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Determinants of Healthy Lifestyles

Determinantes de los Estilos de Vida Saludables

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Abstract:

Advances in science and technology have had a great impact on improving people's health, but there has also been an increase in chronic noncommunicable diseases (CNCDs), some of them related to lifestyle (LS). This work deals with the study of LSs and their impact on the health of the individual, its most representative elements are analyzed, and recommendations are made about healthy behaviors. The LS refers to the habitual behaviors of the individual, characteristics of the individual behavior that are repeated throughout life. A healthy LS refers to behaviors that maintain health and reduce the risk of getting sick. Many of the CNCDs are related to four modifiable risk factors: tobacco use, sedentary lifestyle, unhealthy diet, and alcohol abuse. Diet, as part of lifestyles, involves a great complexity; however, the common element to prevent the development of chronic non-communicable diseases is the recommendation to address the intake of specific foods, such as limiting saturated fatty acids, increasing the consumption of dietary fiber, decreasing the consumption of simple carbohydrates, sodium, and alcohol. Food involves great complexity that ranges from food selection, consumption capacity, cultural aspects, knowledge about food, among others. Physical activity favors the ability to maintain independence, vitality, and quality of life in old age, it is important to have a balanced program. Substance abuse leads to risk behaviors and can lead to addiction. Adequate sleep is important for maintaining brain health throughout life. Maintaining a large social network can help promote healthy cognitive aging. Jobs that have the common characteristic of spending a lot of time sitting are a risk factor for cardiovascular diseases.

Keywords:

Lifestyle, feeding, physical activity, drug abuse, sleep habits, work environment, personality type, lifestyle medicine.

Resumen:

Los avances en la ciencia y la tecnología han tenido un gran impacto en la mejoría de la salud de las personas, pero también ha habido un incremento de las enfermedades crónicas no transmisibles (ECNT), algunas de ellas relacionadas con los estilos de vida (EV). Este trabajo aborda el estudio de los EV y su impacto en la salud del individuo, se analizan sus elementos más representativos y se plantean recomendaciones acerca de conductas saludables. Los EV son las conductas habituales del individuo que se repiten a lo largo de la vida. Los EV saludables, se refieren a comportamientos para mantener la salud y disminuir los riesgos de enfermar. Muchas de las ECNT están relacionadas con cuatro factores de riesgo modificables: consumo de tabaco, sedentarismo, alimentación poco saludable y abuso de alcohol. La alimentación implica una gran complejidad, no obstante, el elemento común para evitar enfermedades es limitar el consumo de ácidos grasos saturados, incrementar el consumo de fibra dietética, disminuir el consumo de hidratos de carbono simples, sodio y alcohol. La actividad física favorece la capacidad de mantener la independencia, la vitalidad y la calidad de vida en la vejez. El abuso de sustancias conduce a conductas de riesgo y puede llevar a la adicción. El sueño adecuado es importante para mantener la salud del cerebro a lo largo de la vida. Mantener una gran red social puede ayudar a promover un envejecimiento cognitivo saludable. Los trabajos que tienen como característica común el pasar mucho tiempo sentados son factores de riesgo para enfermedades cardiovasculares.

Palabras Clave:

Estilos de vida, alimentación, actividad física, consumo de Drogas, hábitos de sueño, ambiente laboral, tipo de personalidad, medicina del estilo de vida

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INTRODUCTION

Since the last decades from the last century, humanity has achieved great advances in science and technology that had gotten important impact on the improvement of health and life expectancy of the people. However, there is an increase in non-communicable chronic diseases. Some of them are related to lifestyle (LS),[1,2] so the revision of this topic is relevant starting from the aspect of Medicine of Lifestyle.

It should be considered that income, employment status, occupation, housing, among others, affect the way lifestyles are adopted and, consequently, health. They can act as constraints, limiting the scope for voluntary action and thus shaping individual behavior. Economic disadvantages limit the freedom to voluntarily adopt healthier lifestyles.[3]

This proposal addresses fundamental factors in the study of LS and their impact on the health of the individual since they can be risk factors for the development of diseases, especially chronic non-communicable diseases, but also acute events such as injuries due to violence or accidents.[4] Nonetheless, LS, taken in a positive direction towards health can act as a protective factor to prevent the development of certain diseases, named healthy LS.[5]

In addition, the most representative elements of LS are also analyzed, such as diet, physical activity, drug use, and abuse, sleep habits, activity and work environment, interpersonal relationships, and personality type, so some recommendations are made regarding healthy behaviors. Several instruments were also identified that have been constructed and validated to characterize LS in different types of populations.

