# HOW TO LIVE LONGER AND HEALTHIER?

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## ABSTRACT

Why this title? After reflecting on what all humans have in common, this essay was created as an answer. I believe that everyone should be more responsible and care more about health, both as individuals and as a society as a whole. This was also the topic of a lecture I gave at the opening of the Faculty of Medicine in Mostar in 1997. The aim of this essay is to describe the components of health as essential prerequisites for all progress, well-being, and a better, longer, and happier life. This allows readers who already know enough about health to review and reinforce their knowledge. For others, it serves as an educational tool about the complexity of the human body, the mutual communication, and the functional connection of all organs within the human organism, which work together to maintain stability, health, and life. Learning about health is important. I hope this article will help everyone, with greater knowledge about health, to find enough meaning in all situations that justifies life on this beautiful planet of ours. The purpose of introducing health is described through seven components, which, like pillars, support health, prevent the onset and development of diseases, and contribute to faster recovery as well as a better and longer lifespan.

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*"The foundation of happiness in life is good health."*
*Aristotle*

## INTRODUCTION

It is well known that without health there is no progress, well-being, satisfaction or happiness. We all want to be healthy, but do not know what health is and what it depends on, how to improve and protect it? Reading these pages, you will find out and adopt new knowledge on better health. Throughout life, health needs to be strengthened, improved and protected, because it is easier to protect then treat an illness.

According to the World Health Organization and their definition from 1984; "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (1). According to the above definition, almost no one is completely healthy. Many authors agree that in this definition the word "state" should be replaced with "dynamic balance". This is because health is influenced by genetic, physical, psychological, social, and emotional and spiritual factors, and all interact in a state of a dynamic equilibrium.

The healthcare system has a significant impact on the health status of the population. It protects the health from conception, through birth, development, adulthood, old age, and death.

In the earliest beginnings of human existence on Earth, man instinctively, unconsciously, in order to survive, began to be interested in food, and even more so when he became aware that without it there is no health. Food is a human essential need, without it there is no growth, development or normal function of the organic systems or life. Today, it is well known that proper and balanced nutrition consists of all essential nutrients. Nutrients are divided into macronutrients (carbohydrates, proteins, fats, eater and fiber). In order to be strong and healthy, we must consume a variety of food in required and rational proportions. A balanced diet is essential for humans and serves as an eternal ally in the fight for survival and health maintenance (2).

Humans need physical activity. Physical activity, especially physical education, should start early in childhood, because young bodies have a special ability to adapt, and this positively influences growth and development. This contributes not only to physical and mental health, but also has great social benefits. Today, it is well known that proper nutrition, regular moderate physical activity, and good sleep significantly contribute to better health and the treatment of a wide variety of diseases.

Sleep is one of the natural needs of human life. Same as food, air, water, and movement, regular sleep, as a biological process, is essential for maintaining physical, emotional, and spiritual balance as part of overall health.

It is important to recognize the great diversity and complexity of the human body. It consists of about 36 trillion cells, more than eighty-six different organs, ten organ systems, almost 100 kilometers of blood vessels, and about 700 skeletal muscles connected to 208 bones in the human body. The human body is nearly perfect, not only in its complexity and diversity but also in its interconnectedness, communication, and coordinated functionality (3).

We must understand that a person is not just a collection of various cells, tissues, and organs, but an indivisible psychosomatic unity that, in addition to physical, includes emotional and spiritual elements. Their functions are constantly being adjusted and influence each other. The nervous and endocrine systems regulate and harmonize all organ functions, maintaining a constant and stable balance—homeostasis. This balance preserves health and life. There are numerous conditions for maintaining a stable and harmonious

relationships in our bodies: such as body temperature, fluid levels, electrolyte values, blood pH, blood glucose, and others. The lungs contribute by delivering oxygen in amounts needed by the cells. The digestive system provides nutrients, and the kidneys maintain stable concentrations of electrolytes and water. All this takes place in dynamic balance.

