GLOBAL LIFESTYLE DISEASES: LESSONS FOR THE FUTURE

Health Science

Medhavi Sudarshan*	Department of Zoology, J N L College, Khagaul, Patliputra University, Patna, India *Corresponding Author
Sumit Sharan	Department of Community Medicine, Katihar Medical College, Katihar, India

ABSTRACT

Lifestyle illnesses are a major public health concern in the modern world. The way a person lives has an effect on how fit they are. Smoking, unstable diets and weight loss plans, physical inactivity, and alcohol use are four variable lifestyle behaviours that are linked to the development of noncommunicable diseases (NCDs), which tend to last a long time and are bthe result of the combination of genetic, physiological, behavioural, and environmental factors. Diabetes, most cancers, cardiovascular infection, blood stress/excessive blood strain, and so on are only a few examples. According to several study findings, death from NCDs disproportionately affects the poorest people worldwide as well as low- and middle-income countries o minimise the effect of way of life ailments on individuals and society, the author attempted to broaden a holistic approach that encompasses all sectors, which include health, finance, training, planning, and others. This review's major focus is on the growing burden of noncommunicable illnesses/lifestyle diseases in emerging nations. The other issues include various risk factors, correct diagnosis, screening, and treatment of these diseases, as well as giving comfort care to those who require it. The author right here believes that standard encouraging wholesome behaviours in the population ought to make a contribution to decreasing the excessive burden of life style diseases.

INTRODUCTION

In the past, communicable diseases—also known as infectious and parasitic diseases—were the primary causes of mortality. However, noncommunicable diseases (NCDs) have surpassed them as the leading cause of mortality. Typhoid and cholera are two infectious illnesses that no longer receive much attention since advances in sanitation, housing, and medication have made us more resistant to them. However, today's culture constantly brings up diabetes, hypertension (high blood pressure), obesity, and heart disease. NCDs have superseded them in recent decades as the primary cause of mortality. It is essential to comprehend how these issues are raised. There are some disorders that can develop even while the body is healthy.We are to blame for this due to our poor lifestyle choices.This might be due to changes in food habits and lifestyle choices throughout time, which have influenced people's illness patterns. NCDs are hence frequently referred to as lifestyle illnesses. As a result of economic development and globalisation, the prevalence of lifestyle illnesses has grown internationally. The main purpose of this review article is to enlighten and educate individuals on the present condition of lifestyle diseases in order to help them live a healthy life in the future.

What are Lifestyle diseases

A person's lifestyle, which includes their behaviours, practises, and habits, has a significant impact on whether or not they develop a lifestyle disease. A person's regular activities are mostly to blame for lifestyle ailments.Distracting individuals from physical activity and promoting sedentary behaviour can lead to a number of health issues, including chronic noncommunicable illnesses with potentially fatal consequences. The phrase "lifestyle illnesses" is widely used to characterise NCDs, including cardiovascular disease (CVD), stroke, diabetes, and some types of cancer, because lifestyle decisions have a considerable influence on these conditions.. Furthermore, these problems account for 53% of all deaths.(Rahimi Foroushani et al., 2014) It may be described scientifically as a set of consistent behaviours that are unique to an individual and determine how they live. These behaviours include activities, manners, behaviours, coping mechanisms, motivation, and mental processes. Every person, family, and community has a lifestyle that they utilise to deal with their daily physical, psychological, social, environmental, and economic circumstances. Changes in lifestyle that affect actions or exposures can assist to delay or stop the onset of the disease Lifestyles are shaped by a variety of factors, including childhood effects, personality makeup, and cultural, physical, economic, and political influences. According to studies undertaken by the World Health Organization (WHO), lifestyle and health behaviours account for roughly 60% of Quality of Life. They have a complicated origin and are noninfectious/ noncontagious in nature. NCDs are chronic diseases that last for a long time. While some NCDs advance slowly or produce chronic symptoms that need long-term care and control, others advance quickly. They affect both men and women, but children are also at risk. People may look to be healthy, but they are nonetheless suffering from these illnesses. Even if people appear to be in good health, they are still suffering from chronic ailments. NCDs harm person throughout their productive years of life, which is one of the most severe problems.

Different types of Lifestyle diseases

Researchers have noted that the wellness-oriented lifestyle is at the heart of the health-conscious lifestyle and that people's conduct affects their health..(Budreviciute et al., 2020) A biological machine's body systems are collections of organs that collaborate to create and sustain life. the primary human physiological functions are breathing, digestion, gas exchange, blood circulation, movement, and the coordination and control of bodily activities. All of these are managed in a way that keeps them functioning as living one. Lifestyle diseases are conditions that emerge gradually as a result of individual decisions and genes rather than being passed from one person to another.

A person's lifestyle has a substantial impact on their health, including their physical, emotional, and social well-being. Arthritis, asthma, Alzheimer's disease, atherosclerosis, cancer, chronic liver disease, liver cirrhosis, heart disease, renal failure, type 2 diabetes, depression, obesity, stroke, and metabolic syndromes are all common lifestyle diseases. The co-existence of two or more serious diseases with a lifestyle condition can result in severe consequences that necessitate hospitalisation, skilled care, and surgery. Later challenges that are too severe, such as cardiac arrest, falls, or strokes, may cause death. The table 1 lists a number of key worrying lifestyle diseases to be aware of.

