

ISSN 2583 - 2913

### LIFESTYLE DISORDERS AND THEIR MANAGEMENT: A SHORT REVIEW

## Md Sadique Hussain<sup>1</sup>, Ganesh N. Sharma<sup>1,\*</sup>, Sakshi Sharma<sup>2</sup>

Abstract: Lifestyle has long been related to the advancement of various chronic illnesses. In the present era of developed technology, communication, and electronic gadgets, the level of comforts available for our utility has increased but it has somehow or other also led to an increase in our problems associated with psychosomatic and spiritual health. The concept of lifestyle disease is used for several different diseases such as asthma, coronary heart disease, diabetes, lung cancer, etc. The idea shows that diseases are caused by a person's behaviors. The transformation from an ancestral to a new-fashioned way of living, eating diets high in fat and calories combined with an increased level of mental stress has intensified the problem further. A change in eating habits & the embracement of an inactive lifestyle has led to the increasing influence of lifestyle diseases like Obesity, Asthma, Diabetes, Arthritis, Hypertension, Chronic liver diseases, Coronary heart disease, Metabolic syndrome, Depression, and Cancer, all across the globe. A Combined made report by the World Health Organization and the World Economic Forum, tells that India will face a loss of \$236.6 billion approximately by 2015 on account of a sick way of life and unhealthy diet. Poor lifestyle includes unhealthy food, decreasing physical activity, increased tobacco consumption, high intake of alcohol, inadequate sleep, and stress due to increased work pressure.

**Keywords:** - Lifestyle disorders; Health; Poor lifestyle; Diet; Physical activity.

Introduction: There was an era when human beings do not have lifestyles but have long lives. [1] This testimony from Fitzgerald has particular current importance because over the last three decades, an enormous focal point had been given to the public health policies, to speak the minimal, on what is termed "lifestyle diseases". An important cause is due to the non-implementation of things as these are only found as written material. There is a huge difference between words and work. This kind of lifestyle is not being observed in India but in other countries as well. [2] The report presented by World Economic Forum and the

#### \*Corresponding author

<sup>1</sup>School of Pharmaceutical Sciences, Jaipur National University, Jaipur, Rajasthan 302017, India.

<sup>2</sup>School of Pharmaceutical Sciences, Lovely Professional University, Phagwara, Punjab 144411, India

E-mail: ganeshmph@gmail.com Published on Web 30/04/2022, www.ijsronline.org World Health Organization in 2008 delivered that India has to suffer a collective loss of 236.6 billion dollars by 2015 due to harmful ways of living and a defective diet. The earnings dropping in India due to these disorders was 8.7 billion dollars in 2005, which is estimated to rise by 54 billion dollars in 2015. These kinds of economic losses are also expected in other countries like China (131.8 billion dollars), Pakistan (5.5 billion dollars), etc. [3]

Some main components leading to lifestyle diseases involve bad physical inactivity, food habits, disturbed biological clock, and wrong body posture. An unhealthy way of life includes bad eating habits, absence of physical workout, smoking, more intake of alcohol, disturbed sleep, and anxiety as a result of a massive amount of work. [4]

With advancements in therapeutic discipline, a lot of progress has been observed in cleanliness and sanitation, avoidance of disorder by using vaccines and curing various ailments using antibiotics. Therefore, satisfactory results in the field of therapeutic medicine declined the number of casualties due to communicable and infective disorders, many vaccinations had helped in eradicating



various disorders which have taken the lives of children in past and many of the infective disorders can be treated using antibiotics. [5] The kind of disorders which are caused due to living standards are directly connected with the habits of an individual. According to additional speeches, these disorders describe illnesses whose existence is established by the day-to-day practice of individuals and the consequence of improper relations of individuals with their surroundings. These kinds of happening due to technological disorders are advancements that are taking place around the world. [6] primary Non-Communicable Diseases threatening causes worldwide in terms of accountable demise are high blood pressure (13%), tobacco use (9%), diabetes (6%), lack of physical activity (6%), and obesity (5%). It has been observed that these diseases are mainly affecting the younger generation and city population. [7] The life of a person having an absence of exercise alludes to being an inactive way of living and is the major reason of safeguard mortality around the world. This kind of distressed attitude towards life causes an increment in risk factors for life such as high BP, high cholesterol levels, respiratory tract infections, and obesity. [8] It is estimated by World Health Organisation that India will have a maximum number of individuals suffering from these sedentary lifestyle disorders. Figure 1 represents the good and bad lifestyle habits. While Figure 2 represents the different types of disorders of lifestyle.



