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Ali Akbar Moosavi-Movahedi

Rationality and Scientific Lifestyle for Health



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Ali Akbar Moosavi-Movahedi
Editor

Rationality and Scientific Lifestyle for Health



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Editor

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*This book is dedicated to all the people of the world who sincere
to knowledge, reason, science and ethics.*

Human beings are members of a whole

In creation of one essence and soul

If one member is afflicted with pain

Other members uneasy will remain

If you've no sympathy for human pain

The name of human you cannot retain

Saadi Shirazi

Preface

Probably the few books have been written in the field of rationality, science and lifestyle. In this book, an attempt has been made to link science with reason and lifestyle so that the anomalies of technology branching out from science are under the control of rationality.

In the past, scientists discovered and developed science with good intentions for humanity, but today most abnormal technologies are created to generate large incomes without considering sustainable development, that caused industrial diseases, mental disorders, lack of peace for humanity.

This book raises the issues that science is supported by rationality and lifestyle and science is imbued with ethics to promote the effectiveness of science for human society.

This book not only introduces science and technique but also introduces knowledge as a combination of transcendental sciences, peripheral sciences (not just systems), human experience, conscience, strong imagination and inspiration, networking of data and information. In fact, science is the existence of enriched human (really science = scientist) being who can make the best use of better data and information to make the right decision. Based on the maturity, thinking and wisdom of the scientist, science yields and develop. Science is a correct analysis that can identify any phenomenon and provide solutions to problems. Science is different from research, but research has a narrow position that creates points, but science is integrated and connects points to reveal the true meaning. The important thing in the realm of science is that man can make the right analysis and make the right decision.

This book is written for the health and well-being of people to lead everyone to true prosperity. This states that man for his/her health should be in love with nature and be balanced with them as much as possible. The guidance is: if do not unbalance the nature so that its own balance is not disturbed. The best and healthiest for human beings is to have a balance in life and nature. Here introduces what is useful nutritious, functional foods, nutraceuticals, antioxidants and how natural molecules, which are from the generosity of nature, can be the best medicine for human beings.

In this book, the molecular meaning of stress is defined by the presence of unbalanced free radicals in the body. Most diseases, especially type 2 diabetes, which makes up most diabetics, come from this pathway. Our scientific evidence shows that diabetes type 2 is not just a disease of sugar but it is a disease of stress. In this book expresses about healthier lifestyle by

considering psycho-emotional dimension of wellness. And finally this book states that good sleep is the principle of health and happiness for humanity and how it removes stress from mankind and how unbalanced free radicals in good sleep are expelled from human beings.

We hope that the contents of this book will be useful and make tranquility for the readers, especially during the outbreak of COVID-19 that man needs inner quietness, and we hope that the mores suggested in this book will show a new path to a better life.

Tehran, Iran

Ali Akbar Moosavi-Movahedi

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About This Book

This book will guide you how to find knowledge, how to get acquainted with nature, how rationality helps to promote science, and how a good lifestyle makes a person healthy and happy.

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Philosophy Virtue of Nature, Mankind and Natural Health

Ali Akbar Moosavi-Movahedi

Abstract

The universe is high in spirituality, and the abstract of the universe is also a human being who owns all the wonders of being. Thus, human health is formed by a balance between external nature and human inner nature. Whatever man departs from his nature, approach to unbalanced diseases and make a balance, which is the principle of human health. Self-knowledge is thus the foundation of human health and happiness. Human beings need comprehensive knowledge to know themselves, so they can appreciate themselves and not self-harm. If one realizes that it does not harm itself, it certainly does not harm others. Human-kind has created technologies based on inferior knowledge, whereas it needs vast knowledge to produce healthy technologies. Today, a large part of man-made technologies is anomalous and create pollutants that produce unbalanced free radicals for humans and other creatures. Unbalanced free radicals created by pollutants that caused human disease and damage to the planet and the environment. Technologies must be linked to ethics, sustainable environment, bio-model, biomimetic and bioinspiration and health.

