

Prevention and Self-Care Practices for Lifestyle Diseases Among Civil Servants in Nigeria

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ABSTRACT: *This article examines lifestyle diseases, often referred to as non-communicable diseases (NCDs), which present a significant threat to world health. Exposing the frequency and consequences of these chronic conditions, which include cancer, diabetes, cardiovascular disease, and chronic respiratory disorders, the story emphasises why they are the primary cause of death globally. The paper explores the definitions, worldwide burdens, and the significant influence of lifestyle choices on the emergence of hypertension, diabetes, and obesity. The crucial link between unhealthy behaviours and the emergence of lifestyle illnesses is shown by a comprehensive study of modifiable risk variables, underscoring the need of proactive lifestyle treatments. The importance of preventative measures in preserving cardiovascular health is discussed in detail, including diets low in sodium and potassium, physical exercise, weight loss, and stress management. With a focus on health exams, public awareness campaigns, and teamwork, the paper promotes a multimodal strategy to combat lifestyle disorders. The article ends by highlighting the significance of regular blood pressure checks as an essential part of preventative healthcare.*

KEYWORDS: prevention, self-care practices, lifestyle disease

INTRODUCTION

This article explores the crucial idea of lifestyle illnesses, sometimes referred to as non-communicable diseases (NCDs), which have become a significant worldwide health issue. These chronic illnesses, which are also known as lifestyle diseases (LSDs), are distinguished by their non-transmissible origin and delayed onset. These conditions arise from extended exposure to

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modifiable risk factors linked to an individual's lifestyle. These illnesses, which include chronic respiratory conditions, cancer, diabetes, and cardiovascular disease, account for a larger share of world mortality than all other causes combined. This article covers a broad review of lifestyle illnesses, including their incidence and risk factors, with a particular emphasis on obesity, diabetes, and hypertension.

The article opens with a brief overview of lifestyle disorders, their traits, and the threats they bring to the world community. The frequency of these illnesses is emphasised, highlighting the financial burden in terms of missed productivity and medical expenses in both developed and developing countries. The article then classifies the main lifestyle illnesses and investigates common risk factors linked to their emergence, emphasising how these variables may be changed by adopting different lifestyle choices. Particular lifestyle diseases—hypertension first—are addressed in depth. There includes a discussion of the definition, prevalence, and worldwide burden of hypertension in addition to blood pressure categories and related health hazards. The article explores primary and secondary hypertension and describes lifestyle changes that may be made to avoid and manage the condition. Diabetes is covered in a similar manner, including its forms, worldwide prevalence, and how lifestyle choices affect it. Additionally, the definition, assessment, effect on life expectancy, and connection between lifestyle decisions and the beginning of obesity are discussed.

The article goes on to talk about lifestyle modifications and modifiable risk factors, putting a focus on public awareness campaigns, health screenings, legislative reforms, and healthcare access. The significance of lifestyle modifications, teamwork, and ongoing monitoring is emphasised as essential elements of treatment and prevention. The story argues in favour of a multi-sectoral strategy and consistent work to successfully combat lifestyle illnesses. With a particular emphasis on heart-healthy foods, salt and potassium consumption, physical exercise, weight loss, and stress management, preventive measures and treatment tactics take centre stage. The contribution of each preventative intervention to preserving cardiovascular health and lowering the risk of illnesses associated with a lifestyle choice is examined.

In the article's conclusion, the need of routine blood pressure monitoring in preventive healthcare is emphasised. The American Heart Association's blood pressure monitoring recommendations are emphasised, emphasising the value of frequent readings in identifying changes and trends over time. The story's ultimate goal is to provide a thorough overview of lifestyle illnesses, including their frequency, risk factors, and preventative methods. It also promotes taking proactive actions to lessen the impact of these disorders and enhance general health results.