Figure 1: Represents good and bad Lifestyle.

# T'C 4 1 D' 1

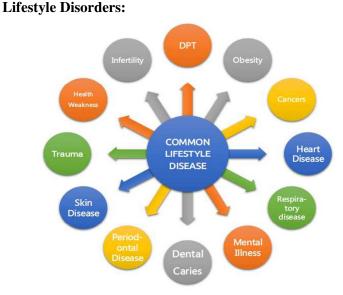


Figure 2: Various Lifestyle Disorders.

### 1. Diabetes:

India is expressed to be the world's diabetes capital, already. Diabetes is a metabolism disturbance that usually influences the method of the body consuming food for energy and overall development. It is classified into four types: Type 1. Type 2, Gestational, and Pre-Diabetes (Disturbed Glucose Tolerance). Type 2 diabetes is most commonly known around the globe and is generated by modifiable behavioral risk circumstances. It is considered to be the chief reason for mortality around the globe and has also become the most formidable disease of the 21<sup>st</sup>era. [8,9] On considering pathophysiology, Diabetes Mellitus is of mainly two types, Type-1 diabetes mellitus (T1DM) and Type-2 diabetes mellitus (T2DM). In contrast to T1DM, T2DM is less hereditary or largely affected by the surrounding aspects, the sick routine of an individual, and eating routines. The latest analysis indicates the companionship of the gut microbiome along with its connection with hereditary reasons in people is highly significant in deciding the type of diabetes mellitus. [10] Type 2 is a universal catastrophe that causes damage to the financial development of all communities, especially developing nations. Obesity is also one of the major causes of this resulting due to poor eating habits or improper nutritional intake. It has been studied that in Asian countries a maximum number of people due to fast financial growth created diabetes a massive disorder. These communities are affected by this disorder at an early age due to low



BMI levels. [11] In southern parts of India frequency has achieved about 20%. [12]

In this country, many of the traits of individuals has made them prone to the disorder. According to various reports, it is observed that the people here possess a powerful hereditary tendency to diabetes, which is simply disclosed due to unfavorable environmental situations. It is observed that about 75% of patients have a family history of diabetes in the country, expressing a well-built hereditary mass in the people. [13] The lifestyle change can only help the individual to protect against the disorder by healthy eating habits, enhanced exercise, and avoiding the substances like artificial sweeteners, alcohol, cigarettes, etc. [8]

#### 2. Obesity

Obesity causes or intensifies countless fitness problems, both individually and in connection with extra diseases. According to clinical sciences, the body fat of an individual is calculated depending upon the height and body mass of a person. BMI termed body mass index is used for the estimation of the accumulation of fat in the individual. [14] The accumulation of more body fat than required which also hinders the health of an individual is termed obesity. In health care budgets of various nations around 2 to 7 percent is spent on obesity in the overall health budget which is a huge amount. [15] The rising obesity in the people also hinders various functioning of the human body like cardiac output, respiratory functioning, disturbs insulin concentrations, etc. [16] In India, the rate obese is not too high but the number of sufferers of diabetes is high. As compared to the U.S. we still have a lower rate of obese people. But there is an enhanced chance of diabetes in the Indian population as compared to Europe. [17]

### 3. Polycystic Ovary Syndrome (PCOS)

This is the general endocrine anomaly in females during fertile age. This disorder is approximated to 4–8% in studies conducted in countries like Greece, Spain, USA. [18] The statistics given conventionally reduce occurrence approx., the expected financial load of this disorder in Australia was AU\$400 million, describing primary well-being or economic load. [19]

Even though the accurate pathophysiology is complicated and is uncertain for most, the main cause is hormonal imbalance due to elevated levels of androgens or insulin. The other risk factors are obesity, hypothyroidism, ovaries impairment, and abnormalities related to pituitary glands. [20] Females suffering from this disorder have a high risk to have diabetes, cardiac-

related problems, and IGT (impaired glucose tolerance). On the contrary, skinny females and females with moderate disorders are detected to have insulin resistance. [21] Skinny women with this disorder are found to have dysfunction in insulin release. [22]