CONCEPT OF HEALTHY LIFESTYLES

Hippocrates is credited with suggesting that to stay well it was sufficient to avoid eating too much or working too little.[6] In ancient Greece, people were encouraged to have adequate food, professional activity, interpersonal relationships, exercise, and rest time, what today we would call a healthy lifestyle (LS). [6]

The concept of lifestyles was introduced by the German sociologist Max Weber (1864-1920), who studied various consumer groups. The concept consisted of two parts: the first part was life chances, which indicated the probability that an individual would achieve his or her goals given certain factors over which the person has little control. [7]

These factors involve access to tangible, for instance, food, clothing, and shelter, and intangible such as education and health care sources. Life chances coincide with what is known today as socioeconomic status.

The other part of the term is life behavior, which refers to choose and self-direction in a person's behavior. In the translation of Weber's Class, Status, Party from German into American English, the original term "life chances" was translated into "lifestyle," a mistake which has been criticized ever since.[7]

At the end of the 19th century, machines reduced man's physical effort to obtain food. Besides, increasing the availability and energy density of food, this led to the conclusion in the 20th century that a person's LS depended on his or her social stratification. This was subsequently related to behaviors that individuals assume rationally and, on many occasions, can generate health risks.[4]

In the middle of that century, when chronic degenerative diseases began to become one of society's main problems, lifestyles were addressed from the public health point of view, so that in the 1980s, strategies for intervention in unhealthy LS began to be established due to the increase in mortality associated with diseases caused by them.[4]

LS are the individual's habitual behaviors, characteristics of individual behavior that are repeated over prolonged periods of a person's life and that are nuanced by the social context and can influence the individual's health positively or negatively depending on the nature of the behavior presented.[8] Lifestyle according to the World Health Organization (WHO) is based on identifiable patterns of behavior, determined by the interaction between individual personal characteristics, social interactions, and socioeconomic and environmental living conditions.[9]

A healthy lifestyle refers to behaviors that reduce the risk of illness, such as proper nutrition, adequate control, and treatment of stress and negative emotions. As well as good physical exercise, sleep, and distraction regimen; control and avoidance of substance abuse; and proper use of time.[5] This type of lifestyle contributes to the individual maintaining or recovering health, while an unhealthy lifestyle favors the appearance of diseases at both the physical and psychological levels and may even contribute to the appearance of chronic degenerative diseases.[10]

LIFESTYLE MEDICINE

The notorious advances in medical science in at least the last 70 years have increased the life expectancy of human beings, achieving in general terms a notable decrease in the prevalence of infectious diseases, but this has been accompanied by a greater prevalence of chronic non-communicable diseases (NCDs), with the consequent affectation of the quality of life, and which have among their risk factors some characteristics of lifestyle. These factors are susceptible to be modified and thus reduce their deleterious effects.

Some of the risk behaviors that contribute to the appearance of diseases are sedentary lifestyle, alterations in nutritional status due to excess or deficiency, the use of tobacco, alcohol, and other drugs, alterations in sleep habits, increased work and family stress, among others.[6] The progression of NCDs favors the appearance of greater health affectation, and one of the most important measures to prevent or control many of these diseases is the modification of lifestyle.[1,2]

The adoption of healthy lifestyles as part of the management of NCDs is of the utmost importance as it is estimated that

approximately 80% of health care costs are due to the care of four groups of diseases; cardiovascular, respiratory, cancer and diabetes, all of them related to the following modifiable risk factors: tobacco use, sedentary lifestyle, unhealthy diet, and alcohol abuse. Since the weight of these modifiable risk factors has been fully identified, they become very important elements in the measures aimed not only and preventing the disease, but also at short stopping its progress and mitigating its consequence one stablished.[11] Lifestyle modifications make it possible to act on the three levels of prevention, which means. Firstly, preventing the onset of the disease. Secondly, slowing its progression. Finally, preventing or delaying the onset of sequelae.[12]

Healthcare systems generally start intervening with people when symptoms are already present or when the chronic disease has already been diagnosed, to get better results they need to focus on the underlying mechanisms of the disease, including lifestyle, to prevent the onset of these risk factors. Prevention models focused on healthy behaviors can prevent or significantly delay the onset of chronic disease.