Concept of Lifestyle Diseases

Non-communicable diseases (NCDs), often referred to as lifestyle diseases (LSDs), are persistent illnesses that do not result from acute infection processes. They are neither transmissible or infectious to other people. These conditions are the main causes of mortality globally, accounting

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for more deaths than all other causes combined (Parashar et al.,2022). They have a protracted course and do not resolve on their own, usually needing long-term therapy (Roy et al., 2023). They kill more than 36 million people a year, accounting for more than 60% of all deaths worldwide. According to the WHO data from 2015, LSD usage resulted in an estimated 15.0 million deaths in people between the ages of 30 and 69. More than 80% of these premature deaths were attributed to cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases (IHME, 2019). To lessen these disorders' detrimental effects on people's health, early identification is essential. However, by adopting a healthy lifestyle and changing one's behaviour, many of the risk factors linked to the development of LSDs may be altered or under control (Parashar et al., 2022). As people's schedules become busier and their lifestyle choices worsen, there is a growing demand for more awareness about risk factors, particularly those that can be changed. Risk factors may be controlled or avoided, including smoking, binge drinking, high blood pressure, high cholesterol, being overweight or obese, eating few fruit and vegetables, being sedentary, and having high blood sugar levels (Rocha et al., 2021).

Both industrialized and developing countries are experiencing a rise in the prevalence of LSDs, which have become the leading cause of death worldwide, accounting for nearly 75% of all deaths (CDC, 2019). The economic impact of is significant, including the burden of lost productivity and healthcare costs. The four primary categories are diabetes, cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma), and cardiovascular diseases (including heart attacks and strokes) (WHO, 2020). Tobacco use, heavy alcohol use, poor food, and inactivity are among the behavioural risk factors that are common to these illnesses. These risk factors cause changes in metabolism and physiology, including high blood pressure, higher cholesterol, increased body fat or obesity, and high blood glucose (WHO, 2021). Prolonged exposure to a variety of risk factors, many of which are connected to individual behaviours and environmental circumstances, may result in lifestyle illnesses. Major worldwide physical risk factors for morbidity and death include high blood pressure, tobacco use, physical inactivity, overweight or obesity, high blood glucose levels, and high cholesterol (WHO, 2021).

Particularly in sub-Saharan Africa, where the risk is growing at an alarming pace, rapid urbanisation and lifestyle changes have led to the increased incidence of LSDs (Choukem et al., 202). This increase creates a huge social and economic burden, especially in low- and middle-income nations that are already dealing with a dual burden of sickness from infectious diseases. Long-term management's high healthcare costs have the potential to drive households into poverty, so policymakers from a variety of backgrounds, including health departments, national treasuries, and other pertinent industries like agriculture, labour, planning, and education, must get involved. The World Health Organisation dispels a common misperception by asserting that affluence and the use of LSDs are unrelated. Rather, 80% take place in nations with low and moderate incomes. Chronic respiratory conditions, diabetes, malignancies, cardiovascular diseases, and musculoskeletal problems are among the illnesses that currently plague the poor in the world's poorest nations, especially in sub-Saharan Africa. Developed nations are seeing a move away from

communicable illnesses, whereas underdeveloped countries still bear a double burden of sickness. According to WHO (2020), the most prevalent kinds include musculoskeletal disorders, malignancies, diabetes, chronic respiratory diseases, neurological illnesses, musculoskeletal disorders, and chronic kidney disease. These illnesses represent a serious danger to global health in developed nations, and their frequency is rising quickly on a global scale. The underlying risk factors contribute significantly to the burden of illness and death worldwide, even though they are generally avoidable (Rampou, 2019). For instance, hypertension is a major risk factor for stroke in Nigeria and other African nations where it is common. According to recent studies, mortality rates are rising in low- and middle-income nations (WHO, 2022). Using civil servants as the target demographic at risk of a sedentary lifestyle brought on by employment variables, this research will concentrate on hypertension, diabetes, and obesity since they offer shared substantial risk factors.