When this balance is disrupted, and the defense mechanisms are unable to eliminate the resulting disorder, there is a risk that leads to the onset of disease. Illness disrupts the harmony and balanced rhythm of life, whether it is accompanied by physical or psychological pain when confronted with sadness (4). Physical condition and illness are regularly accompanied by emotions. They affect the body, and when they are unpleasant and intense in the form of an attack or a life-threatening situation, they are defined as stress. This condition was first described by a Canadian physician Hans Selye in the early 20th century. Man is a spiritual being, who has the power to think, plan, believe and the power of free will to make decisions.

Read on, you will learn much more about health.

## MATERIAL

A significant proportion of our health is inherited from our ancestors.

### 1. Genetic component

The genetic component is the gene, the basic substance of inheritance, and it is part of the DNA molecule. We carry this part from birth till death and have little influence over it. The other part is epigenetic, and can be influenced by numerous environmental factors. It is a very important part of health and largely dependent on our knowledge, daily habits and lifestyle. Epigenetics include all environmental factors and everything we consume by our bodies: food, water, air, smoking, alcohol, physical activity, and sleep. Recent findings indicate that our thoughts, beliefs, and prayers also have a significant impact on health. All these influences can be classified into seven fundamental components that condition and support health like pillars: heredity, healthcare, nutrition, physical activity, sleep, emotions, and spirituality.

### 2. The role of healthcare services in health protection

The healthcare service consists of institutions, whether state or private, that provide medical care and other forms of health promotion and protection. According to their function, primary and secondary healthcare institutions hold particular significance. Primary healthcare has the objective and obligation to meet the basic health and social needs of the population. In this case, family medicine plays the most important role. It provides a wide range of health - preventive, and especially early diagnostic measures, as a prerequisite for proper treatment of both individuals and their family members. It is true, today healthcare is unthinkable without inpatient type institutions such as general, special and clinical hospitals. In the modern organization of healthcare, there are also polyclinics where specialist-advisory healthcare is provided. They include diagnosis, treatment and rehabilitation of patients.

The key indicators of the quality and overall activity of the healthcare service are the organization, management, expertise of healthcare workers, user satisfaction, and the implementation of preventive actions. Medical science had made great progress. It is necessary to apply professional guidelines for the benefit of health, because the average life expectancy increases by an average of three months per year. Today, healthcare services are becoming more efficient. However, planning and implementing of preventive measure is still insufficient. Primary healthcare

doctors are burdened in their practices and with patients who often come in terminal phases.

Has Bosnia and Herzegovina done enough in disease prevention and early detection? The answer to this question is provided by the "Report (B&H Public Health Institute) on infectious diseases and immunization in B&H for the year 2024." "In 2024, epidemics of measles with 7,445 and whooping cough with 665 cases were recorded. Children who were not vaccinated dominated among the reported cases. It is assumed that there were more cases, but they were not registered. Unfortunately, among the sick there were 2 fatal cases of children and 5 deaths from whooping cough (in 2023 and 2024). The implementation of the immunization program is the most important measure of protection and prevention of infectious diseases and care for the health of the population in the Federation of Bosnia and Herzegovina, as required by the Law on Health ("Official Gazette of the Federation of Bosnia and Herzegovina" No. 46/10 and 75/13") and the Law on the Protection of the Population from Infectious Diseases ("Official Gazette of the Federation of Bosnia and Herzegovina" No. 29/05)."

This indicates insufficient vaccination (50% instead of 95%). We live in a beautiful, nature-rich country with a poor population. Poverty, illiteracy and ignorance usually accompany infectious diseases more often. It should be borne in mind that, according to official statistics, B&H is the country with the least educated population in Europe. "Even today, there are 146,000 inhabitants in B&H who do not have any formal education. From the 2013 census, out of three million people over the age of 15, there are 274,036 people or 9.2% with incomplete primary education", notes Professor Lamija Tanović.