Major Causes And Risk Factors

A risk factor is a condition or behaviour that increases the probability of getting a certain disease.Because habits that eventually result in lifestyle diseases can begin while we are very young, it is crucial to understand the elements that contribute to these conditions. The great majority of lifestyle diseases have

Table 1. details of some alarming lifestyle diseases

Disease Name	Description	Controllable Risk factors (Which can be avoid in lifestyle)
1.Cardiovascular Diseases	Disorder of heart and blood vessels mainly, ischemic attack, stroke, cardiomyopathies, atherosclerosis	Unhealthy diet, Physical inactivity, Alcohal use, Stress
2. Endocrine system	Type 2 Diabetes, Metabolic syndrome, Osteoporosis	Unhealthy diet, Physical inactivity, Alcohal use,Vitamin D/Ca deficiency

3. Resperitory system	Asthma, COPD	Smoke, Dust & Chemicals, Air pollution,
4.Gastrointestinal system	NAFLD, Liver cirrhosis, Gastroesophgeal reflux diseases	Unhealthy diet, low fiber intake, Alcohol intake, irregular routine
5. Renal diseases	Chronic kidney disease	Poor health habit, alcohol, smoking, drug, Hypertension, Diabetes
6. Nervous system	Alzheimer's disease	Poor health habit alcohol, smoking, drug, irregular daily routine, Low level of cognitive engagement
7. Others	Certain types of Cancers, Insomnia, other sleep disorders	Alcohol, Smoking, radiation exposure, Work environment & Stress, Hypertension

complex origins as their primary cause. There is a connection between genes, environment, and life, according to recent epigenetics research. If people also lack the fundamental information about prevention and early diagnosis and have little to no access to standard treatment choices, lifestyle variables are more likely to result in illness and untimely deaths.. Anything that raises the chance of illness, injury, or other health issues is a risk factor. Numerous risk factors, some of which are within one's control and others of which are not, affect a person's likelihood of developing a lifestyle diseases

Diet, physical activity, smoking, sun exposure, and body weight are controllable or modifiable risk factors. Genes, age, gender, ethnicity, and other non-modifiable characteristics are uncontrolled. The harmful behaviours or modifiable risk factors result in four metabolic changes: elevated blood pressure, obesity, elevated blood sugar levels/hyperglycemia, and elevated blood fat levels/hyperlipidemia. These changes play a significant role in the development of various lifestyle diseases because they act as metabolic risk factors and upset the balance of the body's metabolic system. The modern occupational setting and the stress related to work is also being seen as a potential risk factor for NCDs. Night shift workers experience a disrupted biological clock, which causes sleeplessness, indigestion, acidity, loss of appetite, headache, irritability, hypertension, mood changes, and physical discomfort. In other words, we may classify significant causes or risk factors as environmental, genetic, socioeconomic, self-management, and medical condition variables. Almost all NCDs share common risk factors.

1. Genetic Factors:
A genetic predisposition (sometimes also called genetic susceptibility) is an increased likelihood of developing a particular disease based on a person's genetic makeup Specific genetic differences, which are commonly inherited from a parent, cause a genetic predisposition. Different epigenetic changes, radiation exposure or toxic meterial based gene mutation, genetic inheritence or family disease history are very important root cause of NCDs. SNPs, which are used to predict individual response to medications in a population, have been connected to many of the diet-related health costs.(Seedorf, Schulte, & Assmann, 2007) The leptin/leptin receptor polymorphism (associated to the obesity gene), apolipoprotein (E and A1, related to CVD), and methylenetetrahydrofolate reductase (MTHR) (related to folate metabolism) are the most common instances of these polymorphisms. (Subbiah, 2007) Genetic differences are regarded as diabetes risk markers since they can be used to anticipate the disease as well as to determine the beginning of diabetes.(Raciti et al., 2014)

2. Environmental Factors:
The expression of genes in an organism can be influenced by the environment. Air, water, sunlight, climate, soil, light cycles, and the presence of mutagens natural vegetation and landforms are all environmental factors which affect everyday living, and play a key role in bringing health differences. All of these factors can influence which genes in an animal are expressed, which in turn impacts the animal's phenotype. Growing data suggests that environmental and lifestyle factors might alter epigenetic mechanisms such as DNA methylation, histone changes, and microRNA expression.(Alegría-Torres, Baccarelli, & Bollati, 2011)

3. Sociodemographic Factors:
A substantial and rising amount of data suggests that sociodemographic characteristics such as age, race, ethnicity, and language, as well as socioeconomic status (SES) indicators such as income and education, might impact health outcomes. As sociodemographic factors have substantially influenced our way of life, they have a significant impact on lifestyle diseases.The chances of developing a lifestyle disease increase as we age. While both sexes are affected equally by CVDs, males have a greater incidence than women. Still, CVDs are the leading cause of death of women in developed countries.(Di Giosia et al., 2017) African Americans are more likely to develop high blood pressure than Europeans. (Schneiderman, 1992)

4. Factors Of Self Management:
There are four personal behaviors that can affect Lifestyle diseases namely poor nutrition, excessive alcohol use, tobacco use, and lack of physical activity. The use of fast food in regular life is on the rise,addition of tobacco, alcohol and other drugs are very frequent and sedentary behaviour or lack of physical activity add different chronic complications in our life and strongly promotes NCDs. The simple availability of contemporary technology and manufacturing in homes and workplaces, such as machines, automobiles, and labor-saving technologies, makes life easier but unhealthy in terms of reducing the risk of NCDs. (Budreviciute et al., 2020) The relationship between epigenetic marks and lifestyle factors such as nutrition, behaviour, stress, physical activity, working habits, smoking, and alcohol intake has been studied in various studies. (Gharipour et al., 2021) A mere lack of physical activity claims 1.6 million lives each year. (WHO 2017. Noncommunicable diseases. Fact Sheet).