Some Lifestyle Diseases

Hypertension

This research takes into consideration hypertension, also referred to as high blood pressure (HTN), as a serious lifestyle condition. It describes the pressure that the blood puts on the walls of the arteries when the heart pumps blood throughout the body. High blood pressure (HTN) may result in major health problems such as heart failure, stroke, renal failure, and coronary heart disease. It is a global public health issue that causes around 7.5 million fatalities a year, or 12.8% of all deaths globally (WHO, 2022). 1.56 billion persons worldwide are expected to have hypertension by 2025 (Tabrizi et al., 2016). High blood pressure is not communicable and is a chronic illness that affects people over time. Although hypertension seldom causes symptoms, it may cause major side effects such dementia, peripheral vascular disease, heart failure, atrial fibrillation, coronary artery disease, stroke, and peripheral vascular disease. Systolic pressure, or maximum pressure, and diastolic pressure, or lowest pressure, are the two numbers used to assess blood pressure. The normal levels for blood pressure are 60-80 mmHg diastolic and 100-130 mmHg systolic. High blood pressure is defined as 130/80 or 140/90 mmHg or above on a regular basis.

Systolic blood pressure should be less than 120 mmHg, and diastolic blood pressure should be less than 80 mmHg, according to Joint National Committee 7 (JNC7) recommendations. Prehypertension is defined as readings between 120-139 mmHg systolic and 80-89 mmHg diastolic, while readings over 140 mmHg systolic and/or 90 mmHg diastolic are categorised as hypertension (WHO, 2022).

Non-communicable illnesses are largely influenced by hypertension, especially in low-income nations. Hypertensive individuals are more likely to have coronary artery disease, congestive heart failure, and cerebrovascular illnesses. About 17.9 million fatalities in 2021 were related to cardiovascular disorders, of which 9.4 million deaths were attributable to hypertension. Low-resource nations account for almost 80% of fatalities from cardiovascular disease (WHO, 2020). According to Atinyi et al. (2017), the prevalence of hypertension is predicted to climb from 26%

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(972 million) in 2000 to 29% (1.56 billion) in 2025, which may cause a rise in associated cardiovascular issues. According to reports, the incidence of hypertension in Nigeria is an unsettlingly high 37.7%. According to estimations by Ehwarieme et al. (2022), more than 40% of people may be impacted.

Ninety-five percent of instances of hypertension are primary hypertension, also known as essential hypertension, meaning that there is no underlying reason for the raised blood pressure. Primary hypertension is influenced by several factors, including genetics, lifestyle, and diet. Five to ten percent of people have secondary hypertension, which may be brought on by a number of underlying illnesses include renal artery stenosis, endocrine problems, and kidney failure. It has been observed that younger people are more likely to acquire secondary hypertension, and certain lifestyle choices, such obesity and heavy alcohol use, may also play a role in the disease's development. A comprehensive strategy that incorporates lifestyle modifications—such as maintaining a balanced diet, engaging in regular physical exercise, controlling weight, quitting smoking, and consuming less alcohol—is necessary to treat hypertension. In rare circumstances, a prescription for medication may be given to regulate blood pressure. In order to lessen the impact of this lifestyle illness and avoid its related problems, early identification, routine monitoring, and efficient treatment of hypertension are essential (Atinyi et al., 2017).

When three distinct antihypertensive drug classes, including diuretics, are used to treat a patient's hypertension, the patient nevertheless has resistant hypertension. Roughly 10% of people with hypertension are thought to have true resistant hypertension (Sertoglo et al., 2020). Individuals with resistant hypertension have a higher chance of dying overall, end-stage renal disease, stroke, chronic heart failure, and coronary artery disease. Non-adherence to treatment, insufficient medication dosage, lifestyle choices, white-coat hypertension, and the use of drugs that obstruct blood pressure regulation are among the variables that lead to resistant hypertension. Resistant hypertension disproportionately affects certain groups, including the elderly, those with diabetes, people with chronic kidney disease (CKD), and African-Americans (Schutte et al., 2023). The term "malignant hypertension" describes abnormally high blood pressure that damages organs. Blood pressure levels that are usually more than 180 mm Hg systolic or 120–130 mm Hg diastolic indicate the seriousness of this potentially fatal disorder. Malignant hypertension is very uncommon, occurring in about 1-2 occurrences out of every 100,000 individuals, and it may be more prevalent in Black communities. Malignant hypertension is linked to non-adherence to antihypertensive therapy, certain drugs (e.g., monoamine oxidase inhibitors and birth control pills), and illicit drug usage (e.g., cocaine). It may also arise as a result of diseases such spinal cord injuries, tumours of the adrenal glands, and certain spinal cord illnesses. Malignant hypertension may cause blurred vision, angina (chest pain), dizziness, shortness of breath, severe headaches, and other symptoms. It is imperative to get medical attention right once if you have any of these symptoms.