Keywords

Nature · Human · Natural health · Bio-model · Biomimetic · Ethics · Free radicals · Diseases

1 Introduction

Man is the abstract of the whole universe, and his health must be in balance with nature outside the body. A moderate man with nature has guaranteed his health and happiness. The secret of moderation in humans is the knowledge from the self and nature outside the body. Self-scrutiny is the base of human health and fortune. A man has two beings: the human body who needs water, food, air, clothes, and the human reality (soul) needs a healthy spirit. The healthy soul and spirit is also the capital of a healthy body. A healthy spirit is achieved by spirituality and a healthy body with a balance with nature. So, the logic of life teaches us to increase and practice our knowledge for a healthy soul and body. Be capable of being wise. Man needs knowledge-based on wisdom to understand himself and creation. Wisdom or wise knowledge means the attainment of the truth of knowledge, science, and reason, and is a solid issue in which there is no false. The meaning of wise knowledge is the set of knowledge, interdisciplinary sciences and understanding of the experience that leads man to the truth so that there is no doubt. Science is

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discovering realities as it is the scientist does not create anything but knows what is created. However, wise knowledge is the discovery of facts that certain people have access to. The world is a representation of knowledge, cognition and wisdom.

In this world we live in, everything is created for us, and according to the first law of thermodynamics, man cannot create even a small new thing in existence just can change the material and energy (Edsall and Gutfreund 1983). So must know and model the world, design and produce natural and healthy technologies based on it, and present it to mankind. The most optimal technologies come from biomimetics (Bar-Cohen 2011). It is appropriate to model the being in which we live. The purpose of being is not just the earth, but all the universe. Thinkers have extraterrestrial thinking. They know that they live on earth, but their livelihood comes from heaven.

All Earth's reactions originate from heat, and Earth's heat comes from the sun and other fiery spheres. So, we have to know that everything is not just on Earth. The planet is where we live, but it is ruled by invisible forces from the sky. Therefore, to understand the fundamental of terrestrial creatures, we must know the celestial creatures and secret forces, so we need to think and think extraterrestrial. Modeling the phenomena of being and living to create natural, man-made nature is the key to success in developing healthy and sustainable technologies. So, modeling nature, life and creature is the right way. To follow the right path is called wisdom. The purpose of this article is to pay attention to wisdom and creation that can be identified by nature's modeling, knowledge and innovation, and then to obtain the technology of reality and the product of biostructure based on the knowledge of reality.

Today, much of the technology is anomalous, producing pollutants that produce unbalanced free radicals in humans and other organisms.

Unbalanced free radicals created by pollutants cause disease to humans and damage to the planet and the environment. The creation of technologies must be linked to ethics, a sustainable environment, and health, not just economic

benefits. In today's world, where technology growth is more economical and less about the ethics of technology, one needs to define and adopt a healthy lifestyle to deal with anomalies. Stress avoidance is one of the most important criteria of a good lifestyle, and one of the highest wealth in the world today is relaxation. The new definition of a developed country seems to be that the people and society of that country are at peace and tranquility. So, we need to know how to avoid stressful relationships. Molecular stress generates a variety of unbalanced free radicals from which many diseases originate (Özben 1998). One of the diseases of today's society that is shaped by stress and unbalanced free radicals and has many effects on the body is diabetes. Statistics show that 90% of diabetes is type 2 and known as an industrial disease. Diabetes complicates other types of diseases; that is why it is called "diabetes and its complications." Our research shows that type 2 diabetes is not just come from sugars but comes from stress (Taghavi and Moosavi-Movahedi 2019). In order to prevent stress in the body and reduce the development of diabetes, the right lifestyle should be chosen to diminish stress and diabetes. The following are some of the most important lifestyle modes of stress and diabetes management.

2 Exercise

Exercise is known to reduce stress in the body, free radicals and eventually to reduce or delay diseases in the body. Exercise enhances longevity and vitality. Aerobic exercise in the open environment and nature, its effect is a hundred times more. Exercise and mobility rebuilding the physical organs, also provide mental, intellectual, psychological ability. Of course, sports are various, and each can have a unique effect on the human condition. Scientific sources have always emphasized is the effect of physical activity in the prevention of diseases such as diabetes. The effects of exercise on health can be explained in terms of physiological, psychological, biochemical, metabolic capacity, and improvement of

blood nutrient function. Type 2 diabetes is associated with overweight in adult and non-active lifestyles. However, physical inactivity alone can increase the risk of diabetes. Communities with good physical activity have a lower incidence of diabetes (Fentem 1994).