5. Factors Of Medical Conditions:
Different metabolic system alterations (BP, Lipid, Glucose, Obesity) combined with various medicinal/drug treatments and their adverse effects, as well as virus-like pathogens, may result in chronic illness states that are also influenced by our lifestyles (WHO Factsheets, 2021).

After two years of the pandemic, our lifestyles are more sedentary than ever. Numerous lifestyle problems, such as obesity, diabetes, hypertension, and heart disease, are influenced by variables such as long work hours, sedentary behaviour, bad eating habits, and a lack of physical activity. Two effects of the pandemic are stress and sadness. Furthermore, to some extent, the rapid worldwide spread of these risk factors is facilitated by the globalisation of the production, promotion, and retailing of harmful foods, drinks, alcohol, and tobacco products. As a result, a powerful, coordinated worldwide response is required.

Global Burden
The Global Burden of Disease (GBD) is a tool for quantifying health loss from many diseases, accidents, and risk factors in order to improve health systems and eradicate inequities (Findings from the Global Burden of Disease Study 2017). Chronic disease can lead to loss of independence, years of infirmity, or death, as well as a significant financial load on health-care systems. Today, chronic diseases are a major public health problem worldwide . The majority of the world, especially developing countries like India, is going through a nutrition transformation. The significant growth in the prevalence of lifestyle diseases has been linked to adopting western lifestyles. It is causing increasing concern because it is also harming the paediatric population. Globally almost two thirds deaths (36 million) were because of chronic NCDs.(Boutayeb & Boutayeb, 2005) The burden of NCDs can be quantified using a variety of ways. The technique that estimates the global burden of NCDs in terms of Disability Adjusted Life Years (DALYs), which is a combination of Years of Life Lost (YLL) through premature mortality and Years Lived with Disability (YLD), is the most widely utilised way for overcoming the individual challenges of each country. (Boutayeb & Boutayeb, 2005) Adult NCDs account for 80% of the burden in industrialised nations and 70% in middle-income countries. ven in places with high mortality rates, nearly half of adult disease burden is attributable to NCDs.According to the World Health Organization (WHO), this cluster of diseases accounted for 36 million (63%) of the 57 million total deaths in 2008 were due to non communicable disease, comprising mainly cardiovascular diseases (48% of non-communicable diseases), cancer (21%), chronic respiratory diseases (12%) and diabetes (3.5%).(" World Health Organization (WHO) Global Health Observatory Database ", 2008)

CVDs are the leading cause of death worldwide, with over 17 million people dying each year. The figure is expected to climb to more than 23

million every year by 2030. (Mathers & Loncar, 2006) CVD is expected to cause more fatalities in low-income countries by 2030 than infectious diseases, maternal and perinatal problems, and dietary deficiencies combined. (Beaglehole & Bonita, 2008) Cardiovascular disorders cause 26% of all fatalities in India. Men and young people are at a higher risk. Young and middle-aged persons are most vulnerable in metropolitan India, whereas the elderly are most vulnerable in rural areas.("Global Burden Of Diseases GBD profile: India.," 2021)

In low and middle-income nations, asthma and Chronic obstructive pulmonary disease (COPD) account for the majority of mortality among Chronic respiratory diseases ((CRDs).[14] COPD is a silent killer in low- and middle-income countries caused primarily by tobacco smoking and household air pollution and affects an estimated 328 million individuals globally.(Eisner et al., 2010) Itis expected to overtake heart disease as the leading cause of death within the next 15 years.(Quaderi & Hurst, 2018) India has a disproportionately high 32 percent of worldwide DALYs from chronic respiratory disorders, although having only 18% of the global population. In 2016, the prevalence of COPD was 4.2 % in India, and the prevalence of asthma was 2.9%. The prevalence of COPD in India is higher than the global norm.(Collaborators, 2018) One of the news report from India also stated that every third child in Delhi has impaired lungs.

Metabolic syndrome (a condition characterised by central obesity, high blood pressure, insulin resistance, and dyslipidemia) has recently become prevalent in India. Its prevalence is reported to range between 23.2 and 41.1 percent in different parts of the country. (Pappachan, 2011) Childhood obesity and overweight has become a global epidemic. (The Lancet Diabetes Endocrinology, 2022)   In one of the most dramatic examples, from 1976-1980 to 1999-2000, the prevalence of overweight children aged 6-11 years in the United States than doubled, from 6.5 percent to 15.3 percent.

Diabetes is classified as a major noncommunicable disease (NCD), and the World Health Organization (WHO) addresses it in the global action plan for NCD prevention and management, as well as the WHO's 13th general programme of activity 2019–2023.("Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020," 2013; "Thirteenth General Programme of Work 2019–2023," 2018)   Diabetes had 22.9 million, 476.0 million, 1.37 million, and 67.9 million global incidence, prevalence, death, and disability-adjusted life-years (DALYs) in 2017, with projections of 26.6 million, 570.9 million, 1.59 million, and 79.3 million in 2025 respectively. (Lin et al., 2020) A particularly heavy healthcare burden of diabetes is noted in Europe, where 8.8% of the population aged 20–79   years is estimated to have diabetes according to the International Diabetes Federation. According to the International Diabetes Federation (IDF), 2019 the top three nations with the highest number of diabetics in 2019 are China (116.4 million), India (77.0 million), and the United States (31.0 million). In 2030 and 2045, this trend is predicted to continue, with China (140.5 and 147.2 million) and India (101.0 and 134.2 million) having the largest diabetes burdens.

