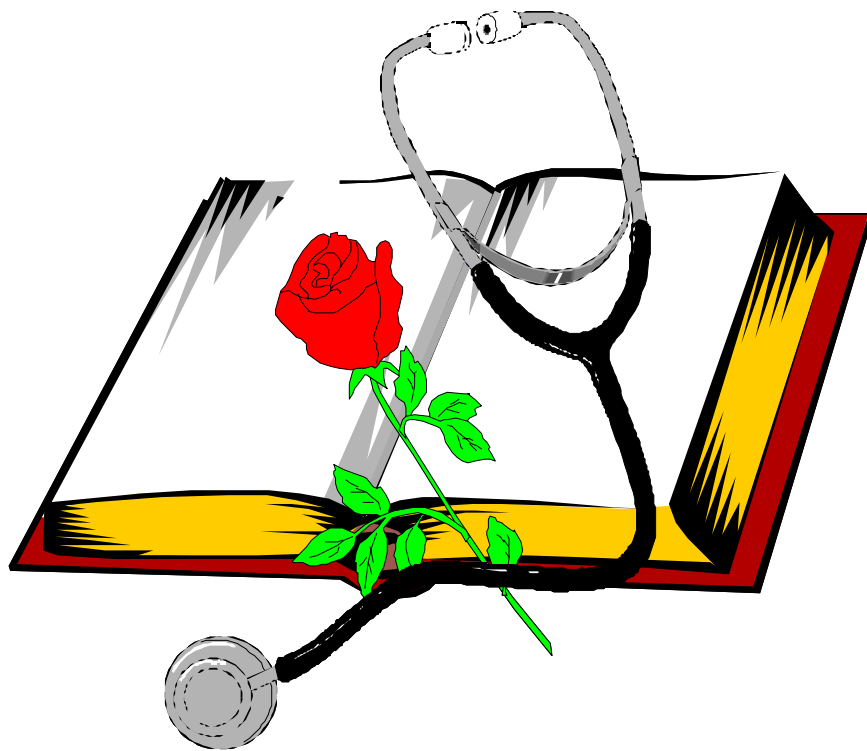


LIFESTYLE DISEASES

(Chronic Diseases)



Jochen Hawlitschek, MD, MPH

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“In new fields no work is so successful as medical missionary work. If our ministers would work earnestly to obtain an education in medical missionary lines, they would be far better fitted to do the work Christ did as a medical missionary. By diligent study and practice they can become so well acquainted with the principles of health reform that wherever they go they will be great blessing to the people they meet.”
(Medical Ministry, p. 239)

This textbook is available in
English, French, German, Portuguese and Spanish.

Dr. Jochen Hawlitschek
September 2008

INTRODUCTION

Probably the reader of this syllabus expects to find a description of the most common chronic diseases, their symptoms and how to make a correct diagnosis without sophisticated equipment, and finally, how to cure them using natural remedies and at low cost. If that is the case, I must disappoint you. You will find other books on the market in that line. During the decades, in which I have worked as a surgeon and later as health promoter in several countries in Europe and Latin America, I came to the conclusion that rich and poor alike could improve their quality of life through a healthier lifestyle.

The purpose of this textbook is not to teach how to diagnose and to treat specific diseases but to understand the great underlying principles that govern the processes of health and disease in the frame of science and revelation. God created us wonderfully and we join the psalmist in his words: “I praise you because I am fearfully and wonderfully made; your works are wonderful, I know that full well.” (Psalm 139:14)

The present course in “chronic diseases” has three main objectives:

1. To show that health reform is an integral part of God’s plan of redemption.
2. To show that the health principles mentioned by Ellen G. White in the book *Ministry of Healing*, p. 127, and represented by the NEWSTART®¹ program, are biblically and scientifically sound.
3. To show that body, mind and soul function as a unity and affect each other.

The main purpose of lifestyle centers is to help people to improve, maintain or recover their health through learning and practicing healthy lifestyle habits. Such healthy habits may help to prevent, alleviate, and often cure the main chronic diseases that afflict our modern society. Such are cancers, cardiovascular diseases, diabetes, hypertension, and obesity. We should also include depression and autoimmune diseases, as we will see in the following chapters. All these diseases have common risk factors – represented as lifestyle habits – and often appear in groups, and in any case, impact each other. Of course, there are genetic predispositions, but usually the disease requires the influence of additional environmental (lifestyle) factors in order to develop.