Elevated systolic blood pressure (more than 140 mm Hg) and normal diastolic blood pressure (less than 90 mm Hg) are the hallmarks of isolated systolic hypertension. With a frequency of 15% in those 60 years of age and above, it is most frequent among older people. Increased arterial stiffness brought on by ageing may result in isolated systolic hypertension. But this illness may also strike younger people; prevalence rates are 1.8% and 6%, respectively, in the 18–39 and 40–59 age groups (Bavishi et al., 2020).

Diabetes

Diabetes mellitus, which is categorised into two main types: type 1 and type 2, is characterised by consistently elevated blood glucose levels. Insulin resistance and insufficient insulin secretion work together to generate type 2 diabetes, while total insulin insufficiency is the cause of type 1 diabetes. It is a complicated illness that is impacted by a number of variables, such as lifestyle choices, age, ethnicity, and heredity.

Numerous symptoms, such as weight loss, impaired eyesight, polyuria, polydipsia, and polyphagia, may result from diabetes (Draznin et al., 2022). Diabetes is a significant source of morbidity and death and may lead to catastrophic consequences such ketoacidosis or non-ketotic hyperosmolar syndrome if left untreated (Raghavan et al., 2019). Globally, the incidence of diabetes is rising, and low- and middle-income nations are disproportionately affected. Diabetes affects people in their productive years and both urban and rural populations in these nations. (WHO, 2020). It is anticipated that the number of diabetics would increase in the next years. Diabetes raises morbidity and death rates, which has a significant financial impact on healthcare systems and society (Draznin et al., 2022). Due to type 2 diabetes's prevalence, gradual onset, and late diagnosis—especially in developing nations with limited resources like Nigeria—patients with this type of diabetes are more likely to experience increased morbidity and mortality when compared to patients with other types of diabetes. Furthermore, Type 2 diabetes is the most prevalent type of diabetes mellitus, accounting for roughly 90% of cases (Bornhorst et al., 2020). Diet is one of the most important lifestyle variables affecting diabetes. Studies have shown that dietary decisions may have a big influence on the chance of getting type 2 diabetes, which is the most common form of the disease globally. A diet high in whole grains, fruits, vegetables, nuts, and low-fat dairy products was linked to a decreased risk of type 2 diabetes, according to a research by Zheng et al. (2018). Conversely, diets heavy in processed meat, red meat, refined carbohydrates, and sugar-filled drinks were associated with a higher risk.

Obesity

In emerging nations, obesity is a significant risk factor for lifestyle disorders (LSDs). In many Sub-Saharan African nations, the incidence of obesity and the chronic illnesses it is linked to has sharply grown. Being overweight or obese puts a person's life expectancy and quality at serious risk (WHO, 2022). Obesity has been associated with an increased risk of osteoarthritis, type 2 diabetes, stroke, and certain cancers.

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There is a significant link between lifestyle and obesity since a number of studies have shown how specific lifestyle choices may lead to the onset and advancement of obesity.

Based on a person's weight and height, the Body Mass Index (BMI) is used to evaluate that person's health risk and establish whether that person is overweight or obese (Rubino et al., 2022). Although it's a helpful tool, those with a really muscular physique could find it inaccurate. Furthermore, various demographics, such as Asians and older persons, may have distinct health risks linked with a certain BMI. Obese people have a greater risk of hypertension, and the waist-to-hip ratio may be a more accurate measure of the risks and pertinent fat distribution. Regardless of the underlying reason, losing weight may significantly decrease blood pressure in obese patients with hypertension. One of the most significant ways to lower the health hazards linked with obesity is to lose weight and keep it off (WHO, 2022). Weight in kilogrammes divided by height in metres squared yields the BMI (Rubino et al., 2022). Different categories of obesity exist based on BMI ranges, as follows:

- Ideal (normal) BMI is 18.5 to 24.9 kg/m².
- A BMI of 25-29.9 kg/m² is overweight.
- A BMI of 30-34.9 kg/m² is obese (Grade or class I).
- A BMI of 35-39.9 kg/m² is obese (Grade or class II).
- A BMI of ≥ 40 kg/m² is obese (Grade or class III) or morbidly obese.