Numerous studies have shown that exercise, especially its regular form, affects metabolic processes by increasing insulin sensitivity, improving glucose tolerance and weight loss, and having an exact effect on cardiovascular health by decreasing blood pressure (Helmrich et al. 1991). Exercise alone can prevent many of the complications of diabetes, but, surprisingly, this treatment has been uniquely suited to people, but it is not much attention to this issue (Tanasescu et al. 2003).

The importance of sport has been so far that a new branch of medicine has emerged since the late twentieth century as sports medicine as one of the most important ways of preventing and treating many diseases. Indeed, Sports Medicine is a branch of medical knowledge that focuses on physical fitness, treatment, and disease prevention (Fentem 1994). On the other hand, meditation practices have been replaced by the scientific perspectives for clear effects in the treatment of diseases and its beneficial effects have been emphasized on insulin resistance, glucose tolerance, insulin sensitivity, lipid-lipoprotein levels, blood pressure, oxidative stress, and blood coagulation factors (Alexander et al. 2008). However, the critical point is that exercise in the open air and the use of nature's air is vital to human health and well-being. Exercise activities in the polluted air have the opposite effect and should be treated with caution.

3 Nutrition and Diet

The type and quality of food consumed are directly related to people's health, so determined a proper diet will be necessary. It is so essential that it is said, "You say what you eat, and I say who you are." Part of human transcendence comes from the quality consumption and quantity of food. If you look at the quantity and

quality of your food, you will not need any medication. One should not even take medication as much as possible, but his food should be his/her medicine "to eat food as medicine." This type of food is called super or functional food. Eating a healthy diet, maintaining an ideal weight, normal blood sugar, providing enough energy in diabetes conditions, and keeping blood fats at optimum levels. Nutrition of fresh foods containing vegetables and fruits due to the antioxidant that reduces free radicals removes toxins from the body and improves the body's immune system. But consuming industrial foods that contain oxidant preservatives can cause stress and increase unbalanced free radicals. If industrial food is eaten several times a week, it must be eaten fresh several times to reduce or counteract the effect (Wheeler et al. 2012).

Foods are considering their effects on diabetes or glycemic index; it is crucial to consider how they are used in diabetic patients. Modern lifestyles and changes in conventional eating habits have led to high consumption of fast foods and ready meals, fat intake and reduced consumption of vegetables and fruits. These factors have led to an increase in the prevalence of diseases. Research suggests that the use of preservatives and antimicrobial agents in a variety of food industries has led to the development of diabetes and other diseases (Meyer et al. 2001). Proper diets, regular exercise and weight control have the potential to control diseases, primarily type 2 diabetes. In ancient societies, traditional methods of using nutrients, processed foods and herbal therapies effectively prevent and treat many diseases, including stress and diabetes. Wholesome foods have created another crucial natural pathway for disease prevention and treatment. Many of these processed foods have antioxidant and anti-inflammatory properties (Boaz et al. 2011). The ancient healing method has a tremendous impact on the application of differentiated or combination methods and approaches to plants, animals, minerals-based medicines, spiritual therapies in preventing and treating diseases, and maintaining health. In industrial societies, tradition, medicine has been termed complementary or alternative medicine. Traditional medicine can

benefit from the achievements of modern medicine, and modern medicine can benefit from the experience and achievements of traditional medicine. The integration of traditional medicine and modern medicine will be one of the most critical decisions in the medical field. It should be developed databases, software in the combination of modern medicine and traditional medicine to benefit medical doctors and patients' treatment. Both methods bring science and experience, and wisdom to humankind. Traditional medicine is a comprehensive term that refers to traditional Chinese medicine, Indian Orodha, Greek medicine, Iranian medicine, and various natural medicine forms. Traditional medicine includes herbal remedies, medications with an animal or mineral section, and non-pharmacological treatments, including acupuncture, manual treatments, and spiritual therapies (Zhang and Organization 2002). Of course, it is noteworthy if a person can do to heal his soul can have a counteraction in the health of his body.

