat and use less salt; enjoy fruits, vegetables and legumes; and select foods of plant and marine origin. This consumption pattern is not only healthier but more favorable to the environment and sustainable development.

To achieve best results in preventing nutrition-related chronic diseases, strategies and policies should fully recognize the essential role of both diet and physical activity in determining good nutrition and optimal health. Policies and programmers must address the need for change at the individual level as well as the modifications in society and the environment to make healthier choices accessible and preferable.

In organizations in which widespread, integrated interventions have taken place, dramatic decreases in NCD-related death and disability have occurred. Successes have come about where people have acknowledged that the unnecessary premature deaths that occur in their organizations are largely preventable and have empowered themselves and their civic representatives to create health-supporting programs.

This has been achieved most successfully by establishing a working relationship between employees and employers. Beyond the rhetoric, this epidemic can be halted – the demand for action must come from those affected. The solution is in our hands.

Lifestyle Diseases Risk Factors

NCDs are caused, to a massive extent, by four behavioral risk factors: tobacco use, unhealthy diet, insufficient physical activity and harmful use of alcohol

According to WHO, low- and middle-income countries and the poorer people in all countries are the worst affected by deaths due to NCDs. It is a vicious cycle of risk where the poor are increasingly exposed to behavioral risk factors for NCDs and, in turn, such diseases may play a significant role in driving people and their families towards poverty. It starts from an individual and eventually affects entire organization. An organization can be slated for an economic loss of on account of unhealthy lifestyles and faulty diet

That is why in order to tackle the global impact of NCDs, it has to be aggressively confronted in the most affected areas and communities.

Characteristics of NCDs

Complex etiology (causes):

Non communicable diseases are driven by seemingly unrelated causes such as rapid unplanned urbanization, globalization of unhealthy lifestyles and population ageing. Apparent causes such as raised blood pressure, increased blood glucose, elevated blood lipids and obesity may be representations of deep lying lifestyle habits

Multiple risk factors:

There are a number of risk factors that lead to the onset and development of NCDs. The various types of risks can be divided into three primary risk sets: modifiable behavioral risk factors, non-modifiable risk factors and metabolic risk factors, many of which are common for a number of diseases.

Lifestyle diseases are ailments that are primarily based on the day to day habits of people. Habits that detract people from activity and push them towards a sedentary routine can cause a number of health issues that can lead to chronic non-communicable diseases that can have near life-threatening consequences.

Introduction

Non communicable diseases (NCDs) kill around 40 million people each year that is around 70% of all deaths globally

1. NCDs are chronic in nature and cannot be communicated from one person to another. They are a result of a combination of factors including genetics, physiology, environment and behaviors. The main types of NCDs are cardiovascular and chronic respiratory diseases in addition to cancer. NCDs such as cardiovascular

Non-contagious origin (non communicable):

NCDs are not communicated from one person to another, so it is a given that these diseases develop in a person from non-contagious origins.

Prolonged course of illness:

NCDs are chronic in nature and thus the course of illness is often prolonged and takes years before a patient may be forced to opt for medical care or intervention.

Functional impairment or disability:

NCDs usually give rise to circumstances that make it difficult for the patients to lead a normal life. Patients with chronic NCDs may not be able to take part in regular physical activity, go to the office or eat normally.

Causes

The causes of NCDs can be divided into three broad categories: modifiable behavioral risk factors, non-modifiable risk factors and metabolic risk factors.

Modifiable behavioral risk factors:

Behavioral risk factors such as excessive use of alcohol, bad food habits, eating and smoking tobacco, physical inactivity, wrong body posture and disturbed biological clock increase the likelihood of NCDs. The modern occupational setting (desk jobs) and the stress related to work is also being seen as a potent risk factor for NCDs

According to the WHO, more than 7 million people die each year due to the use of tobacco and the fatality rate is projected to increase markedly in the years to come. Excessive use of sodium in the diet causes 4.1 million deaths per year while alcohol intake leads to around 1.65 million deaths due to NCDs. A simple lack of physical activity has been claiming 1.6 million lives annually.

Non-modifiable risk factors:

Risk factors that cannot be controlled or modified by the application of an intervention can be called non-modifiable risk factors and include:

a. Age .b. Race.c. Gender d. Genetics

Metabolic risk factors:

Metabolic risk factors lead to four major changes in the metabolic systems that increase the possibility of NCDs:

i. Increased blood pressure

ii. Obesity

iii. Increased blood glucose levels or hyperglycemia

iv. Increased levels of fat in the blood or hyperlipidemia

Increased blood pressure is the leading metabolic risk factor globally with 19% of the global deaths attributed to it, followed by obesity and hyperglycemia.