A healthy lifestyle is the cornerstone of prevention, all interventions focused on changing lifestyle should be lifelong.[13] Lifestyle interventions should take place in the places where people live, work or go to school and involve not only health institutions and governments, but also educational and social institutions, industry, and the environment in general, making it easier for individuals to adopt a healthy lifestyle.[14]

THE BURDEN OF DISEASE RELATED TO LIFESTYLE

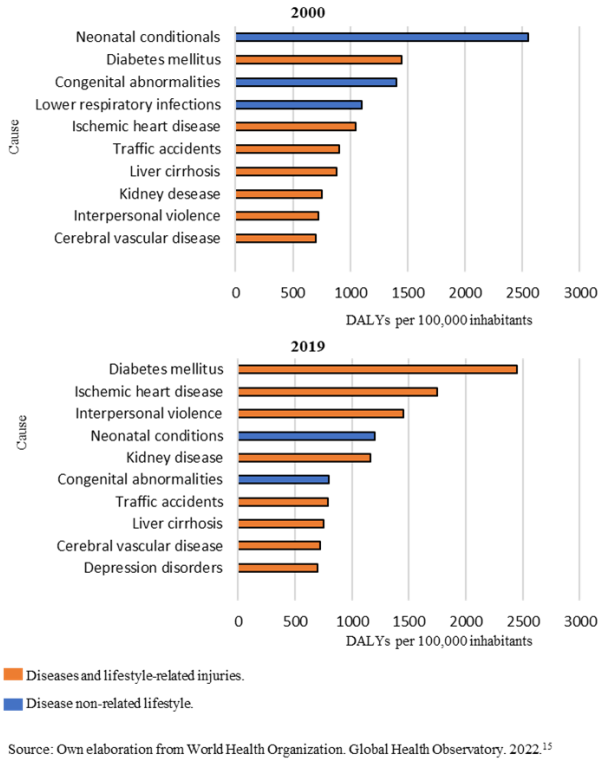
The indicator Disability Adjusted Life Years (DALYs) due to disease represents the total years lost as a result of premature deaths plus the years of healthy life lost due to disability in a given population.

Considering, the weight of mental illnesses and non-communicable diseases directly related to lifestyles on DALYs is important. In Mexico, in the year 2000, seven of the top ten causes of DALYs were directly associated with lifestyle, while in 2019, eight of them were in that category (Figure 1).[15]

LIFESTYLE COMPONENTS

DIET

According to the Food and Agriculture Organization of the United Nations, it is estimated that 22% of adult deaths worldwide are related to dietary habits, and cardiovascular diseases are the main cause, followed by cancers and diabetes. Diets and food consumption habits have changed progressively in recent decades. In Central America, the availability of food exceeds the minimum recommended requirements for an active and healthy life by 28%. Worldwide, the average availability of kilocalories per day went from almost 2,380 kcal/person/day in the period 1960-1980, to about 2,750 kcal/person/day in the period 2000-2013.[16]



Source: Own elaboration from World Health Organization. Global Health Observatory. 2022.[15]

Figure 1. Main causes AVAD in Mexico.[15]

Diet, as part of lifestyles, involves a great complexity ranging from food selection, consumption capacity, cultural aspects, knowledge about food, among others.[3] Diets have tended to include foods with high levels of energy, fats, sugars, and insufficient levels of fruits, vegetables, and fiber. The current change in dietary patterns is reflected in the increased availability of animal protein such as eggs and meat, and animal and vegetable fats. Consumption of sugar and sweeteners in the Americas region is almost double the world per capita consumption, legumes are the only food that has shown a decrease. [16]

Different dietary patterns have been proposed that aim to preserve health to prevent the development of chronic non-communicable diseases. The common element in them is the recommendation to address the intake of specific foods, such as limiting saturated fatty acids, increasing the consumption of dietary fiber, decreasing the consumption of simple carbohydrates, sodium, and alcohol.[17]