4 Spiritual Beliefs

The biochemistry of the human body derives from consciousness and belief. Consciously reinforced beliefs become one's biochemistry. Certainly, even the smallest cell in the human body is fully aware of one's thoughts, feelings, and beliefs. Recent research has substantiated much of the biological science behind beliefs. The human belief system is actually formed by refining all the experiences learned through personality (Bogousslavsky and Inglin 2007; Abdoli et al. 2011).

In the meantime, culture and spirituality can play an essential role in empowering people to live a better life and cope with the disease. Empowerment is a positive and dynamic phenomenon that is increasingly playing a role in modulating diseases, especially those with stress. Feeling responsible for maintaining the body as a divine blessing is full-fledged management of health and well-being. A human being with a morality cares for, safeguards and protects his

health. In fact, this is one of the empowerment solutions (Lipton 2016).

A man with good deeds can use the law of reaction and bring goodness back into his/her life. If anyone does a good deed, he/she will return several times more. You do good and open up to the goddess who gives you God in the desert.

5 Reduce Stress and Anxiety

Urbanization, especially in big cities, and its consequences, such as chemical pollution, traffic congestion, street traffic, and mental disorders, are major causes of stress and anxiety in today's world. Recent research has well established that diverse stresses eventually play an essential role in the pathogenesis of diabetes and its associated vascular complications by causing oxidative stress and systemic inflammation (Davi et al. 2010).

Oxidative stress is an acute state of imbalance between the production of oxidative agents and the antioxidant defense mechanism that leads to poor tissue function and destruction. This stress is part of the disease-causing processes of reactive oxygen species (ROS) that plays a role in insulin resistance (Betteridge 2000). The mentioned species are also the hallmarks of type-2 diabetes. On the other hand, elevated blood glucose causes spontaneous oxidation of glucose, glycation of proteins (producing radical and non-radical active species, especially ROS) and activation of some metabolic pathways. These changes themselves accelerate the production of ROS and cause chemical and oxidative changes of lipids, DNA and proteins in various tissues (Davi et al. 2010). The production of a chain of new free radical-generating interactions will lead to more exposure to macromolecules and the formation of toxic compounds (Betteridge 2000). Oxidative stress also plays a key role in the development of diabetes complications such as cataracts, kidney and nerve damage due to the production of toxic products (Davi et al. 2010). The occurrence of stress will have many effects on the body's metabolism through its mechanism

action (Brindley and Rolland 1989; Engström et al. 2003).

The presence of inflammatory markers is a signal of the onset of obesity. Overweight is directly proportional to the concentration of these inflammatory markers. Recent research has shown that the use of potassium sorbate as a widely used preservative in the food, pharmaceutical, health, and cosmetic industries can have damaging effects. These substances also have a direct and acute interactive effect on the development or exacerbation of diabetes mellitus. They mediate the production and intensification of a variety of oxidative toxic species, and in particular, a role in guiding the structure of human serum albumin to fibrillogenesis (Taghavi et al. 2013, 2014), due to the harmful effects of preservatives in altering the structure of proteins and producing toxic intermediate structures and interfering roles. They emphasize the process of forming and exacerbating diabetes, eliminating or restricting the use of these substances in the industries mentioned above, and emphasize that consumers modulate these substances.

Of course, it is worth noting that if antioxidants are discovered as antimicrobial and antibacterial, they may be used as antioxidant preservatives in industrial foods in the near future. Our research team reported the first report of antimicrobial and antibacterial peptides of camel milk proteins (Salami et al. 2010, 2017; Moslehishad et al. 2013, 2014; Moosavi-Movahedi 2013; Rahimi et al. 2016; Khalesi et al. 2017), then reported the antibacterial peptides of walnut proteins (Jahanbani et al. 2016, 2018).