Every year, more than 7 million people die of cancer, with 30% of those deaths related to lifestyle decisions. (WHO (2017) Cancer. Fact Sheet.) According to the GLOBOCAN 2020 predictions published in their report, there would be 19.3 million new cancer diagnoses and about 10 million cancer deaths in 2020. The disease is a major source of sickness and mortality in every part of the world. (Sung et al., 2021) Nearly 1,193,000 new cancer cases were reported in India in 2011, with females (603,500) having a greater burden than men (589,800). The overall number of new male cases is expected to rise from 0.589 million in 2011 to 0.934 million by 2026, according to estimates. The number of new cancer cases among women grew from 0.603 million to 0.935 million.(D'Souza, Murthy, & Aras, 2013)

A study of certain school children aged 8 to 12 years revealed that 12% of the students experienced recurring sleep issues.(Paavonen, Solantaus, Almqvist, & Aronen, 2003) Data from epidemiologic studies on several sleep indices paint a bleak picture. For example, current consensus panel guidelines state that individuals should get at least 7 hours of sleep every night, however the Centers for Disease Control and Prevention (CDC) indicates that around 35% do not fulfil that requirement. (Hale, Troxel, & Buysse, 2020)

How much anyone spent time for watching television each day has

been linked to rising obesity rates in both children and adults, as well as an increased risk of type 2 diabetes and gallstones. (Rosiek, Maciejewska, Leksowski, Rosiek-Kryszewska, & Leksowski, 2015)

Kidney disease was the 12th leading cause of mortality in the 2015 Global Burden of Disease Study, accounting for 1.1 million deaths globally. (Neuen, Chadban, Demaio, Johnson, & Perkovic, 2017) Over the previous decade, overall chronic kidney diseases (CKD) mortality has climbed by 31.7 percent, making it one of the fastest increasing primary causes of death, alongside diabetes and dementia. In 2017, there were 697,5 million cases of CKD worldwide. China (132 million cases) and India (115 million cases) accounted for nearly a third of all CKD patients. There were over 1 million prevalent cases of CKD in 79 of the 195 countries covered in GBD. (Collaboration, 2020)

Women are disproportionately impacted by osteoarthritis, More than 500 million individuals suffer from osteoarthritis, which affects 7% of the global population.. Between 1990 and 2019, the number of persons afflicted worldwide increased by 48 percent, and osteoarthritis was the 15th leading cause of YLDs, accounting for 2% of all YLDs. (Hunter, March, & Chew, 2020) With a frequency of 22 percent to 39 percent in India, osteoarthritis is the second most prevalent rheumatologic condition. (Pal, Singh, Chaturvedi, Pruthi, & Vij, 2016)

Dementia affects an estimated 0.7 percent of the global population, or 51.6 million people. When compared to Asia and Africa, the frequency is higher in high-income nations such as Western Europe. Dementia-related fatalities are expected to rise from 2.4 million in 2010 to 5.8 million by 2040. Alzheimer's disease afflicted 26.6 million people globally in 2006. By 2050, the global frequency of the disease would have approximately four times of current status, with one in every 85 people suffering from it. (Brookmeyer, Johnson, Ziegler-Graham, & Arrighi, 2007)

People with co-morbidities of non-communicable diseases (NCDs) have a greater death rate than those who do not, according to trends emerging from Covid management across the country for some time. According to the Lancet report, 2021, the mortality rate among Covid patients with at least one existing health issue was 5.7 percent in India, compared to 0.7 percent in otherwise healthy people.

Screening , Diagnosis and Monitoring
Any health system must have the capacity to accurately diagnose patients. At the pathophysiological level, exposure-related NCDs are the outcome of interactions between internal (genetic, epigenetic, hormonal, ageing, etc.) and external (occupational/environmental) factors. These lifestyle disorders are often diagnosed based on their symptoms. Physical examinations, clinical testing, including molecular, serological, biopsy, genetic analysis, and imaging tests, among others, are used to diagnose many diseases, each of which has its own set of symptoms.The development of diagnostic tools enables the rapid identification of high-sensitivity NCD biomarkers to aid in the early detection of diseases, resulting in easier treatment and faster cures. Furthermore, creating speedy and sensitive diagnostic systems to detect NCDs at the point-of-care would be extremely beneficial to both healthcare workers and the system as a whole. In recent decades, huge strides have been achieved in the study of genetic and epigenetic variables, as well as the diseases they cause and their further diagnosis. There are already approximately 2500 genetic tests available for different diseases identification. (Bray et al., 2016) To reduce the public health burden, ongoing attempts are being undertaken to assess genetic risk of people to certain of these diet-related disorders, such as Type 2 diabetes and obesity, using accessible testing and screening tools. When gene variations linked to osteoporosis are found, it becomes simpler to diagnose, treat, and prevent fractures, resulting in a more individualized approach/therapy. (Antoñanzas, Juárez-Castelló, & Rodríguez-Ibeas, 2015) With the proliferation of genomic technology, we can now utilise an individual's genome to generate helpful predictions regarding future illness risk. Recent research, however, has revealed that the predictive usefulness of genetic information varies depending on the circumsances, including age, gender, and ethnicity. (Jiang, Holmes, & McVean, 2021) Newer technologies utilising nanodiagnostic instruments, such as DNA-based bionanosensors, have recently evolved and are thought to be safe and cost-effective, with excellent specificity for disease diagnosis. (Abu-Salah et al., 2015) People are being screened for serious diseases at an increasing rate, as research shows the potential benefits of early identification and intervention in reducing morbidity and death. Health