The Mediterranean diet has been widely recommended for consistently demonstrating lower morbidity and mortality rates from cardiovascular disease, type 2 diabetes, some types of cancer, and cognitive diseases in Mediterranean countries. It is attributed to the low content of saturated fatty acids, high consumption of plant foods, for instance, fruits, vegetables, cereals, legumes, oilseeds, and seeds; low to moderate content of fish, poultry and occasional consumption of eggs and red meat; and low to moderate consumption of wine at meals. Olive oil is considered the main source of fat in this diet.[17]

According to the Mexican Official Standard 043,[18] there is a "The healthy plate", a graphic tool used to provide dietary guidance. In this scheme, foods are organized into three groups: vegetables and fruits, leguminous and animal foods, and cereals. The proposal consists of five meals a day, three of the main meals, and two snacks.

To the diet not to cause damage to health, it must meet the criteria that define it as correct, in other words, it must be safe, have the correct proportion of proteins, lipids, and carbohydrates, provide all the micronutrients necessary for the physiological condition of each individual, be culturally and economically accepted by those who consume it, contain foods from the three groups presented in Healthy plate, and vary the foods that make up the diet. Additionally, the intake of simple water throughout the day.

Mexico also has front labelling supported by Mexican Official Standard 051,[19] which consists of reporting on the front of packaged foods and beverages, with octagonal seals, the excess calories, sodium, trans fats, sugars, and saturated fats. Likewise, if it contains sweeteners and caffeine to warn about its consumption by children. With this labelling, it is understood that the more labels are present, the less healthy the food will be.

Due to the above, the adequate diets generally contain whole fruits, vegetables, legumes, whole grains, oilseeds, dairy products, seafood, foods that provide protein and polyunsaturated fatty acids. Moreover, consuming in moderation red meat, refined grains, sodium, foods with added sugar, sweetened beverages, sausages, and alcohol.[17]

PHYSICAL ACTIVITY

In the second half of the 20th century began what is considered an inactive modern lifestyle, which in recent years has extended due to sedentary behavior at work, at home, and in leisure time, favoured by the emergence of new technologies such as the Internet. According to Booth et al,[20] the physical activity has decreased up to 60%, compared to about a century ago. The decrease in physical activity to meet daily needs has led to a significant decrease in energy expenditure, which favours the appearance of overweight or obesity.[20]

Physical activity refers to any movement of the body by skeletal muscle that uses energy beyond that expended at rest,[21] including activity performed to move from one place to another, during the workday and/or during leisure or recreational time. Activities such as walking, jogging, sports, cycling, and other recreational activities help to prevent and control some heart diseases, cerebral vascular events, some types of cancer, and diabetes mellitus, among others. Furthermore, maintaining a healthy weight and generally improving quality of life.[22]

A sedentary lifestyle due to work, school, and recreational activities generate more time of physical inactivity by spending several hours in front of a computer screen, television, and other technological resources.[23] According to the World Health Organization (WHO), approximately 25% of the world's adult population does not get enough physical activity, and this is more frequent in high-income countries.

Physical activity promotes healthy aging, which implies the ability to maintain independence, vitality, and quality of life in old age. Even despite certain factors that may negatively influence health. It helps prevent or mitigate pain, falls, loss of muscle tissue, osteoporosis, and cognitive decline. As a result, it is important to have a balanced program that includes aerobic, strength, flexibility, and balance exercise.[24]

Giving up sedentary lifestyles, even low amounts of physical activity are beneficial to health and reduce the risk of premature death by approximately 22% and is also important as part of the management of patients with cardiovascular disease, hypertension, diabetes mellitus, some types of cancer and chronic obstructive pulmonary disease.[25]

It is recommended that adults should engage in at least 150 to 300 minutes per week of moderate physical activity, or 75 to 150 minutes of intense activity, or a combination of both. It is also recommended that they perform muscle-strengthening activities one to two days per week.[22]

DRUG USE AND ABUSE

The abuse of drugs in Mexico is strongly linked to cultural, economic, social, and historical conditions. To address this phenomenon, policies have been implemented at the national level based on three principles: a public health approach; prevention and reduction of the social harm associated with drug use; and containment and deterrence of drug production, transit, and distribution.