What should we do? We should do what is known and proven in medicine: achieve the greatest possible results with least resources. The law exists, and there is a possibility for repressive measures. However, preventive measures should come first. Repressive measures should be the last resort, as they rarely prove effective. Continuous education, tailored to people and their problems, should be conducted in all communities. Science and expertise need to be popularized and demystified so that medical facts become more accessible, understandable, and acceptable to the general population. The recommendations of the renowned Croatian physician Prof Andrija Štampar should be implemented: "Doctors should seek patients, not the other way around."

Today, according to research, one in ten people has diabetes, and every other adult has high blood pressure and high cholesterol. The importance of early detection, referral to necessary measures, and prevention of serious complications such as disability and premature death cannot be overstated.

Primary healthcare should be made as effective and accessible as possible to users, including digital transformation and the use of artificial intelligence in prevention, early diagnosis, especially in cardiology, radiology, home treatment, early detection, and disease control. Artificial intelligence is a great aid for doctors in every day work, providing quick information. In addition, healthcare services should regularly provide healthcare, home visits, and comprehensive health and social care. In this way, timely medical services will be provided to patients and their family members. All this should be supported by more education and concern for health and disease prevention. It is important to accept that health is not only the responsibility and monopoly of doctors and healthcare professionals but of the entire society and every individual.

## 3. Nutrition and health

"*Let food be thy medicine and medicine be thy food.*"
*Hippocrates*

This quote highlights the importance of selecting foods that protect and positively impact our health, preventing the onset of disease. Food is the substance that provides energy to maintain body functions and meet nutritional needs. It should be consumed regularly and in moderation in order to preserve health, taking into account age, gender, physical activity, and health status.

A varied and balanced diet is the key to a healthy life for every individual. There is no single food that contains all the elements necessary for human health. For this reason, we need to consume a variety of foods, especially nutrient-rich such as fruits, vegetables, grains, and other essential nutrients that are rich in micronutrients like vitamins, minerals, fiber, and flavonoids, but lower in calories and fats. Variety in foods ensures a balanced intake of carbohydrates, proteins, and fats, contributing to the body's equilibrium (homeostasis).

Proteins are organic compounds that represent the most important factor in the growth and development of every cell, tissue, and organ in the human body. The word "protein" comes from the Greek word *protos*, meaning "first," which already indicates their great importance for our bodies. Protein molecules that we consume in our food are broken down by enzymes in the digestive system into amino acids. Proteins are made up of about twenty amino acids joint together like the links in a chain. Essential amino acids, which cannot be synthesized by the human body, must be obtained through diet. These include tryptophan, leucine, isoleucine, methionine, lysine, phenylalanine, threonine, and valine. Non-essential amino acids can be produced in the body from carbohydrates or essential amino acids.

Proteins play many physiological roles: they are involved in the regeneration and creation of new body cells, and in the production of enzymes and antibodies in the immune system. Proteins largely make up hemoglobin molecules in red blood cells, which carry oxygen to every cell and enable cellular respiration.

It is recommended to consume about 1 gram of protein per 1 kilogram of body weight daily, while children should increase this amount by 50%. In adults, this amount should be increased during intense physical activity. It is important to consume proteins from various sources every day, as they contain vital nutrients for optimal health. The best approach is an equal proportion: 50% from plant sources and 50% from animal sources. Regular consumption of large amounts of protein (especially red meat) can lead to disorders and diseases such as cardiovascular disease and cancers, particularly of the colon and breast. The genotoxicity of red meat is more pronounced when 360 grams or more are consumed daily. This leads to the production of phenol and cresol compounds, which can shorten telomeres, resulting in chromosomal instability and the development of malignant alterations and cancer. For this reason, most scientists now agree that it is better to consume poultry—especially organically raised animals—and fish. It has also been observed that regular consumption of salads and plant fibers (lignin, inulin, pectin; 25 to 35 grams) with meat reduces the genotoxicity of red meat.