The various problems associated with these disorders are excessive hair growth, increase in body weight, acne, infertility, and mood swings. Therefore, it can be said that it affects women physically as well as mentally. The females suffering from this are greatly prone to depression. The major treatment for this is changing in way of living of an individual. [23, 24]

### 4. Cardiovascular Disease

This is one of the disorders due to which maximum deaths occur worldwide and constitutes heart, arteries, veins, and capillaries. Around the globe, approximately 80-85 percent of mortality occurs due to cardiac disorders in less and average earning nations. High BP (blood pressure) almost results in 7.5 million demises around the globe. [25]

The statistics say that SAARC nations constitute about 20 percent of the total population and therefore it is one of the most affected zones. [26] Irregular elevation or suppression in BP is associated with the probability of cardiac stroke. [27] Avoidance of Cardiovascular nowadays includes the approval of appropriate lifestyles as well as the correct use of pharmacological apparatus. One of the chief limitations of the current prevention measure is the patient's obedience and achievement of beneficial habits. Certainly, population studies have demonstrated that only a few human beings follow healthy lifestyle behaviors. [28,29]

### **Management of Lifestyle Disorders**

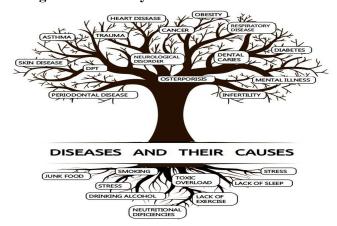


Figure 3: Various lifestyle diseases with causes. One of the principal sources of death and disability globally is chronic diseases. Disease pace from these



circumstances is increasing worldwide, developing throughout every nation and permeating socioeconomic classes. Lowering risks, and drawing attention to healthful ways of living show that the fatality, morbidness, and disability applied to primary persistent disorders, nowadays constitutes approximately 60% of mortality and 43% of the worldwide occurrence of disorders. [30] Figure 3 the causes and lifestyle disorders that occur by them. As per the statistical data issued by World Health Organisation, 53% demise in the year 2008 occurred because of non-communicable diseases in India. [31]

The guidelines set up by World Health Organisation involve: blocking smoking, lowering body weight, moderating alcohol consumption, lowering salt ingestion, better dietary habits, and increasing physical activeness. [32]

A healthy way of life ought to be embraced to fight against these disorders by switching over to healthy food, increasing exercise, and maintaining a biological clock. For reducing disorders due to the working environment, avoid prolonged sitting sessions and some intervals must be spared for stretching or body movements. In this developing era, we cannot stop ourselves from growing for maintaining health but we have to manage our ways of life. [33] The studies say that most of the ailments occurring in humans are generally due to false ways of living like hypertension, diabetes, obesity, etc. to conclude the way of living has to be changed. [34] It is found that Yoga based lifestyle has been efficiently used for the avoidance of many different chronic disorders. Yoga techniques that comprise physical postures, regulated breathing, meditation, and relaxation help to govern the lifestyle better and have the capacity of decreasing the efficacy of various types of lifestyle disorders via different, direct, and indirect mechanisms. [35]

It is said that many of the disorders can be easily avoided and managed by doing Yoga and yoga is reported to be beneficial. [36] The yoga asana helps the body to fight against many disorders as well as maintains flexibility and mental peace. [37,38] As per WHO, physical movement is termed to be the moving of skeletal muscles to do expenditure of energy. [39]

**Conclusion:** These so-called lifestyle disorders have become more frequent as the reason for death chiefly because of alterations in living conditions as well as alterations in a person's behaviors. Lifestyle disorders also known as diseases of civilization are diseases that

notice to increase in frequency as countries become more advanced. Present science through advanced sanitation, vaccination, drugs, and medical attention has killed the threat of death from the majority of infectious diseases. This means that death from lifestyle disorders like heart disease and cancer are now the main reasons for death. The primary factors contributing to lifestyle diseases include faulty food habits, lack of exercise, improper body posture, and disturbed biological clock. The art and science of Yoga have countless possibilities for giving answers to many of the health problems troubling present humankind. Yoga is a holistic science and must be learned and practiced with a holistic view. The dedicated practice of Yoga as a way of life is no doubt a panacea for psychosomatic disorders, stress-related, and lifestyle disorders, and helps us to regain our birthright of health and happiness.