Based on the 2016-2017 National Survey on Drug, Alcohol, and Tobacco Use in Mexico, 10.3% of the population had ever in their lifetime consumed any drug, being more frequent in men. People who had developed a dependence to any drug were approximately 546,000. The most used illegal drug was marijuana, followed by cocaine. More than 22,000 deaths from mental or behavioral disorders directly related to drug use were reported in the period 2010-2017, with alcohol being related to the highest number of deaths.[26]

The Pan American Health Organization (PAHO) considers psychoactive substances to be various natural or synthetic compounds that act on the nervous system, producing alterations in thinking, emotions, and behavior.[26] The harm associated with the consumption of this type of substance depends on how a series of elements interact, including the type of substance, the way it is consumed, the personal characteristics of the consumer, and also the social context in which consumption occurs.[27]

There are various classifications of these substances, based on their origin, their legal status, their effects on the central nervous system, etc. Their use implies a risk of suffering adverse effects on the organism, these can be acute such as intoxication, which is a transitory secondary state to the assimilation of the

substance, which produces alterations at the level of consciousness, cognition, affectivity, perception, and behavior, or chronic, whose spectrum is very broad and may include psychotic disorders, obsessive-compulsive, sleep disorders, depression, anxiety, sexual dysfunctions, confusional syndrome, among others.[28]

Substance abuse leads to risk behaviors and can lead to addiction, which is due to persistent changes in brain function caused by repeated substance use, genetic predisposition, and environmental factors associated with substance use. These substances of abuse act in a similar way to natural reinforcers on the brain's reward and pleasure structures, thereby encouraging repeated use in the medium and long term.[28]

Therefore, it is recommended to avoid or reduce the use of psychoactive substances, whether legal or illegal.

SLEEP HABITS

Sleep deprivation harms the immune, dermatological, muscular, nervous, reproductive, respiratory, skeletal, and renal/urinary systems. Some of the negative consequences of sleep deprivation include reduced heart rate variability and increased risks of hypertension, myocardial infarction, and stroke. In addition, lack of sleep is associated with an imbalance of hormones that regulate satiety, increasing ghrelin, which is the hormone that increases appetite, and decreasing leptin, which is the hormone that increases satiety.[29]

On the one hand, epidemiological evidence has shown that poor and interrupted sleep is associated with alterations in cognitive ability such as decreased cognitive performance and impairment. On the other hand, Alzheimer's disease and all causes of dementia.[30]

Shorter sleep duration and quality may have direct effects on homeostatic fluctuations and aggregate neurotoxin clearance, which may help explain the association of sleep deprivation with neurodegenerative processes.[30]

Adequate sleep is important for maintaining brain health throughout life. The Centers for Disease Control and Prevention and the U.S. National Sleep Foundation recommend 7 to 9 hours of sleep per night for adults under age 65 and 7 to 8 hours of sleep for adults age 65 and older.[31] Helping patients create a healthy bedtime environment conducive to sleep is key to a healthy lifestyle change. The bedroom should be dark, quiet, and cool.[29]

INTERPERSONAL RELATIONSHIPS

There is an association between health and social connectedness, this last one is an essential part of a healthy and happy life. A sense of belonging, connection, and feeling loved is a basic human need that follows only food and shelter in Maslow's hierarchy of needs. A 9-year follow-up study found that those who lacked social and community ties were 2 to 3 times more likely to die than their counterparts who enjoyed extensive social connections. Loneliness is a risk factor for heart disease.[29]

Interpersonal relationships, stress management, and self-actualization are part of mental health,[30] lifestyles, which in turn are implicit in emotional intelligence, which can be defined as a set of emotional and social knowledge and skills that influence the overall ability to cope effectively with the demands of the environment. It refers to accurate self-perception, interpersonal relationships, stress tolerance, and flexibility, as well as self-actualization and optimism.[32]

Epidemiological evidence suggests that low social participation, less frequent social contact, and feelings of loneliness are associated with cognitive decline and the incidence of dementia. Although, the causal direction of this association is difficult to prove because more affected individuals may have fewer social interactions.