screenings have been pushed and implemented in various contexts as a tool to improve population health and individuals' ability to successfully engage in health throughout their lives, based on the basic concept that knowledge is vital to prevention and treatment. Health screenings are commonly performed as part of routine health care visits in high-income nations. Health screenings have been pushed and implemented in various contexts as a tool to improve population health and individuals' ability to successfully engage in health throughout their lives, based on the basic concept that knowledge is vital to prevention and treatment. Health screenings are commonly performed as part of routine health care visits in high-income nations. Considering the fact that low and middle income countries are more prone for Lifestyle diseases, it is critical to guarantee that screening programmes focused at illnesses in affluent nations may be made available to developing countries where similar ailments have already established as major health issues, if suitable.

Precautions, Prevention and Treatment

Lifestyle illnesses are prevalent among the people nowadays in practically every country, not just India. We also came across a number of persons who died as a result of not being aware of their sickness and not having enough time to seek treatment. It becomes imperative that one identify the ailments from which he or she is suffering as soon as possible. When a person is aware of their health, it is much easier to take precautions to avoid problems. NCDSs are also linked to greater health-care expenses as a result of the lengthy and costly treatment. When it comes to NCDs, one cannot stop taking medications once they feel better; instead, one must continue to take them in order to avoid sickness, which can last a lifetime. Many risk factors, which are among the most common causes of death, can be coped with by modifying lifestyles. Lifestyle changes, such as tailored nutrition and physical exercise, are thought to play an important impact in the prevention, management, and treatment of several life-threatening illnesses. To treat any lifestyle condition, there are three approaches: (i) medications alone, (ii) lifestyle adjustments, and (iii) a combination of medicines and lifestyle changes.

80 percent of chronic illnesses, according to the World Health Organization, are avoidable. More than anything else, our lifestyle choices have an influence on our health and lifespan. Many chronic illness risk factors might start early in life. However, research suggests that implementing dietary and lifestyle modifications might help avoid disease progression and mortality. Educating individuals, altering the environment, adjusting the food supply, carrying out community interventions, and adopting economic policies are all examples of interventions targeted at influencing diet and lifestyle characteristics. The concept of lifestyle illnesses contends that focusing just on one type of cause impedes public health efforts.

NCDs require long-term monitoring due to their chronic nature, in order to evaluate their progression, treatment success, and toxicity. Many of the health issues connected with lifestyle can be avoided or postponed by using health promotion and disease prevention techniques. Preventing diseases caused by lifestyle choices and supporting physical and mental health necessitates an understanding of how people's health is jeopardised in everyday scenarios.

Nevertheless, healthy lifestyle methods are now easily achievable with appropriate interventions, like nutritional counselling, exercise training, de-addiction programmes, regular medical checkups and stress management techniques. Most genetic and epidemiologic research have concluded that lowering known job risks, altering eating habits, and changing lifestyle-risk factors might prevent the majority of instances of cardiovascular illnesses, stroke, diabetes, neurological diseases, and many forms of cancer. Diet personalization, which includes bettering nutritional quality and genotyping (nutrigenomics), leads to better health. (German, Zivkovic, Dallas, & Smilowitz, 2011) The most essential part of the preventative approach is individual lifestyle management, with a focus on activities, such as innovations, that may help society raise risk factor knowledge, make country-level health policy decisions, and establish a global health strategy. (Jiang et al., 2021) To minimise the impact of lifestyle illnesses on individuals and society, a comprehensive strategy including all sectors, including health, finance, education, planning, and others is required.(Tabish, 2017) The strategy must galvanise a concerted effort to lower the risks associated with noncommunicable diseases while also motivating solutions to control and prevent them. A primary healthcare system that prioritises early identification and treatment must provide high-

quality lifestyle disease intervention. The appropriate diagnosis, screening, and treatment of lifestyle diseases, as well as the provision of palliative care to those who require it, are all part of the management of these diseases. Regular reporting, global monitoring, and accountability are required to ensure that projects meet their objectives. Epigeneticists have mostly unexplored chances to discover how closely epigenetic markers are reliant on lifestyle variables, as well as whether and how much epigenetic processes may be modified once positive or negative lifestyle modifications are acquired and maintained.(Alegría-Torres et al., 2011) To battle these disorders, a healthy lifestyle that includes a well-balanced diet, physical activity, and respect for the biological clock must be embraced. We cannot cease developing work in this revolutionised age because to our human nature, but we can certainly minimise our illnesses by incorporating these simple and practical ways into our lives. (Sharma & Majumdar, 2009) Funding for research into creative approaches to enhance food biotechnology, on the other hand, is in high demand. Furthermore, creating rapid and sensitive diagnostic methods to detect NCDs at the point of treatment would benefit both healthcare workers and the entire system. The majority of individuals who lead a healthy lifestyle are able to mitigate the negative environmental and societal impacts of bad lifestyle choices like pollution and passive smoking. As a consequence, they are able to keep their health for longer than expected, against all odds.