Four Major Lifestyle Diseases

CVD

Cardiovascular diseases are a group of disorders of the heart and blood vessels and may include:

A. Ischaemic heart disease

B. Stroke

C. Peripheral arterial disease

D. Congenital heart disease

CVDs are the number 1 cause of death globally and account for more than 17 million deaths per year. The number is estimated to rise by 2030 to more than 23 million a year.

Major Modifiable

Risk Factors

Non-Modifiable

Risk Factors

Other Risk Factors

High blood pressure

Abnormal blood lipids

Tobacco use

Physical inactivity

Obesity

Unhealthy diet (salt)

Diabetes

Heavy alcohol use

Age

Heredity or family history

Gender

Ethnicity or race

Excess homocysteine in blood - Inflammatory markers (C-reactive protein) Abnormal blood coagulation (elevated blood levels of fibrinogen) Lipoprotein

(a) Diabetes

Diabetes is a metabolism disorder that affects the way the body used food for energy and physical growth. There are 4 types of diabetes: Type 1, Type 2, Gestational, and Pre-Diabetes (Impaired

Glucose Tolerance). Type 2 is the most common diabetes in the world and is caused by modifiable behavioral risk factors.

Major Modifiable Risk

Factors

Non-

Modifiable

Risk Factors

Other Risk

Factors

Unhealthy diets

Physical Inactivity

Obesity or Overweight

High Blood Pressure

High Cholesterol

Heavy alcohol use

Psychological stress

High consumption of sugar

Low consumption of fiber Advanced age

Family history/genetics

Race

Distribution of fat in the body

Presence of autoantibodies

Low socioeconomic status

Cancer

Cancer affects different parts of the body and is characterised by a rapid creation of abnormal cells in that part and can invade other parts of the body as well. More than 7 million people die of cancer each year and 30% of those diseases are attributed to lifestyle choices.

8Type Of

Cancer

Modifiable Risk Factors

Other Risk Factors

Cervical cancer

Smoking

Poverty

Human papilloma virus infection (hpv)

Immune deficiencies

Family history

Lung cancer

Smoking

Second hand smoke

Radiation therapy

Being exposed to asbestos, radon, chromium, nickel, arsenic, soot, or tar

Living in air-polluted place

Breast cancer Hormone therapies

Weight and physical activity

Race

Genetics BRCA1 and BRCA2 genes

Age

Prostate cancer

Obesity

Bad food habits

Low intake of fiber

Age

Race

Colorectal cancer

Unhealthy diet

Insufficient physical activity

Age

Race

Family history

Diabetes

Chronic respiratory diseases

Some of the most under-diagnosed conditions, chronic respiratory diseases (CRD) are a potent cause of death globally with 90% of the deaths taking place in low-income countries.

Chronic obstructive pulmonary disease (COPD) and asthma are the two main types of CRDs.

Modifiable Risk

Factors

Non-Modifiable Risk Factors

Cigarette smoke

Dust and chemicals

Environmental tobacco smoke

Air pollution Infections

Genetics

Age

CVD – A global epidemic

As stated earlier, CVD is the number one cause for deaths globally and the number of people dying from it each year is constantly rising. It is estimated that by 2030, CVD will be responsible for more deaths in low income countries than infectious diseases, maternal and perinatal conditions, and nutritional disorders combined. Mortality trends in comparison to other causes.

CVDs are the face of lifestyle diseases and manifest in a number of ways, such as:

Coronary heart disease (CHD):

Also known as coronary heart disease and ischaemic heart disease, CHD is one of the most common types of heart problems faced today and is characterised by a reduction or blockage in the flow of oxygen-rich blood to the heart muscle. This puts exaggerated strain on the heart, which can lead to:

- a) Angina – chest pain caused by lack of flow of blood to the heart
- b) Heart attacks – caused when the blood flow to the heart is suddenly but completely blocked
- c) Heart failure – the failure of the heart to pump blood properly to the rest of the body

Cerebrovascular disease (strokes and TIAs): Cerebrovascular disease is the disease of blood vessels supplying blood to the brain. When the blood supply to the brain is cut off, a person suffers a stroke, which can be lethal. A transient ischaemic attack, popularly known as a mini-stroke, occurs when the blood supply to the brain is temporarily blocked.