In addition to protein, dietary fats are also essential. Fats serve as fuel in the body (1 gram yields 9.3 kcal) and, alongside carbohydrates, are important sources of energy. Fats are classified as saturated and unsaturated. Saturated fatty acids have all their carbon

bonds attached to hydrogen atoms and are mainly of animal origin, such as meat and butter, and should be limited in the diet. Fats containing fewer hydrogen atoms than saturated fats are called unsaturated fats, and their intake is beneficial to health. Olive oil is a prime example, containing both monounsaturated and polyunsaturated fatty acids. It is not without reason that Homer called olive oil "liquid gold." Today, numerous beneficial effects of olive oil on human health are well known. It acts almost like a medicine. For adults, its effect is similar to the effect of mother's milk for a newborn child. Daily fat intake should not exceed 25 to 30% of total energy values, with only 7 to 10% coming from saturated (animal) fats.

A very interesting report by Prof Dwight Lundell in the book "The Care for Heart Disease" (2012) states that the primary cause of heart disease is inflammation in the arteries. This inflammatory process is mostly caused by omega-6 oils, such as soybean, sunflower, and corn oil, as well as processed foods that contain them. These foods lead to the production of large amounts of cytokines, which cause inflammation. Inflammation contributes to the development of atherosclerosis (vascular disease), heart disease, and diabetes. He recommends consuming olive oil, as well as butter from pasture-raised animals, fruits, and vegetables, along with regular moderate physical activity. If we consume more food than our physical activity burns, fat accumulates in the body, leading to weight gain. Excess weight manifests as overweight, and obesity is a disease that brings many serious health consequences. It is necessary to reduce salt, as higher amounts increase blood pressure and strain the kidneys and heart. According to the World Health Organization (2011), reducing salt in food by 50% annually would save about 180,000 lives in Europe. Intake of sugar, white flour, white rice, fats, and red meat should also be reduced.

Extremes are not necessary in nutrition or in any other aspect. Since ancient Egyptian sages, Greek philosophers and physicians, the Bible, and the most recent medical experts, moderation in everything has been recommended. Therefore, a balanced and varied diet, enjoyed with pleasure and sometimes concluded with a good dessert, is best. These are now sugars.

Carbohydrates or sugars are organic compounds that are produced in the green parts of plants by assimilating CO2 and H2O in the presence of light, where light—solar energy (photosynthesis)—is converted into chemical energy. Carbohydrates make up the largest part of the human diet and, along with fats, are the most important sources of energy (1 g = 4 kcal). We must regularly consume them. They differ from fats in that, for example, the central nervous system (the brain) cannot use energy from fats but exclusively uses sugar—glucose. The level of glucose in the blood is around 4 mmol/L to 6 mmol/L, regulated by insulin, a hormone secreted by beta cells in the pancreas. When we eat, the process of digestion and breakdown begins in the mouth, then the food passes through the esophagus to the stomach, where it is exposed to mechanical and chemical processes. After a certain amount of time, it passes through the duodenum into the small intestine, where the breakdown and absorption of nutrients into the bloodstream continues. L cells from the wall of the small intestine stimulate the secretion of an intestinal hormone called glucagon-like peptide 1 (GLP-1), which plays a key role in glucose regulation after a meal. It reaches the pancreas via the bloodstream and stimulates insulin production. Insulin then "opens the doors" on muscle cell membranes, allowing glucose to enter, where it is used in the mitochondria to produce energy with the help of oxygen. As glucose

enters muscle cells, its concentration in the blood decreases. Some of the GLP-1 hormone also reaches the hypothalamus in the brain, which gives a feeling of satiety—signaling us to finish the meal (5).

Likewise, dietary habits play a crucial role in insulin resistance, which occurs at the level of muscle cells, so the pancreas must secrete increasingly higher amounts of insulin in order to maintain normal blood glucose levels. Most other cells in the body remain normally sensitive to insulin, but this increased insulin effect on specific cells leads to a wide range of disorders and diseases. Numerous comorbidities can develop, such as fatty liver, obesity, high blood pressure, arteriosclerosis, narrowing of blood vessels, claudication, heart attack, stroke, kidney and eye diseases, and even malignant tumors. This condition can exhaust the pancreas to such an extent that its beta cells are no longer able to produce insulin, resulting in rising blood glucose levels and the development of type 2 diabetes. Therefore, early detection of the disease is key in preventing associated complications.