Elimination Programmes

We spend our days surrounded by electronics and other items of convenience. A sedentary work culture and urban lifestyle encourages us to engage in unhealthy behaviours that harm rather than benefit our bodies. Unfortunately, the public is mostly unaware of the link between health and lifestyle. The identification of the causes of lifestyle illnesses is critical since eliminating these factors will aid in healing and improved health. During these COVID times, it is more crucial than ever to ensure that we are making good choices and getting adequate physical exercise. Lifestyle diseases have become public health issues due to the frightening rate at which they are spreading throughout society. The attitudes of the youngsters toward physical exercise are incompatible with their current practises. As a consequence, it's clear that simply spreading knowledge and raising awareness isn't enough to keep kids from acquiring lifestyle issues. (Booth, Roberts, & Laye, 2012).

To modify diet and lifestyle factors, individuals can be taught, the environment can be modified, the food supply can be adjusted, community interventions can be carried out, and economic policies may be enacted. Individual education, environmental change, food supply modification, community interventions, and economic policies are all examples of interventions aimed at improving diet and lifestyle characteristics. The Lifestyle diseases are expected to be the major cause of mortality in every area of the world by 2030. While legislation and policy are critical in curbing this epidemic, our current understanding of how to use them most effectively is limited. Evidence on current patterns of NCDs, as well as therapies related with them, gives insights into which legislation and policies should be enacted. (Toebes, Hesselman, van Dijk, & Herman, 2017). The Framework Convention on Tobacco Control is a one-of-a-kind, legally binding instrument that has prompted several nations to revise their tobacco laws and practises.

NCDs are recognised as a serious issue to sustainable development in the 2030 Agenda for Sustainable Development. Heads of State and Government agreed to developing ambitious national responses by 2030 to decrease premature mortality from NCDs by one-third via prevention and treatment as part of the Agenda (SDG target 3.4). (Singh Thakur, Nangia, & Singh, 2021)

The WHO's leadership and coordinating position in promoting and monitoring global action against NCDs was reaffirmed in the UN General Assembly's High-Level Meetings on NCDs in 2011 and 2014, which reaffirmed WHO's leadership and coordinating role in promoting and monitoring global action against NCDs. In 2018, the United Nations General Assembly held its third High-Level Meeting on NCDs to assess progress and reach agreement on a strategy for the years 2018-2030. ("Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020," 2013)

To decrease the needless NCD burden, WHO Member States agreed on global initiatives in 2013, including a "Global action plan for the

prevention and control of NCDs 2013-2020." By executing nine voluntary worldwide objectives, this Plan intends to reduce the number of early deaths from NCDs by 25% by 2025. Two of the objectives are directed primarily at preventing and controlling CVDs. (Lin et al., 2020)

In 2020, nations had completely implemented a third of the 19 policies 32.8% on average. Average policy implementation increased from 39% in 2015 to 45.9% in 2017 and 47% in 2020, according to aggregate policy evaluations, which include partially implemented programmes. Alcohol, tobacco, and unhealthy food regulations had the lowest implementation rates, with a third of all measures reverting. Low-income and less democratic countries have the worst policy execution. ("Correction to Lancet Glob Health 2021; 9: e1528-38," 2022)

The National Health Policy, 2017, was developed by the Indian government with the goal of achieving the highest possible level of good health and well-being for all people of all ages through a preventive and promotive health care orientation in all developmental policies, as well as universal access to high-quality health care services without causing financial hardship to anyone.. With an emphasis on prevention and health promotion, the approach strives to move the focus from sickness to wellbeing. Among other things, the strategy aims to avoid early death from cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases. As per ICMR report , (Press Information Bureau, Government of India, Ministry of Health and Family Welfare) Under the National Health Mission, the Indian government is also executing the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases, and Stroke (NPCDCS). The program's goal is to raise awareness of cancer prevention, screening, early diagnosis, and referral to a treatment facility at the appropriate level. Breast, cervical, and oral cancers are the three cancers that are being focused on. A therapeutic vaccine for lifestyle-related illnesses (such as high blood pressure) is being researched throughout the world, with the objective of generating a one-of-a-kind treatment that might be injected once or twice a year instead of taking daily drugs. To successfully address the rising issue of NCDs, the most prevalent lifestyle programmes, such as the promotion of good eating habits and smoking cessation, are implemented. Globally, WHO and UN agencies may collaborate to develop policies and initiatives to lower the risk of NCDs. (Lim, Chan, Alsagoff, & Ha, 2014) Although, NCDs pose the biggest threat to future global health, they remain an under-emphasized subject of inter-disciplinary study. (Horton, 2013) Worldwide rules and standards are critical for establishing the global agenda on NCDs and ensuring a coordinated international response to the growing epidemic.(Taylor AL, 2015) Researchers from a variety of disciplines have studied NCDs and contributed significantly to the establishment of successful NCD legislation and policies. (Toebes et al., 2017)

CONCLUSION:

To prevent and cure NCDs, dietary changes and increased physical activity alone will not be sufficient. It will require work on several fronts, including multi-stakeholder engagement, better healthcare systems, and leadership from governments and healthcare professionals. Effective management solutions are critically needed since lifestyle diseases are a global danger to the socioeconomic components of nations. The current scenario is concerning, and we must draw lessons from it for the future.