Obesity is not solely about appearance but has significant implications for overall health. Making lifestyle changes, such as adopting a healthy diet and engaging in regular physical activity, is crucial for weight loss and long-term weight management. By taking steps to maintain a healthy weight, individuals can reduce the associated health risks and improve their overall well-being (Rubino et al., 2022).

Modifiable Risk Factors of Lifestyle Diseases

Non-communicable diseases (NCDs), including obesity, diabetes, cancer, and cardiovascular disease, are mostly influenced by modifiable risk factors. Four common modifiable risk factors are identified by the World Health Organisation (WHO, 2020): poor diets, hazardous alcohol use, tobacco use, and physical inactivity. Smoking tobacco is a significant risk factor for a number of illnesses, including as cancer, respiratory conditions, and cardiovascular disorders. It has a negative impact on smokers as well as those who are exposed to secondhand smoke, and it causes millions of fatalities per year (Wahied & Sachdeep 2021). A higher incidence of liver disease, many malignancies, and injuries is also linked to harmful alcohol use. To reduce health concerns, alcohol use should be modest and kept below suggested limits. Chronic illnesses are a result of unhealthy diets that are heavy in salt, processed carbohydrates, saturated and trans fats, and fats. Another risk factor is a low diet of fruits, vegetables, and fibre. Fruits, vegetables, whole grains, lean meats, and minimal levels of sodium, trans fats, saturated fats, and added sugars are all components of a healthy diet (Traina et al., 2019). One of the main risk factors for NCDs, such as obesity, diabetes, hypertension, coronary heart disease, and stroke, is physical inactivity. Regular

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physical exercise has several health advantages, such as stronger bones and muscles, enhanced mental clarity, and enhanced cardiovascular health. The burden of NCDs may be greatly decreased by addressing these modifiable risk factors via lifestyle modifications. Among the most significant actions people can take to enhance their health and lower their risk of chronic illnesses are giving up smoking, consuming alcohol in moderation, eating a nutritious diet, and getting regular exercise.

It is important to put into practice public health initiatives that support healthy behaviours, discourage the start of alcohol and tobacco use, stimulate physical activity, and support healthy eating habits (Dai et al., 2021). Individuals and communities may endeavour to lessen the effect of NCDs and enhance overall health outcomes by addressing these modifiable risk factors.

Awareness of Lifestyle Diseases

A greater awareness can be achieved by educational and screening programme initiatives as well as community-based intervention as part of the preventive measures. These will prompt changes in lifestyle that will lessen the burden of lifestyle diseases. Such initiatives educational program includes:

Public Awareness Campaigns: Public awareness campaigns and educational programmes are essential for educating people about the dangers and effects of illnesses linked to a certain lifestyle. The main goals of these programmes need to be to encourage healthy lifestyle choices including consistent exercise, a balanced diet, giving up smoking, and moderate alcohol use (Janakiram & Dye, 2020).

Health Screenings: Regular health screenings can help detect early signs of lifestyle-related diseases and enable timely interventions. Screening programs should target high-risk populations and emphasize the importance of early detection and treatment (Pankaj 2020).

Policy Changes: Reducing illnesses associated with unhealthy lifestyles may be greatly aided by the implementation of policies that support healthy behaviour. Restrictions on tobacco promotion, higher charges on unhealthy food and drink, and the establishment of smoke-free spaces are a few examples.

Access to Healthcare: Improving access to healthcare services, particularly in underserved areas, is essential for effective prevention and management of lifestyle-related diseases (Bekele et al.,2020). This includes ensuring availability of medical facilities, diagnostics, and affordable treatment options.

Lifestyle Interventions: Galani and Schneider (2017) stated that lifestyle interventions play a critical role in preventing and managing lifestyle diseases. These interventions may include

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promoting physical activity, healthy eating habits, stress management, and weight management programs.