According to Dr. I. Kraljac (2025), about one-third of adults have insulin resistance without being aware of it.

In order to prevent the numerous disorders and diseases caused by excess insulin, it is essential to regularly conduct early detection, as well as implement appropriate dietary, physical activity, and treatment measures. This approach can prevent or delay insulin resistance. People with insulin resistance cannot efficiently obtain energy from carbohydrates because insulin becomes ineffective and cannot “open the doors” on muscle cell membranes to allow glucose entry. At the same time, blood glucose levels rise, along with multiple chronic diseases in people with type 2 diabetes. That is why the body needs moderation, variety, and balance, with an increased intake of vegetables and fruit. It is also necessary to drink enough fluids every day (1.5–2.5 liters, and even more during the summer). Water is the healthiest drink. One glass of wine or one beer per day is considered normal.

In our country, a great variety of vegetables and fruits can be cultivated and should be regularly included in the diet. It is now scientifically confirmed that the Mediterranean diet is one of the healthiest. It was first described by American doctor Ancel Keys in the famous southern Italian city of Salerno (1945). There were many misconceptions and debates afterwards, but a consensus among scientists and global recognition of the Mediterranean diet as the healthiest in the world was reached in 1990, after a study in seven countries with 12,700 participants. Numerous subsequent studies at universities confirmed encouraging results in both healthy and sick individuals. The World Health Organization has also confirmed and recommended this diet. In 2010, the Mediterranean diet was inscribed on the Representative List of the Intangible Cultural Heritage of Humanity. Today, there are three golden rules for improving and protecting health:

1. The Mediterranean diet
2. Reduction of calorie intake (by 30%)
3. Regular physical activity.

Today, it is well known that food is not only a source of calories. It is a very powerful epigenetic modulator - meaning it can, together with other environmental factors (physical activity and quality sleep), influence changes and the expression of genes (DNA).

Therefore, the diet should include a variety of plants: grains, regular and sweet potatoes, an abundance of vegetables and fruit, since they contain valuable pigments, antioxidants, vitamins, minerals, and fiber but very little fat. Their regular consumption has an anti-inflammatory effect, protecting the body from

the aggressive action of free radicals. Vegetables such as garlic and onion, leeks, zucchini, tomatoes, peppers, legumes, beans, peas, celery, carrots, beetroot, Swiss chard, broccoli, cauliflower, brussels sprouts, cabbage, kale, collard greens, spinach, and lettuce are all recommended. All cruciferous vegetables, especially broccoli, contain a very useful compound (sulforaphane) that improves the function of blood vessel endothelium, strengthens immunity, improves liver function, protects DNA, and has anticancerous effects. The most common fruit are apples, pears, plums, olives, cherries, sour cherries, pomegranates, kiwis, lemons, mulberries, oranges, and tangerines. Berries and nuts such as almonds, walnuts, and hazelnuts are also very beneficial for our health. Never skip breakfast, as it is the most important meal of the day - ideally consumed before engaging in physical activity.

## 4. Physical Activity

Food alone is not enough without physical activity. Regular and moderate physical activity significantly contributes to overall health. This is also reflected in the ancient Latin saying: Mens sana in corpore sano ("A healthy mind in a healthy body"). This undeniable truth tells us that physical activity boosts and maintains physical, psychological, and spiritual fitness, improves functional abilities, and has numerous health benefits. Today, it is known that physical inactivity is the fourth leading risk factor for disease and mortality.

If muscles remain inactive for a long time, they shrink, atrophy and weaken, resulting in limited mobility and diminished function. On the other hand, if muscles are used intensively over time, their size increases. Muscle activity is beneficial not only for the muscles themselves but for all organs and the entire body. It particularly benefits the heart, which works harder during physical exertion, thereby strengthening its muscle fibers and increasing functional efficiency. Movement also increases the calcium content in our bones, which is one measure against osteoporosis. Bones become stronger, more resilient, and less prone to fractures.