REFERENCES

1. Abu-Salah, K. M., Zourob, M. M., Mouffouk, F., Alrokayan, S. A., Alaamery, M. A., & Ansari, A. A. (2015). DNA-Based Nanobiosensors as an Emerging Platform for Detection of Disease. Sensors (Basel), 15(6), 14539-14568. doi:10.3390/s150614539
2. Alegría-Torres, J. A., Baccarelli, A., & Bollati, V. (2011). Epigenetics and lifestyle. Epigenomics, 3(3), 267-277. doi:10.2217/epi.11.22
3. Antoñanzas, F., Juárez-Castelló, C. A., & Rodríguez-Ibeas, R. (2015). Some economics on personalized and predictive medicine. Eur J Health Econ, 16(9), 985-994. doi:10.1007/s10198-014-0647-8
4. Beaglehole, R., & Bonita, R. (2008). Global public health: a scorecard. Lancet, 372(9654), 1988-1996. doi:10.1016/S0140-6736(08)61558-5
5. Booth, F. W., Roberts, C. K., & Laye, M. J. (2012). Lack of exercise is a major cause of chronic diseases. Compr Physiol, 2(2), 1143-1211. doi:10.1002/cphy.c110025
6. Boutayeb, A., & Boutayeb, S. (2005). The burden of non communicable diseases in developing countries. Int J Equity Health, 4(1), 2. doi:10.1186/1475-9276-4-2
7. Bray, M. S., Loos, R. J., McCaffery, J. M., Ling, C., Franks, P. W., Weinstock, G. M., . . . Group, C. W. (2016). NIH working group report-using genomic information to guide weight management: From universal to precision treatment. Obesity (Silver Spring), 24(1), 14-22. doi:10.1002/oby.21381
8. Brookmeyer, R., Johnson, E., Ziegler-Graham, K., & Arrighi, H. M. (2007). Forecasting the global burden of Alzheimer's disease. Alzheimers Dement, 3(3), 186-191. doi:10.1016/j.jalz.2007.04.381
9. Budreviciute, A., Damiati, S., Sabir, D. K., Onder, K., Schuller-Goetzburg, P., Plakys, G., . . . Kodzius, R. (2020). Management and Prevention Strategies for Non-communicable Diseases (NCDs) and Their Risk Factors. Front Public Health, 8, 574111. doi:10.3389/fpubh.2020.574111
10. Collaboration, G. C. K. D. (2020). Global, regional, and national burden of chronic kidney disease, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. Lancet, 395(10225), 709-733. doi:10.1016/S0140-6736(20)30045-3
11. Collaborators, I. S.-L. D. B. I. C. (2018). The burden of chronic respiratory diseases and their heterogeneity across the states of India: the Global Burden of Disease Study 1990-2016. Lancet Glob Health, 6(12), e1363-e1374. doi:10.1016/S2214-109X(18)30409-1
12. Correction to Lancet Glob Health 2021; 9: e1528-38. (2022). Lancet Glob Health, 10(1), e41. doi:10.1016/S2214-109X(21)00521-0
13. D'Souza, N. D., Murthy, N. S., & Aras, R. Y. (2013). Projection of cancer incident cases for India -till 2026. Asian Pac J Cancer Prev, 14(7), 4379-4386.
14. Di Giosia, P., Passacquale, G., Petrarca, M., Giorgini, P., Marra, A. M., & Ferro, A. (2017). Gender differences in cardiovascular prophylaxis: Focus on antiplatelet treatment. Pharmacol Res, 119, 36-47. doi:10.1016/j.phrs.2017.01.025
15. Eisner, M. D., Anthonisen, N., Coultas, D., Kuenzli, N., Perez-Padilla, R., Postma, D., . . . Committee on Nonsmoking COPD, E. v. a. O. H. A. (2010). An official American Thoracic Society public policy statement: Novel risk factors and the global burden of chronic obstructive pulmonary disease. Am J Respir Crit Care Med, 182(5), 693-718. doi:10.1164/rccm.200811-1757ST
16. German, J. B., Zivkovic, A. M., Dallas, D. C., & Smilowitz, J. T. (2011). Nutrigenomics and personalized diets: What will they mean for food? Annu Rev Food Sci Technol, 2, 97-123. doi:10.1146/annurev.food.102308.124147
17. Gharipour, M., Mani, A., Amini Baghbahadorani, M., de Souza Cardoso, C. K., Jahanfar, S., Sarrafzadegan, N., . . . Silveira, E. A. (2021). How Are Epigenetic Modifications Related to Cardiovascular Disease in Older Adults? Int J Mol Sci, 22(18). doi:10.3390/ijms22189949
18. Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020. (2013). In.
19. Global Burden Of Diseases GBD profile: India. (2021). In: fromHealthdata.orgwebsite:.
20. Hale, L., Troxel, W., & Buysse, D. J. (2020). Sleep Health: An Opportunity for Public Health to Address Health Equity. Annu Rev Public Health, 41, 81-99. doi:10.1146/annurev-publhealth-040119-094412
21. Horton, R. (2013). Non-communicable diseases: 2015 to 2025. Lancet, 381(9866), 509-510. doi:10.1016/S0140-6736(13)60100-2
22. Hunter, D. J., March, L., & Chew, M. (2020). Osteoarthritis in 2020 and beyond: a Lancet Commission. Lancet, 396(10264), 1711-1712. doi:10.1016/S0140-6736(20)32230-3
23. Jiang, X., Holmes, C., & McVean, G. (2021). The impact of age on genetic risk for common diseases. PLoS Genet, 17(8), e1009723. doi:10.1371/journal.pgen.1009723