Individualized Therapy: Khachaturian (2023) opines that tailoring treatment plans to individual needs and characteristics can improve outcomes. Personalized therapy may involve a combination of lifestyle modifications and medication adjustments based on a person's specific risk factors and health status.

Collaboration and Partnerships (WHO, 2021): Addressing lifestyle diseases requires collaboration among healthcare providers, policymakers, community organizations, and individuals. Partnerships can facilitate the sharing of resources, knowledge, and expertise to develop comprehensive approaches for prevention and management.

Long-term Follow-up and Support: Continued monitoring, follow-up, and support are essential for individuals with lifestyle diseases (Garcia et al., 2023). This includes regular check-ups, medication adherence, counseling, and ongoing education to maintain healthy behaviors and manage risk factors.

It is feasible to enhance overall health outcomes and lessen the burden of lifestyle-related disorders by putting these recommendations into practice (Quam et al., 2017). To succeed over the long run, however, a multi-sectoral strategy, stakeholder commitment, and persistent work are needed. Through the implementation of a community-based lifestyle intervention, the researchers in this study hope to improve workforce community knowledge about the prevention, management, and management of obesity, diabetes, and hypertension. They also hope to help workers modify or control their risk factors related to lifestyle diseases.

Prevention and Management of Lifestyle Diseases

Heart-healthy diet as a preventive measure

It is well known that the DASH diet is a useful dietary strategy for controlling illnesses linked to a lifestyle change and decreasing blood pressure. Its focus on eating a range of fruits, vegetables, whole grains, lean meats and low-fat dairy products is in line with the most recent dietary guidelines for heart health promotion.

A study by Carey et al., (2018) have shown that the DASH diet may lower blood pressure more than either dietary intervention alone when paired with a reduced salt consumption. The possible consequences of high salt consumption on blood pressure are mitigated by reducing sodium intake. They contend that the DASH diet's emphasis on nutrient-dense foods—such fruits and vegetables—supplies vital nutrients like vitamins, minerals, and dietary fibre that support good cardiovascular health. The diet also discourages the consumption of cholesterol and saturated fats,

which are linked to a higher risk of cardiovascular disease, and encourages the use of lean protein sources.

Healthcare providers often advise following the DASH diet in conjunction with lowering salt consumption for those with high blood pressure and illnesses connected to lifestyle choices. This combined strategy may help control blood pressure and enhance the general health of the cardiovascular system. (Carey and others, 2018).

Adequate sodium intake as a preventive measure

Although the body needs sodium for a number of physiological processes, an excessive salt consumption has been closely associated with the development of high blood pressure, a significant risk factor for cardiovascular illnesses.

Studies by Carey et al. (2018), and Mancia et al. (2017) have brought attention to the link between elevated blood pressure and a high salt diet. Many nations, including the United States, consume more salt on average than is advised each day. Owing to their high salt and sodium content during production, processed and packaged goods account for a large amount of the sodium in diets. It is now known that lowering salt consumption throughout the population may help prevent and treat illnesses linked to a lifestyle, especially those connected to the heart. According to Carey et al. (2018), modelling studies have shown that even a little decrease in salt intake may have a significant positive impact on health, lowering healthcare expenses and the number of deaths linked to these illnesses.

A reduction in salt consumption may be achieved by consumer education, food sector changes, and public health campaigns. By reading food labels and choosing lower-sodium options, people will be more empowered to make better choices. Food producers will be encouraged to limit the amount of sodium in processed foods. Health hazards associated with high salt consumption will also be brought to light. It is crucial to remember that techniques for reducing salt consumption should be balanced with each person's unique dietary requirements. Additionally, those with certain medical issues may need individualised advice from registered dietitians or healthcare experts in order to manage their sodium intake (Mancia et al., 2017).