Regular physical activity increases the number of T-lymphocytes, thereby boosting general immunity. This is best demonstrated by the increase in myokines, cytokines, and IL-6 in circulation after physical activity. IL-6 plays an important protective role in many processes in the human body and is found on cell surfaces and the blood. It is a cytokine-glycoprotein secreted by macrophages as a response to inflammatory processes and physical activity. It is found in the heart, prostate, ovaries, pancreas, kidneys, lungs, and most abundantly in skeletal muscles. The simplest form of physical activity is walking: walking at 4 km/h burns about 250 calories. All of this supports the advice: walk, because with every step, you are closer to good health.

Walking, hiking, and strolling at a speed of 3 to 5 km/h on flat ground are very beneficial and represent some of the most common and effective physical activities. More beneficial that this is gardening, which activates the legs, arms, and the whole body on fresh air. Physical activity performed regularly brings multiple benefits, such as increased immunity, reduced stress, lower cholesterol (LDL), lowered blood pressure, decreased blood sugar, and reduced body weight. Other benefits of moderate physical activity include stimulation of hormone secretion (serotonin and dopamine), which leads to greater satisfaction and well-being, and better sleep after exercise. Physical activity also contributes to faster recovery from illness and prolongs life expectancy. It can even be performed while sitting, usually under the supervision of a physiotherapist.

However, if physical activity and exercise are excessively intense or unbalanced, they can have numerous harmful effects on health.

Our ancestors were healthier than we are today, mainly because they were physically active every day, moving often in their daily lives and work. Most of the tasks they performed back then are now done by machines. They ate food they produced themselves, without herbicides, pesticides, fungicides, additives, or other toxins. They went to sleep at sunset, and woke up before sunrise. Of course, the average lifespan was much shorter, as when illness struck, there was often no medicine, doctor, or other medical care available. Modern humans use their muscles less and less, even though our bodies are designed for movement. Lack of movement leads to many so-called "civilizational diseases." After walking, exercise, or any physical activity, it is important to relax and rest for a short or longer period. The elixir of health consists of a proper diet, normal body weight, moderate physical activity, and quality sleep. Quality sleep provides the best rest and is a biological need for every human being.

## 5. Sleep and health

In order to live, humans need air, water, food, movement, and sleep. Sleep, as a physiological need, enables the normal functioning of all organs and organ systems. After a full day of mental activities, every person needs complete relaxation and rest of all muscles in the body, which can only be achieved through peaceful sleep.

Getting enough restful sleep contributes to regeneration and good health. While we sleep, the cells in our body are renewed, and our immune, endocrine, and nervous systems are strengthened. Even during deep sleep, the function of vital organs does not stop. For example, the lungs perform about 20,000 breaths in one day, and the heart beats around 100,000 times in 24 hours. Such continuous work requires substantial energy. This energy is produced in the cells' mitochondria, where nutrients are "burned" with the help of oxygen to generate energy.

Today, people are exposed to various nervous tensions, dangers, even fear, panic, and chronic stress every day. In addition, lack of physical activity, excessive sitting, smoking, coffee and alcohol consumption, and frequent use of medications all contribute to sleep disturbances. Sleep disorders can lead to increased secretion of cortisol, the hormone produced during stress. Cortisol stimulates appetite, contributes to the accumulation of fat deposits and obesity, and increases the risk of type 2 diabetes. It also often raises blood pressure, which puts a strain on the heart, weakens its function, and leads to the most deadly and prevalent diseases of today - heart disease and stroke.

A study conducted in the United States in 2015 found that about 17% of adults have more serious sleep disorders (Labit et al., 2015). Peaceful and sufficiently long sleep (seven to nine hours) offers multiple health benefits. Children need even more sleep. Sleep has two phases: the Rapid Eye Movement (REM) phase, which makes up about 30% of total sleep and is when dreaming occurs, and the non-REM phase. As people age, the REM phase changes: after birth, it lasts about eight hours, at age 20 only two hours, and by age 70, about 45 minutes (Purves et al., 2001).