**Conflicts of Interest:** Declared none.

Funding: None.

### **References:**

- 1. Fitzgerald. F. T. 1994. The Tyranny of Health. New England Journal of Medicine. 331: 196-198.
- 2. Vallgarda. S. 2011. Why the concept "lifestyle diseases" should be avoided. Scandinavian Journal of Public Health. 39: 773-775.
- 3. Yesudian. C. A. K., Grepstad. M., Visintin. E. and Ferrario. A. 2014. The economic burden of diabetes in India: a review of the literature. Globalization and Health. 10: 80.
- 4. Khanna. P., Kaushik. R. and Kaur. G. 2012. Changing dietary pattern and lifestyle on diseases. Asian Journal of Multidimensional Research. 1: 49-
- 5. Chakma. J. K. and Gupta. S. 2014. Lifestyle and Non-communicable Diseases: A double edged sword for future India. Indian Journal of Community Health. 26: 325-332.
- 6. Jomon. M. 2014. Lifestyle Diseases in India: Facts, Threats and Remedies. Employment News. 64.
- 7. Alwan. A. 2011. Global status report on non-communicable diseases 2010. Global status report on noncommunicable disease.
- 8. Senapati. S., Bharti. N. and Bhattacharya. A. 2015. Modern diseases: Chronic diseases, awareness and prevention. International Journal of Current Research and Academic Review. 3: 215-223.
- 9. Lefebvre. P. and Pierson. A. 2004. The global challenge of diabetes. World Hospitals and Health Sciences, 40: 37-39.



- 10. Cox. A. J., West. N. P. and Cripps. A. W. 2015. Obesity, inflammation, and the gut microbiota. The Lancet Diabetes and Endocrinology. 3: 207-215.
- 11. Hu. F. B. 2011. Globalization of diabetes: The role of diet, lifestyle, and genes. Diabetes Care. 34: 1249-1257.
- Ramachandran. A., Mary. S., Yamuna. A., Murugesan. N. and Snehalatha. C. 2008. High prevalence of diabetes and cardiovascular risk factors associated with urbanization in india. Diabetes Care. 31: 893-898.
- 13. Ramachandran. A. and Snehalatha. C. 2009. Current scenario of diabetes in india. Journal of Diabetes. 1: 18-28.
- 14. Kopelman. P. G. 2000. Obesity as a medical problem. Nature. 404: 635-643.
- 15. Seidell. J. C. 1995. The impact of obesity on health status: some implications for health care costs. International Journal of Obesity and Related Metabolic Disorders: Journal of International Association for the study of Obesity. 19: S13-S16.
- Mohit., Hussain. M. S., Sonu., Verma. R. and Sharma. S. 2021. Etiological Factors, Comorbidities, and Prevention of Obesity: A Review. International Journal of Research and Analytical Reviews. 8(2): 802-834.
- 17. Yoon. K. H., Lee. J. H., Kim. J. W., Cho. J. H., Choi. Y. H., Ko. S. H., Zimmet. P. and Son. H. Y. 2006. Epidemic obesity and type 2 diabetes in Asia. Lancet. 368: 1681-1688.
- Diamanti-Kandarakis. E., Kouli. C. R., Bergiele. A. T., Filandra. F. A., Tsianateli. T. C., Spina. G. G., Zapanti. E. D. and Bartzis. M. I. 1999. A survey of the polycystic ovary syndrome in the Greek Island of Lesbos: Hormonal and metabolic profile. Journal of Clinical Endocrinology and Metabolism. 84: 4006–4011.
- 19. Azziz. R., Marin. C., Hoq. L., Badamgarav. E. and Song. P. 2005. Health care-related economic burden of the polycystic ovary syndrome during the reproductive life Span. Journal of Clinical Endocrinology and Metabolism. 90: 4650–4658.
- Doi. S. A. R., Al-Zaid. M., Towers. P. A., Scott. C. J. and Al-Shoumer. K. A. S. 2005. Ovarian steroids modulate neuroendocrine dysfunction in polycystic ovary syndrome. Journal of Endocrinological Investigation. 28: 882–892.
- 21. Ganie. MA. and Kalra. S. 2011. Polycystic ovary syndrome A metabolic malady, the mother of all