24. Lim, J., Chan, M. M., Alsagoff, F. Z., & Ha, D. (2014). Innovations in non-communicable diseases management in ASEAN: a case series. Glob Health Action, 7, 25110. doi:10.3402/gha.v7.25110
25. Lin, X., Xu, Y., Pan, X., Xu, J., Ding, Y., Sun, X., . . . Shan, P. F. (2020). Global, regional, and national burden and trend of diabetes in 195 countries and territories: an analysis from 1990 to 2025. Sci Rep, 10(1), 14790. doi:10.1038/s41598-020-71908-9
26. Mathers, C. D., & Loncar, D. (2006). Projections of global mortality and burden of disease from 2002 to 2030. PLoS Med, 3(11), e442. doi:10.1371/journal.pmed.0030442
27. Neuen, B. L., Chadban, S. J., Demaio, A. R., Johnson, D. W., & Perkovic, V. (2017). Chronic kidney disease and the global NCDs agenda. BMJ Glob Health, 2(2), e000380. doi:10.1136/bmjgh-2017-000380
28. Paavonen, E. J., Solantaus, T., Almqvist, F., & Aronen, E. T. (2003). Four-year follow-up study of sleep and psychiatric symptoms in preadolescents: relationship of persistent and temporary sleep problems to psychiatric symptoms. J Dev Behav Pediatr, 24(5), 307-314. doi:10.1097/00004703-200310000-00001
29. Pal, C. P., Singh, P., Chaturvedi, S., Pruthi, K. K., & Vij, A. (2016). Epidemiology of knee osteoarthritis in India and related factors. Indian J Orthop, 50(5), 518-522. doi:10.4103/0019-5413.189608
30. Pappachan, M. J. (2011). Increasing prevalence of lifestyle diseases: high time for action. Indian J Med Res, 134, 143-145.
31. Quaderi, S. A., & Hurst, J. R. (2018). The unmet global burden of COPD. Glob Health Epidemiol Genom, 3, e4. doi:10.1017/gheg.2018.1
32. Raciti, G. A., Nigro, C., Longo, M., Parrillo, L., Miele, C., Formisano, P., & Béguinot, F. (2014). Personalized medicine and type 2 diabetes: lesson from epigenetics. Epigenomics, 6(2), 229-238. doi:10.2217/epi.14.10
33. Rahimi Foroushani, A., Estebsari, F., Mostafaei, D., Eftekhar Ardebili, H., Shojaeizadeh, D., Dastoorpour, M., . . . Taghdisi, M. H. (2014). The effect of health promoting intervention on healthy lifestyle and social support in elders: a clinical trial study. Iran Red Crescent Med J, 16(8), e18399. doi:10.5812/ircmj.18399
34. Rosiek, A., Maciejewska, N. F., Leksowski, K., Rosiek-Kryszewska, A., & Leksowski, Ł. (2015). Effect of Television on Obesity and Excess of Weight and Consequences of Health. Int J Environ Res Public Health, 12(8), 9408-9426. doi:10.3390/ijerph120809408
35. Schneiderman, N. (1992). Ethnicity and ambulatory blood pressure measurement: relationship to clinic and laboratory measurements. J Clin Pharmacol, 32(7), 604-609. doi:10.1002/j.1552-4604.1992.tb05768.x
36. Seedorf, U., Schulte, H., & Assmann, G. (2007). Genes, diet and public health. Genes Nutr, 2(1), 75-80. doi:10.1007/s12263-007-0001-1
37. Sharma, M., & Majumdar, P. K. (2009). Occupational lifestyle diseases: An emerging issue. Indian J Occup Environ Med, 13(3), 109-112. doi:10.4103/0019-5278.58912
38. Singh Thakur, J., Nangia, R., & Singh, S. (2021). Progress and challenges in achieving noncommunicable diseases targets for the sustainable development goals. FASEB Bioadv, 3(8), 563-568. doi:10.1096/fba.2020-00117
39. Subbiah, M. T. (2007). Nutrigenetics and nutraceuticals: the next wave riding on personalized medicine. Transl Res, 149(2), 55-61. doi:10.1016/j.trsl.2006.09.003
40. Sung, H., Ferlay, J., Siegel, R. L., Laversanne, M., Soerjomataram, I., Jemal, A., & Bray, F. (2021). Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. CA Cancer J Clin, 71(3), 209-249. doi:10.3322/caac.21660
41. Tabish, S. A. (2017). Lifestyle Diseases: Consequences, Characteristics, Causes and Control. J Cardiol Curr Res 9(3). doi:https://doi.org/10.15406/jccr.2017.09.00326
42. Taylor AL, P. E., Schmidt LA. (2015). The increasing weight of regulation: countries combat the global obesity pandemic. Indian Law J, 90:257.
43. The Lancet Diabetes Endocrinology. (2022). Childhood obesity: a growing pandemic. Lancet Diabetes Endocrinol, 10(1), 1. doi:10.1016/S2213-8587(21)00314-4
44. Thirteenth General Programme of Work 2019–2023. (2018). In.
45. Toebes, B., Hesselman, M., van Dijk, J. P., & Herman, J. (2017). Curbing the lifestyle disease pandemic: making progress on an interdisciplinary research agenda for law and policy interventions. BMC Int Health Hum Rights, 17(1), 25. doi:10.1186/s12914-017-0131-5
46. World Health Organization (WHO) Global Health Observatory Database (2008). In.