Helping people with insomnia is complex and should almost always begin with non-pharmacological measures; only if these prove ineffective over time should pharmacological treatment be considered. Regular physical activity should not be done in the late afternoon, and coffee, tea, or smoking should also be avoided in the afternoon. Dinner should be light, not too abundant, and at

approximately the same time every day, at least three hours before bedtime. After dinner, take a light, relaxing walk of about 30 minutes, and then you may have a cup of lemon balm (Melissa) tea, melatonin, or a valerian tincture, all of which have calming effects.

## 6. Emotions and health

Emotions are feelings of excitement and a response of the organism to internal and external stimuli. They influence health and the functional capacity of bodily organs. Pleasant emotions accompanied by satisfaction and joy stimulate the brain - specifically, the hypothalamus, pituitary gland, and pineal gland - to release "happiness hormones" such as melatonin, serotonin, endorphins, and dopamine, resulting in a sense of well-being.

When feelings are unpleasant—such as guilt, humiliation, sadness, low mood, tension, depression, or stress, or when a person faces some danger—this information quickly travels to the hypothalamus. The hypothalamus triggers an alarm about the perceived threat, causing numerous changes to prepare the body for a so-called "fight or flight" response. In this stressful state, both the nervous and endocrine systems (the hypothalamus–pituitary–adrenal axis) activate to release stress hormones, primarily cortisol.

This leads to a series of changes, such as: increased heart and lung rates to deliver more oxygen to cells; elevated blood pressure and plasma glucose; and changes in the digestive system. All these changes affect a person's overall health. If stress is intense and prolonged, it poses a greater risk for the onset and worsening of existing diseases. Many psychosomatic illnesses are now recognized as having such origins and should not be ignored. Fortunately, stress is not always severe or long-lasting, nor does it always present a high risk for disease. A milder example would be student exams, when candidates experience discomfort such as insomnia, heart palpitations, sweating, dry mouth, stomach pain, or even a rise in body temperature before or during the exam.

Emotions always, especially when strongly expressed, affect the body, and the body, in turn, influences emotions. Their integration impacts health. Regular and moderate physical activity can significantly help strengthen health and transform negative emotions into positive ones. Negative emotions - such as anger, low mood, tension, anxiety, and mild depression - should be managed through physical activity, breathing exercises, and walks in nature with friends. In most cases, this will boost satisfaction and mood, positively influencing emotional balance and overall health.

## 7. Spiritual component of health

We must not forget that humans are individual, social, and spiritual beings. The spiritual dimension of health is an inner personal strength that greatly contributes to coping with all of life's situations. Therefore, the physical cannot be separated from the mental—from the state of spiritual personal conviction and belief. Spirituality contributes to health by providing believers with a sense of security, meaning, and purpose in life. The World Health Organization recognizes the spiritual dimension as the fourth component of health, alongside physical, mental, and social health, and includes it in the framework of comprehensive healthcare.

We are witnessing ever greater and faster scientific, technical, and medical achievements, which are enabling people to live longer. This, among other things, requires a more holistic approach to health - an idea advocated by Hippocrates in his pursuit of balance between mind and body. Today, medicine has its limitations, and sometimes medications and surgical procedures do not

achieve the desired results. What medicine cannot do, God can. The Bible records that for those who believe, all things are possible. The famous French physician, surgeon, and biologist Alexis Carrel, winner of the Nobel Prize for Medicine in 1912, said: "Just as people need to breathe and require oxygen, water, and food, they need prayer and God."

The times we live in are marked by increasing pressures and more frequent crises - conflicts, wars, and natural disasters - that lead to dissatisfaction, anxiety, and result in anxiety and depressive states. This disrupts overall human health, especially its mental component (Babić, 2002) (6).