The acronym FAST is used to signify the symptoms of a stroke or TIA

. It stands for:

- a. **Face:** Face drooping on one side is the most common visible symptom, followed by dropping of mouth or eye.
- b. **Arms:** Weakness or numbness in one or both arms doesn't allow a person to raise both of his or her hands up and hold them there.
- c. **Speech:** Slurred or garbled speech in some cases, a
- d. **Time:** It is time to call the emergency services if you see any of these symptoms.

Other symptoms include:

- i. Blurred or complete loss of vision in one or both eyes
- ii. One-sided weakness or numbness of the body
- iii. Sudden memory loss or confusion
- iv. Sudden dizziness combined with any of the above mentioned symptoms can be a definite sign

Peripheral arterial disease

: Peripheral arterial diseases is a disease of blood vessels supplying the arms and legs. It happens when there is a blockage in the arteries to the limbs (usually the legs).

Signs to watch out for:

- a) Dull or cramping pain that gets worse with walking and better with rest
- b) Hair loss on the limbs

- c) Numbness or weakness in the limbs
- d) Persistent ulcers on the legs and feet

Rheumatic heart disease: Rheumatic heart disease is characterised by damage to the heart muscle and heart valves from rheumatic fever, caused by streptococcal bacteria. Some of the most common symptoms are fever and painful, tender joints.

Congenital heart disease: Congenital heart disease is a problem with the structure of the heart, i.e. malformation of heart structure, that exists at birth. The problem can range from a small hole in the heart to a more severe problem such as a defective heart muscle. Some of the common symptoms are shortness of breath and having trouble exercising. In infants and younger kids, cyanosis, a bluish tint to the skin, fingernails and lips can be an important marker.

Risk factors include:

- i. Use of certain medications, drugs or alcohol during pregnancy
- ii. Viral infections in the mother in the first trimester
- iii. Genetic problems or issues with chromosomes of the child

Pulmonary embolism due to deep vein thrombosis (DVT):

DVTs are blood clots, often found in the veins of the legs, which can dislodge and move to the heart and lungs, causing pulmonary embolism. This condition can be life-threatening and special care should be taken if diagnosed with DVT.

Symptoms include:

- a) Chest pain – may get worse with deep breaths
- b) Sudden shortness of breath
- c) Sudden cough or coughing up blood
- d) Anxiety
- e) Light-headedness and fainting

Aortic disease: Aortic diseases are a group of conditions that affect the aorta, the largest blood vessel in the body. The aorta is responsible for carrying blood from the heart to the rest of the body. An example of an aortic disease would be aortic aneurysm, where the walls of the aorta are weakened, leading to outward bulging of the blood vessel. Usually symptomless, this condition can lead to life-threatening circumstances if it bursts.

Managing CVD:

Depending on the type of CVD, an appropriate exercise plan can help alleviate the problem/s. There are a number of treatments ranging from medication to surgeries that can help, however, prevention is always recommended over treatment. To prevent CVD, one must:

- a) Stop smoking
- b) Have a balanced diet with plenty of fibre
- c) Exercise regularly (>150 minutes of aerobic activity per week)
- d) Maintain a healthy weight and body mass index (BMI; aim for a BMI below 25)
- e) Cut down on alcohol (<14 alcohol units per week)
- f) Aspirin and anti-platelet therapy

Control and prevention of lifestyle diseases

An important way of controlling non-communicable diseases is by controlling the risk factors associated with it. In other words, a number of communicable diseases can be prevented by controlling the behavioral or lifestyle habits associated with those diseases. There are a number of low-cost solutions that can be implemented by the organizations and other involved groups to reduce the common modifiable risk factor

Monitoring the trends of non -communicable diseases and their associated risks is crucial for guiding policies and guidelines.

A comprehensive approach is essential that involves all sectors including health, finance, education, planning and others, to minimise the impact of lifestyle diseases on individuals and society. The approach needs to instigate a collaborative effort to minimise the risks associated with non communicable diseases and at the same time inspire interventions to control and prevent them.

Lifestyle diseases are a threat to the socio-economic aspects of nations globally and appropriate actions for their management are the need of the moment. Management of lifestyle diseases includes proper diagnosis, screening and treatment of these diseases in addition to providing palliative care for people who require it. Quality lifestyle disease intervention needs to be delivered through a primary healthcare approach where early detection and proper treatment are prioritised.