Adequate potassium intake as a preventive measure

Lower blood pressure has also been linked to increasing potassium intake via food, particularly in those with hypertension. Certain subgroups—older adults, Black people, and those who consume a lot of sodium—are more affected by this impact than others (Carey et al., 2018). According to Carey et al. (2018), controlling blood pressure requires consuming enough potassium in the diet. Adults should consume 4,700 mg of potassium daily, and it is best to get this amount from food. Foods high in potassium include legumes like beans and lentils, dairy products, vegetables like tomatoes, sweet potatoes, and leafy greens, and fruits like bananas, oranges, and avocados. To naturally enhance potassium intake, including these items in a balanced diet.

It is said that increasing potassium consumption should be done under the supervision of a healthcare provider and in combination with a general healthy eating plan. This is particularly important for those with specific medical problems or those using drugs that may interact with potassium. In some situations, potassium supplements could be suggested, but generally speaking, it's encouraged to prioritise dietary sources of potassium wherever feasible. For blood pressure control and general cardiovascular health, eating a balanced diet that contains enough potassium and salt and limits processed foods rich in sodium might be helpful.

Regular physical activity as a preventive measure

Numerous studies have shown the preventive effects of physical exercise against illnesses connected to lifestyle choices and its ability to reduce blood pressure in both hypertensive persons and those at risk for developing the condition. Both randomised clinical trials and observational research have shown that physical exercise has a beneficial effect on blood pressure. Regular physical exercise has been linked to a decreased risk of lifestyle-related disorders and has been demonstrated to lower blood pressure (Huai et al., 2020; Carey et al., 2018).

It has been determined that the best kind of physical activity for reducing blood pressure is aerobic exercise, which includes activities like cycling, swimming, walking, and running. Research indicates that it lowers blood pressure by around 5 to 7 mm Hg. Furthermore, blood pressure reductions of around 4 to 5 mm Hg have been seen by dynamic and isometric resistance training (Carey et al., 2018).

It is unclear exactly how physical exercise affects blood pressure and wards against illnesses linked to a certain lifestyle. Nonetheless, a number of plausible mechanisms have been suggested, such as a decline in cardiac output, a decrease in the activity of the renin-angiotensin system and the sympathetic nervous system, a decrease in insulin resistance and total peripheral vascular resistance, and an improvement in endothelial function (Motuma et al., 2023). The positive benefits of physical exercise on blood pressure and general cardiovascular health are partly attributed to these physiological changes.

It is crucial to remember that people should exercise in a way that is suitable for their level of fitness and health. A healthcare provider or exercise expert should be consulted in order to create a customised fitness programme that takes into account each person's requirements and preferences.

Weight reduction as a preventive measure

One other important factor to take into account is the Body Mass Index (BMI), which has a significant correlation with blood pressure levels. A greater BMI is connected with a higher risk of developing lifestyle illnesses and high blood pressure. Numerous studies have repeatedly shown a direct and almost linear association between blood pressure and BMI, including the work done by Carey et al. (2018). Blood pressure often rises in tandem with an increase in BMI. This association is valid for a wide range of demographic groupings and populations. A higher risk of

having high blood pressure has also been linked to other anthropometric measurements, such as waist circumference, waist-to-hip ratio, and waist-to-height ratio, in addition to BMI. Research has shown that greater waist-to-hip or waist-to-height ratios and a bigger waist circumference are associated with higher blood pressure levels. One such study is that carried out by Jayedi et al. (2020).

However, it has been repeatedly shown that losing weight lowers blood pressure and lowers the chance of contracting illnesses linked to a certain lifestyle (Jayedi et al., 2020). Studies have shown that those who lose weight have lower blood pressure and a lower chance of contracting illnesses including diabetes, hypertension, and cardiovascular disease (Carey et al., 2018). For the prevention and treatment of illnesses linked to a lifestyle, maintaining a healthy weight via suitable weight management techniques, such as a balanced diet and frequent physical exercise, is crucial. Blood pressure levels and general health outcomes may be greatly improved by losing weight, especially in those who are overweight or obese.