- lifestyle disorders in women Can Indian health budget tackle it in future? Indian Journal of Endocrinology and Metabolism. 15: 239.
- 22. Diamanti-Kandarakis. E. and Papavassiliou. A. G. 2006. Molecular mechanisms of insulin resistance in polycystic ovary syndrome. Trends in Molecular Medicine. 12: 324–332.
- 23. Deeks. A. A., Gibson-Helm. M. E. and Teede. H. J. 2010. Anxiety and depression in polycystic ovary syndrome: A comprehensive investigation. Fertility and Sterility. 93: 2421–2423.
- 24. Khatri. H. and Singh. S. 2022. Postmenopausal Syndrome and Their Management. Indo American Journal of Pharmaceutical Research. 12(2):
- 25. Pappachan. M. J. 2011. Increasing prevalence of lifestyle diseases: High time for action. Indian Journal of Medical Research. 134: 143–145.
- 26. Goyal. A. and Yusuf. S. 2006. The burden of cardiovascular disease in the Indian subcontinent. Indian Journal of Medical Research. 124: 235–244.
- 27. Shetty. P. 2012. Public health: India's diabetes time bomb. Nature. 485(7398): S14-S16.
- 28. Volpe. M. and Battistoni. A. 2018. Lifestyle and cardiovascular disease: Barefooting through the guidelines. International Journal of Cardiology. 263: 156–157.
- 29. Hussain. M. S. 2021. Obesity and Higher Risk for Severe Complications of Covid-19. Current Trends in Pharmacology and Clinical Trials. 4(1): 180029.
- 30. Tabish. S. A. 2017. Lifestyle diseases: consequences, characteristics, causes and control. Journal of Cardiology and Current Research. 9(3): 00326.
- 31. Kanazawa. I., Inaba. M., Inoue. D., Uenishi. K., Saito. M., Shiraki. M., Suzuki. A., Takeuchi. Y., Hagino. H., Fujiwara. S. and Sugimoto. T. 2020. Executive summary of clinical practice guide on fracture risk in lifestyle diseases. Journal of Bone and Mineral Metabolism. 38(6): 746-758.
- 32. Chalmers. J. 1999. WHO-ISH hypertension guidelines committee. world health organization-international society of hypertension guidelines for the management of hypertension. Journal of Hypertension. 17: 151–185.
- 33. Sharma. R., Gupta. N. and Bijlani. R. L. 2008. Effect of Yoga Based Lifestyle Intervention on Subjective Well-Being. The Indian Journal of Physiology and Pharmacology. 52(2): 123-131.
- 34. Sudharma. I. and Kodituwakku. S. S. 2015. Ayurvedic Approach to the Prevention and

# Review Article



Hussain S. et al., Ind. J. Sci. Res. 2022, 2(1), 10-15

- Management of Lifestyle Disorders. International Journal of General Medicine and Pharmacy. 4: 27–35.
- 35. Singh. S. 2016. Yoga: an answer to lifestyle disorders. International Journal of Applied Natural Sciences. 5: 27–34.
- 36. Binorkar. S. V. 2014. Yoga-The non-pharmaceutical approach for lifestyle disorders. Journal of Yoga & Physical Therapy. 4: 1.
- 37. Biswas. S. K. and Debnath. M. 2017. Yoga and Ayurveda: Concomitant preventive therapeutics for some important lifestyle disorders. Indian Journal of Traditional Knowledge. 16: S60-S68.
- 38. Manchanda. S. C., Narang. R., Reddy. K. S., Sachdeva. U., Prabhakaran. D., Dharmanand. S., Rajani. M. and Bijlani. R. 2000. Retardation of coronary atherosclerosis with yoga lifestyle intervention. The Journal of the Association of Physicians of India. 48: 687–694.
- 39. Ghorbani. F., Heidarimoghadam. R., Karami. M., Fathi. K., Minasian. V. and Bahram. M. E. 2014. The effect of six-week aerobic training program on cardiovascular fitness, body composition and mental health among female students. Journal of Research in Health Sciences. 14: 264-267.