Maintaining a large social network may help promote healthy cognitive aging. Aspects of social isolation, including low levels of social activity and small social networks, are associated with diminished cognitive function in old age.[30]

Stress management involves identifying and mobilizing psychological and physical resources to effectively control or reduce stress. Interpersonal relationships involve the exchange of thoughts and feelings through verbal and nonverbal messages to achieve a sense of intimacy and closeness within meaningful, rather than more informal, relationships with others.[32]

People who have a better health-related lifestyle gain a greater sense of purpose in life. In other words, a healthy lifestyle predicts purpose in life, which may be a more efficient approach to health promotion.[33]

People who have supportive social networks and satisfying friendships can increase their chances of achieving longevity. Furthermore, having more and better friends is a protective factor for the cardiovascular health of older men, when compared with more solitary individuals. Elderly women with more friends throughout life had a lower incidence of cognitive problems, compared to those with smaller and more fragile social networks.[34]

ACTIVITY AND WORK ENVIRONMENT

Other components included in the lifestyle are the conditions that the person finds in his/her place of work or study, that is, how satisfied he/she is with his/her work activities and how are his/her relationships with those around him/her.

Job satisfaction can be determined by the nature of the work itself, by the worker's variables, or by the interactions that are established between the worker and the work context. In other words, it is the attitude of people towards various aspects of their work, and it is very important in any profession because it includes the desirable well-being for people, as well as productivity and quality in the company.[35]

Studies have identified that jobs that have a common characteristic of spending a lot of time sitting down are a risk

factor for cardiovascular disease. Cardiovascular deaths are increasing among the working-age population, which may be explained by the increase in the incidence and prevalence of obesity, overweight, and type 2 diabetes in the country.[1]

In Mexico, in the adult population, the combined prevalence of overweight and obesity affects about 8 out of 10 people.[23]

Actions have been recommended to reduce these conditions by increasing levels of physical activity since many jobs involve mostly sedentary activities. Moreover, improving the eating habits of people in the work environment since many workers have at least one meal at their workplace.[1]

Providing well-being and a better quality of life to people in the workplace promotes efficiency, productivity, commitment, and diligence to the work performed.[36] Integrating workers into company projects in such a way that they identify themselves with the common objectives significantly enhances job satisfaction.[36]

PERSONALITY TYPE

Some of the instruments used to evaluate lifestyle include the individual's personality type since it is a psychological factor that generates risk for the appearance of cardiovascular diseases, specifically the Type A Behavioral Pattern (BPTA). This construct is characterized by the need for recognition, achievement of goals, impatient behavior, competitiveness, work overload, loss of control, hostility, among others. The physiological response to this type of psychological characteristic is usually an increase in the activity of the sympathetic nervous system, which can trigger a cardiovascular event.[38]

BPTA is a determinant in the generation of certain states that directly affect cardiovascular risks, such as anger, hostility, aggression, and stress. People with this behavioral pattern, compared to those with a non-A behavioral pattern, have a coronary heart disease rate up to six times higher and greater atherosclerosis.[39] Type D personality, characterized by negative affectivity and social inhibition. It has also been associated with maladaptive health-related behaviors and unhealthy lifestyles; it is identified as a cardiovascular risk factor. Individuals in the general population with type D behavioral patterns tend to have less healthy lifestyles than those with other personality types.[40]

LIFESTYLE ASSESSMENT INSTRUMENTS

To characterize lifestyles, various instruments have been designed to characterize lifestyles, some of which are shown in Table 1.[41-47]

CONCLUSIONS

Lifestyles influence the state of health of individuals, in such a way that those who are healthy decrease the probability of getting sick. Lifestyle Medicine, which is a relatively new adjunct to conventional medicine, focusing on the growing proportion of lifestyle and environment-related chronic diseases, emphasizes patient involvement and behavior change to facilitate better long-term self-management of the various modern chronic diseases and conditions. Non-communicable diseases and injuries related to lifestyles, reflected in DALYs, have increased over time.

Dietary modifications that favour the establishment of healthy LS are aimed at reducing the consumption of saturated fatty acids, simple carbohydrates, sodium, and alcohol; occasional consumption of red meat; low to moderate consumption of fish, poultry, and eggs. Furthermore, increasing dietary fiber, vegetables, fruits, whole grains, legumes, oilseeds, and the main source of oil should be olive oil. The criteria that define a diet as correct, must have the correct proportion of proteins, lipids, and carbohydrates, provide all the micronutrients necessary for the physiological condition of each individual, be culturally and economically accepted by those who consume it, contain foods from the three groups presented in Healthy plate.