Stress Management as a Preventive Measure

High blood pressure and other disorders linked to an unhealthy lifestyle are thought to be influenced by stress. There is evidence linking chronic stress to elevated blood pressure levels, even if the precise connection between stress and blood pressure is complicated and not entirely understood. Stress may result in unhealthy coping strategies including binge eating, drinking too much alcohol, smoking, and not exercising, all of which increase the risk of high blood pressure and other illnesses. These actions may eventually affect blood pressure levels by causing weight gain, improper eating habits, and an unhealthful lifestyle. According to the American Heart Association (AHA) (AHF, 2019), stress has a major role in the development and treatment of high blood pressure. Prolonged stress may cause the body to go into stress mode, which can lead to the production of stress hormones that can narrow blood vessels, speed up the heart rate, and perhaps raise blood pressure.

Keeping one's blood pressure under control and preserving general health both depend on effective stress management. The American Heart Association offers a number of stress-reduction recommendations, such as getting regular exercise, practicing relaxation methods (such as deep breathing exercises or meditation), keeping up a support system, and taking part in enjoyable and stress-relieving activities. If stress reduction methods by themselves are insufficient, a prescription for medication may be given in some situations to assist lower blood pressure. It's crucial to remember that stress management strategies should still be used as part of a comprehensive strategy for health and wellbeing, and that medication should only be recommended and overseen by medical experts.

In order to effectively manage stress in connection to high blood pressure and lifestyle-related disorders, further study is required to better understand the precise pathways through which stress impacts blood pressure.

Regular Monitor of Blood Pressure as a Preventive Measure

Monitoring and preserving cardiovascular health also depend on routine blood pressure tests. Readings of blood pressure may reveal whether or not blood pressure is raised and can provide important information about the force that blood exerts on artery walls. The American Heart Association (AHA) offers recommendations for blood pressure monitoring and states that if a person's blood pressure is below the normal range of 120/80 mmHg, they should have their blood pressure monitored at least once every two years, beginning at age 20. Regular blood pressure monitoring aids in detecting any variations or patterns over time.

However, if an individual has a higher blood pressure or has been diagnosed with hypertension, then more frequent monitoring is advised (high blood pressure). The exact number of blood pressure checks needed may vary depending on an individual's risk factors, overall health, and any current medical conditions. It's crucial to remember that blood pressure may fluctuate throughout the day and that a variety of factors, such as stress, physical activity, and recent meal or drink consumption, can influence it. To get an accurate estimate, it is recommended to take blood pressure measurements while calm, after a period of rest, and using a reliable blood pressure monitor. In addition to getting their blood pressure tested on a regular basis at a medical facility, some also choose to utilise home blood pressure monitors. With home monitoring, blood pressure patterns may be seen more thoroughly, and tracking blood pressure over time can be made easier. It's crucial to follow the guidelines and procedures suggested while checking blood pressure at home. It is advisable for individuals to consult with their healthcare provider on the frequency of taking blood pressure measurements at home and the interpretation of the data. Regular blood pressure checks are essential for the early diagnosis, treatment, and prevention of high blood pressure and the cardiovascular issues it is linked with, whether they are performed at home or at a medical facility. They help patients maintain their optimal level of cardiovascular health by enabling timely intervention and lifestyle modifications as required.

CONCLUSION

This research offers a thorough analysis of lifestyle illnesses, illuminating their widespread influence on world health. Lifestyle illnesses are the leading cause of death worldwide and need prompt attention and aggressive therapies due to their non-communicable nature and protracted development. The story threads through the complexities of obesity, diabetes, and hypertension, explaining each condition's description, prevalence, and the crucial role that lifestyle choices and changeable risk factors play in its development. The research emphasises the need of heart-healthy diets, salt and potassium control, physical exercise, weight loss, and stress management, as well as the possibility for prevention and treatment via lifestyle interventions. As essential elements of a comprehensive plan to address lifestyle illnesses, it promotes public awareness campaigns, health screenings, regulatory reforms, increased access to healthcare, and cooperative efforts.

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Moreover, a key component of preventive healthcare is the need of routine blood pressure monitoring. The study is in line with the larger public health discourse, which calls for persistent efforts across several sectors, commitment from stakeholders, and ongoing research to reduce the burden of lifestyle illnesses and improve overall health outcomes. This work adds to the worldwide effort to lessen the effect of lifestyle illnesses and clear the path for future healthy societies by combining information and practical insights.

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