Our body, mind and soul functions as a unity according to God’s laws in nature – physical, chemical, biological, physiological, psychological and moral laws. As Ellen G. White said, “In teaching health principles, keep before the mind the great object of reform – that its purpose is to secure the highest development of body and mind and soul. Show that the laws of nature, being the laws of God, are designed for our good; that obedience to them promotes happiness in this life, and aids in the preparation for the life to come.” (*Ministry of Healing*, p. 146)

“In case of sickness, the cause should be ascertained. Unhealthful conditions should be changed, wrong habits corrected. Then nature is to be assisted in her effort to expel impurities and to re-establish right conditions in the system.” (*Ministry of Healing*, p. 127)

¹ The NEWSTART acronym was created by a group of physicians and teachers of the Weimar Institute in California (www.newstart.org) and stands for the 8 natural remedies mentioned in “Ministry of Healing” on page 127: **N**utrition, **E**xercise, **W**ater, **S**unshine, **T**emperance, **A**ir, **R**est, and **T**rust in God.

The principles expressed in this textbook are based on the biblical world view, accepting God as the Creator; on the inspired counsels given to Ellen G. White; and on the known scientific laws. In true science there is no contradiction with the Bible and you will see that all three mentioned sources of knowledge harmonize and support each other.

“The theme of redemption is one that the angels desire to look into; it will be the science and the song of the redeemed throughout the ceaseless ages of eternity. Is it not worthy of careful thought and study now?” (Christian Education, p. 57; Steps to Christ, p. 88)

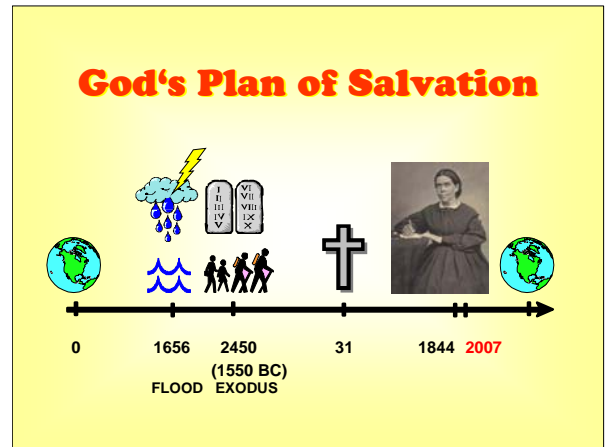
The division into chapters is only for didactical purposes. Each chapter serves as a complement for the others. The different areas, such as the immune system, stress management, nutrition, physical exercise, spirituality, chronic diseases, are all linked to each other. In fact, there is only one purpose in God’s plan of salvation – the complete restoration of the original state of physical, mental, spiritual and social health – that was lost because of sin. This concept is in full accordance with the World Health Organization (WHO), which states that "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”

Jochen Hawlitschek, MD, MPH

CHAPTER 1

GOD’S PLAN OF HEALING THROUGH THE AGES

While lecturing about health in different places and countries I observed that people in general – including Christians – separate health from religion. Some agree that religion may promote a healthy lifestyle but do not consider it as an essential part of the plan of salvation. In the Bible we find no such separation. All laws, natural and moral, are from God and the transgression of either one of them is sin and results finally in disease and death. The plan of salvation offers complete restoration to the original sinless, healthy and holy state. This process begins here on earth and will be concluded when Jesus returns and sin be finally eradicated from the universe. This basic understanding is necessary in order to comprehend the importance of obeying the laws of health as part of a rational religion. “I beseech you therefore, brethren, by the mercies of God, that you present your bodies a living sacrifice, holy, acceptable to God, which is your reasonable service.” (Romans 12:1)



“May God himself, the God of peace, sanctify you through and through. May your whole spirit, soul and body be kept blameless at the coming of our Lord Jesus Christ.” (1 Thessalonians 5:23)

To follow a healthful lifestyle is not more a matter of “works” as it is to keep the Sabbath or other commandments. To follow a healthy lifestyle “promotes happiness and usefulness in this life and aids in the preparation for the life to come.” (Ministry of Healing, p. 146). It improves our physical and mental condition, enabling us to better handle daily stresses and to have a clearer understanding of spiritual truths.

What is salvation in reality? What was lost by the entrance of sin in this world and what is God’s plan to restore the original situation? These are the questions we want to address. In fact, we can only understand the magnitude of this issue by examining the entire plan of salvation from the creation of this earth until the complete restoration on the new earth.

A Perfect Creation



When the earth was created everything was perfect. The Bible tells us that God created man (and the woman) in His own image, with faculties that reflected His faculties. The human race was a special creature, manufactured by God’s hands, to reflect God’s character and with the purpose to live eternally to God’s glory (Isaiah 43:7).

“The heavens declare the glory of God; the skies proclaim the work of his hands.” (Psalms 19:1)

In this perfect stage there was no disease. Therefore there was no need to give instructions regarding sickness. However, God gave our first parents instructions for the maintenance of a healthy life. They needed to be active, physically and mentally. “And the Lord God took the man, and put him into the Garden of Eden to dress it and to keep it.” (Genesis 2:15) To keep the Garden of Eden required creative thinking and physical activity. These two aspects are still valid today. We know that mental and physical activities are major factors to maintain and restore health.