6 Sleep

Scientific research shows that sleep detoxifies the body and removes waste from the brain. Sleep is healing and restorative, and one of the best antioxidants called melatonin is produced in healthy sleep and relieves stress. During waking up, the body experiences a variety of stresses, and sleep is a remedy. It is worth noting that sleep is different from the rest and that healthy

sleep is defined at night when the sun is not present. In today's urban and urbanization, people overuse virtualized social media, changing their sleeping hours and usually getting up late. Even as they fall asleep, they wake up to the unnatural noise of the city, and insomnia just starts for them and may fall asleep at non-biological hours instead. This story does not detoxify well the body and causes a lot of stress that is induced by a variety of disasters and anomalies for the individual and society. In this state of the body and brain infraction, human learning also comes down. Insomnia causes people to spend the whole day constantly sleeping and waking, which drastically reduces focus and accuracy. Also, in these situations, people are not able to perform precise and sensitive tasks that depend on high alertness and concentration (Heijden et al. 2005). Therefore, it is necessary for a healthy lifestyle for the people and society to control the anomalies. A good lifestyle is a collection of old and new knowledge that must be collected from all cultures of the nations and applied in today's life (Foley et al. 2004; Spiegel et al. 1999).

Understanding the body's biological clock is very important. The theme of "Body Biology Clock" won the 2017 Nobel Prize in Medicine and Physiology. The Nobel Committee jointly awarded the prize to three scientists because of the tremendous impact of this finding on health. The body clock or biological rhythm is a 24-h cycle that regulates the activity of the organs as it rotates around the Earth and passes day by night and vice versa. It plays an important role in regulating body temperature, hormone secretion, and metabolism. This is the hour that makes us sleep at night and wake up in the morning. Disruption of the biological clock can have a profound effect on health, such as working in shifts or the phenomenon of long-haul flights, where the destination and origin time differences are high and cause the body clock to adapt to a 24-h rhythm. In the short term, it opposes effects on memory, concentration and alertness, and other cognitive abilities, but over the long term, it increases the risk of developing type 2 diabetes and other diseases (Allada et al. 1998;

Dembinska et al. 1997; Emery et al. 1998). They identified a portion of DNA called the periodic gene that plays a role in this twenty-four-hour cycle (Frisch et al. 1994). The recurrent gene contains a specific protein synthesis (Hege et al. 1997). This protein increases during the night, and we fall asleep and get lower in the day and wake up and stay awake.

Insomnia increases and disrupts metabolism, resulting in insulin resistance and the development of type-2 diabetes, as insomnia decreases during night time sleep. Previous research suggests that insulin resistance in diabetic patients with insomnia (poor sleep quality) is 82% higher than those with normal sleep (Ananthakrishnan et al. 2013). In fact, prolonged periods of inadequate sleep can increase the level of fatty acid in the blood, disrupting the metabolism of fats and impairing insulin's ability to properly regulate blood sugar. In the long run, these destructive phenomena can cause people to develop diabetes. Fatty acids levels typically fluctuate throughout the day but usually follow a pattern that rises in the afternoon and decreases at midnight. Studies have shown that nocturnal insomnia increases the level of fatty acids at night. According to research conducted in adolescents, increased night time sleep by reducing metabolic regulation of fatty acids reduces the risk of diabetes (Vgontzas et al. 2009). Nocturnal insomnia speeds up the erosion of nerve cells in the brain and exacerbates diseases such as Alzheimer's and Parkinson's. This is why a lack of sleep can lead to the formation of amyloid plaques because the brain's cleaning system will be active during sleep, and this cleaning may defeat due to insomnia (Dauvilliers 2007).

6.1 Optimize Melatonin Levels in the Body

Two common environmental factors that can disrupt the sleep process are light and heat pollution. Therefore, they should not watch TV or use the computer for at least one hour before bedtime. These devices emit blue light itself, which makes the brain mistakenly imagine that it