Today, a large number of scientific and medical studies confirm the positive link between spirituality and significantly faster and more complete recovery from illness, as well as improved quality of life and health for patients. "In illness, one should pray to God because He gives health, but it is also necessary to go to the doctor, for God has given him the power and ability to bring health to people." (Sirach 38:9,12)

An increasing number of doctors today believe that science can be reconciled with the Bible and the Qur'an, and that these can be complementary in treatment. "These are the very foundations of mental health" (Jakovljević, Nikić 2002) (7). Spirituality - together with relaxation, peace, love, prayer, and faith in God - strengthens health and aids in healing.

## CONCLUSION

Numerous factors, alongside seven fundamental components described here, influence the formation and balanced dynamics of each person's health status. At birth, everyone inherits characteristics from their ancestors, carrying them throughout life until death. For the most part, this inherited genetic component is of good quality, providing a solid foundation for organ systems and normal organ function.

Almost every child should be included in immunization programs from early childhood, as this is the most important measure for protecting against infectious diseases. Since health relies on preventive measures, these should be implemented through continuous and appropriate education in all communities by the healthcare system. Equally accessible healthcare will enable early detection, recognition, diagnosis, prevention, and treatment. Besides the government and healthcare services, each individual is also responsible for their own health. Therefore, it is necessary to be aware of and address everything that can either benefit or harm health.

The fundamental principles of proper nutrition should be followed: variety, balance, and moderation. Include proteins, fats, and carbohydrates in the diet. Grains, especially vegetables and fruits, are recommended because they are low in calories and rich in fiber, water, minerals, vitamins, and antioxidants. The intake of salt, sugar, white flour, rice, red meat, and fats should be limited. For fats, regular consumption of olive oil is advised, as it has a beneficial effect on the digestive, cardiovascular system, and the overall health. Whenever possible, follow the Mediterranean diet, recognized as the healthiest. The three golden rules for health are: the Mediterranean diet, reducing calorie intake, and regular physical activity.

A person with good genes, if they convert their bad habits, live sensibly, and follow recommended measures from youth to old age - with God's help - can expect good health and a high quality of life, and look forward to celebrating their 100th birthday.

In the end, to improve and protect physical, mental, and spiritual health, one must regularly, patiently, and persistently - with

much love - implement the recommended measures. As conscious, rational, and thoughtful beings, with positive thoughts, faith, and prayer, we contribute to better health and greater satisfaction.

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# KAKO ZDRAVIJE I DULJE ŽIVJETI?

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## SAŽETAK

Zašto ovaj naslov? Nakon razmišljanja o tome što je zajedničko svim ljudima, kao odgovor nastao je ovaj esej. Mišljenja sam da bi svi trebali biti odgovorniji i više brinuti o zdravlju, kako svaki pojedinac, tako i društvo u cjelini. Ujedno, to je bila tema mog predavanja kojeg sam održao na otvaranju Medicinskog fakulteta 1997. godine u Mostaru. Cilj ovog eseja je opisati sastavne komponente zdravlja kao neophodnog preduvjeta svakog napretka, blagostanja, kvalitetnijeg, duljeg i sretnijeg života. To omogućava čitateljima koji dovoljno znaju o zdravlju da to ponove i utvrde. Ostalima služi za poduku o složenosti ljudskog tijela, međusobnoj komunikaciji i funkcionalnoj povezanosti svih organa u ljudskom organizmu kako bi se održala stabilnost, zdravlje i život. O zdravlju treba učiti. Nadam se da će ovaj esej pomoći svima da sa više znanja o zdravlju, u svim situacijama, nađu dovoljno smisla koji opravdava život na ovoj nam prelijepoj planeti. Svrha upoznavanja zdravlja opisana je u sedam komponenata, koji poput stupova podupiru zdravlje, preveniraju nastanak i razvoj bolesti te doprinose bržem izlječenju, kvalitetnijem i duljem životnom vijeku.

Ključne riječi: zdravlje, kvaliteta života, duži životni vijek

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