Decreased physical activity and sedentary lifestyles have contributed to NCDs. Physical activity guidelines call for adults to accumulate 150 to 300 minutes of moderate-intensity physical activity per week, 75 to 150 minutes of vigorous activity, or both. Also, twice a week resistance training. The physical activity including activity performed to move from one place to another, during the workday and/or during leisure or recreational time. Physical activity promotes healthy aging. It is important to have a balanced program that includes aerobic, strength, flexibility, and balance exercise.

Substance abuse leads to risk behaviors and can lead to addiction, which is due to persistent changes in brain function caused by repeated substance use, genetic predisposition, and environmental factors associated with substance use. It is recommended to avoid or reduce the use of psychoactive substances, whether legal or illegal.

Sleep deprivation has a negative impact on multiple organs and body systems, some of the negative effects include reduced heart rate variability, increased risk of high blood pressure, acute myocardial infarction, and cerebrovascular disease, it is also associated with an imbalance in the hormones that regulate satiety, as well as with alterations in cognitive capacity and with all causes of dementia. Regarding hours of sleep, 7 to 9 hours per night is considered adequate for adults to avoid the negative impact of sleep deprivation on various systems.

On the one side, social connection is an essential part of a healthy and happy life. Loneliness is a risk factor for heart disease. Maintaining a large social network may help promote healthy cognitive aging. Low levels of social activity and small social networks are associated with diminished cognitive function in old age. Having more and better friends is a protective factor for the cardiovascular health of older men, while elderly women who had more friends throughout life had a lower incidence of cognitive problems.

On the other side, work activity and work environment reflect people's attitudes towards various aspects of their work, such as

satisfaction, interactions between the worker and the work context. Jobs that have a common characteristic of spending a lot of time sitting down are a risk factor for cardiovascular disease conditions that favour or do not favour physical activity, and the type of eating habits they develop in that environment.

Personality also influences the risk of cardiovascular events, particularly type A, which has been associated with behaviors of impatience, competitiveness, work overload, loss of control, hostility, etc. The physiological response to this type of psychological characteristic is usually an increase in the activity of the sympathetic nervous system. Which influences the generation of anger, hostility, aggression, and stress. Type D is associated with maladaptive behaviors due to negative affectivity and social inhibition is related to unhealthy lifestyles and is also identified as a cardiovascular risk factor.

There are several lifestyles assessment instruments, the most frequently explored domains being nutrition, physical activity, health care responsibility, stress management, family and interpersonal relationships, sleep habits, work activity, safety, substance use and abuse, and personality type.

Nonetheless, the preceding elements take for granted those lifestyles, in general, are voluntary acts of choice and health professionals intend to raise awareness in terms of highlighting adverse consequences under the principle of eliminating the misinformation factor. There are social structures, environmental and economic conditions that impact on decision making.

It is important to emphasize how relevant is the context of individuals and not to base habit modification on the reduced perspective of treating them as behaviors that can be freely chosen under any circumstances.

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Table 1. Instruments to assess lifestyles.[41-47]

Instrument	**Author**	**Population in which it was validated**	**Number of items**	**Domains**
Lifestyle profile (PEPS-I) [41]	Nola Pender	Adults	48	Nutrition, exercise, health responsibility, stress management, interpersonal support, and self-actualization.
FANTASTIC [42]	McMaster University Department of Family Medicine	Students, workers, and general practice patients.	25	Family and friends, activity, nutrition, tobacco or toxin use, alcohol, sleep/stress, personality type, introspection, and work.
What is my lifestyle like? [43]	Pan American Health Organization	Adults.	45	Relationship with others, physical activity, rest, nutrition, oral health, sexuality, mobility, substance use, sense of life, and environment.
Instrument of lifestyle JuvenIMSS [44]	Bazán-Riverón.	Adolescents	40	Food, physical activity, social relations, drug addiction, and health.
The health behavior in school Children.[45]	Wold	Adolescents		Physical activity, tobacco, alcohol and drug use, personal hygiene, and sex education.
Questionnaire of lifestyle II (CEVIII)[46]	Walker, Sechrist & Pender, 1987	Adults.	56	Spiritual growth, interpersonal relationships, nutrition, physical activity, health responsibility, and stress management.
Short Multidimensional Inventory Lifestyle Evaluation (SMILE)[47]	Balanza-Martínez.	Adults.	43	Diet and nutrition, substance abuse, physical activity, stress management, restorative sleep, social support, and environmental exposures.