is still day. The brain normally begins to release the melatonin between 9 and 10 PM, and light emitted by these devices may stop the process. Regular exposure to sunlight helps to produce the melatonin pineal gland in the absolute darkness of the night. So, the bed should be a completely dark environment. Even a slight amount of light entering the bedroom can disturb the bio-clock and affect melatonin production. It is recommended to use yellow, orange or red low light bulbs if need a light source for night time in the bedroom. Light with such bandwidth may not disrupt melatonin production as much as blue and white lights. For this purpose, salt lamps can also be used. Bedroom temperature should not exceed 21 °C. Studies show that the proper room temperature for sleeping is between 15 and 20 °C (Haim and Zubidat 2015). Sunbathing in the morning will help the body's biological clock, which needs a little bit of daylight to reset. The scientific research results show that 10–15 min of morning sun exposure send a precise message to the body's internal clock and announces the start of the day. This phenomenon makes the body have a distinct and complete definition of the day and does not confuse it with night time artificial light (Krauchi et al. 1997).

Therefore, insomnia is one of the biggest problems of mankind, and given its widespread implications that encompass various aspects of personal and social life, there is a need for education and awareness of the body about the biological clock. It is also imperative that precise and rapid planning be put on the program of life that plans to improve the sleep patterns of society, especially youth of life.

7 Activate Happiness Hormones

Hormones are chemicals produced by various glands in the body (Farhud et al. 2014). They travel through the bloodstream, act as messengers, and are involved in many body processes and help regulate mood. Some hormones help boost positive emotions, including happiness and pleasure. The "happy hormones" are:

Dopamine is known as the "feel-good" hormone and is a neurotransmitter. Dopamine is

associated with pleasant emotions associated with learning, memory, motor function and more.

Serotonin is a neurotransmitter that helps regulate mood as well as sleep, appetite, digestion, learning ability and memory.

Oxytocin, often referred to as the “love hormone.” It can also help boost trust, empathy, and bond in relationships.

Endorphins are analgesics that the body responds to stress and reduces discomfort.

8 Conclusion

Today, stress invades the human body in many ways, inside and outside the body. The more people move away from their natural life; the more stress they have on them. In today’s life, human beings are more exposed to offensive technologies and their adverse effects. A good lifestyle modulates the anomalous effects of industrial pollutants that move humans away from their natural paths. We have reported the subject of stress inhibition manners (Taghavi and Moosavi-Movahedi 2019). It seems that having a good lifestyle requires a lot of experience and knowledge that should be available from the old to the new era. The software needs to be developed to rationalize the old knowledge and new knowledge-based mostly on technical science to compile and optimize it. The most important thing a human being should seek is certainly a “tranquility and peace” that is not achieved by living in modern cities with great wealth and money. Tranquility and relaxation come from the blessing of others, living with nature, living with contentment, sleeping and being well-nourished, gaining knowledge and wisdom, and receiving inspiration from the pure self.

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Bioinspiration and Biomimicry in Lifestyle

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Abstract

Biomimetics is a new language that enables man to have effective communication with nature. Every human being encounters biomimetic products in normal daily lives, but they are not often recognized as such issues! From a biomimetic point of view, every phenomenon in nature is a source of inspiration to improve human life quality. The human lifestyle undergoes fundamental changes arising from the influence of biomimicry and bioinspiration in technology, health, art, and education. Nature seems to have the best solutions for everything. Every aspect of human life would be seriously affected by the emergence of new bioinspired tools, methods and capabilities at every scale from nano to macro and beyond. Biomimetics is a leading paradigm for the development of new

technologies that potentially facilitate human lives. Expanding medical investigation to new bioinspired approaches accelerates innovations in healthcare. Art, education and architecture also gain considerable benefits from the revolution that biomimicry introduces into the human lifestyle. Nature knows best; by learning from its powerful lessons, we can model innovative strategies to successful and fulfilling personal life.

Keywords

Biomimetic · Bioinspiration · Technology · Medicine · Art · Education

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1 Introduction

Bioinspiration and biomimicry are praiseworthy strategies that help us address the challenges that affect human life. Looking to nature to find out the right answers to our intractable problems is undoubtedly as old as humanity. Nature is and will continue to be the best considered powerful model, mentor, and measure for the right way of life. Systematic studies about the biological rules, concepts and principles of nature is required toward better understanding of features and capabilities. Humans have always made efforts to inspire nature to solve problems and innovate new, improved structures, systems, or processes. As a