The second factor to maintain life is a healthy nutrition. “Then God said, ‘I give you every seed bearing plant on the face of the whole earth and every tree that has fruit with seed in it. They will be yours for food.’” (Genesis 1:29)

Disease and Death – Consequences of Sin



However, there was one restriction: “...but you must not eat from the tree of the knowledge of good and evil, for when you eat of it you will surely die.” (Genesis 2:17) We all know what happened: Sin and death came into the world as the sure consequences of the transgression. Disease and death are the ultimate consequences of sin, although there can not always be traced a direct line. See also John 9:1-3 and Luke 13:1-5.

We have the tendency to blame Eve for what she did, but are we better today? Eve did not eat deliberately from the forbidden fruit. She first examined it carefully. Only “when the woman saw that the fruit of the tree was good for food and pleasing to the eye, and also desirable for gaining wisdom, she took some and ate it.” (Genesis 3:6)

“There was nothing poisonous in the fruit of the tree of knowledge itself, nothing that would cause death in partaking of it. The tree had been placed in the garden to test their loyalty to God.” (Signs of the Times, February 13, 1896)

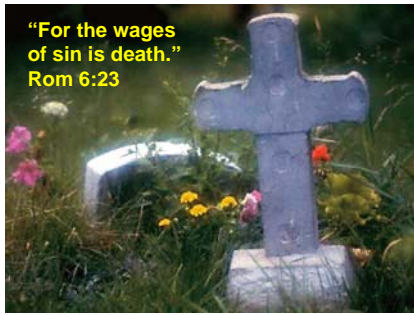
“Eve ate and imagined that she felt the sensations of a new and more exalted life. ... She felt no ill effects from the fruit; nothing which could be interpreted to mean death, but, just as the serpent had said, a pleasurable sensation which she imagined was as the angels felt.” (Testimonies, vol. 3, p. 72)

“After his transgression Adam at first imagined himself entering upon a higher state of existence.” (Patriarchs and Prophets, p. 57)

Today we know well the instructions God has given to our church regarding a healthy diet. How do we react about some not recommended foods? We take them to the laboratory to analyze their composition. When the lab tells us that it contains essential amino acids, vitamins, carbohydrates and provides useful energy, don't we consider this as good reasons to justify our desire? Or we may even go to a modern theologian and ask him, if that message has to be taken literally or be better interpreted according to our culture? Think about that...

Whatsoever excuses our first parents presented, the results could not be evaded, “for the wages of sin is death.” (Romans 6:23) Up to this point there is no separation between religion and medicine.

Life – a Merciful Gift of God

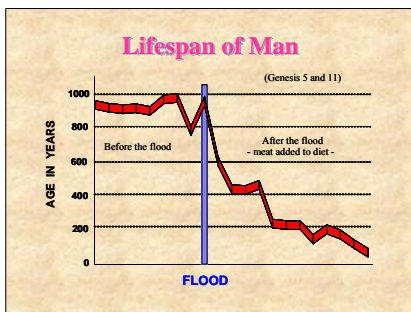


“...but the gift of God is eternal life in Christ Jesus our Lord.” (Romans 6:23) God did not give up His original plan but immediately put into action His plan of salvation to restore what was lost: health, happiness and life. Jesus said, “I have come that they may have life, and have it to the full.” (John 10:10 NIV) God’s plan is to restore the life completely, not only spiritually! There is no separation between the physical, mental and spiritual dimensions of life.

Degeneration of the Human Race



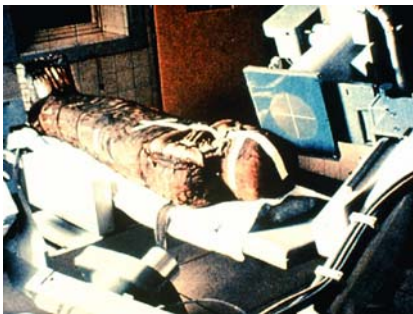
In order to accomplish His plan, God continually sent His prophets to invite people to accept His love and to return to Him. However, after about 1600 years after the creation, there was such wickedness on earth that God had to intervene by destroying humanity using a global flood. Then He started over with the sole remaining family of Noah.



In Genesis chapters 5 and 11 is the report of the genealogies before and after the flood. We can clearly notice the rapid decreasing of the human age from an average of 912 years before the flood to Abraham, who lived 175 years. Not only the longevity was shortened, but also the size of the human race and the intellectual power decreased accordingly. “After the flood the people ate largely of animal food. God saw that the ways of man were corrupt, and that he was disposed to exalt himself proudly against his Creator and to follow the inclinations of his own heart. And He permitted that long-lived race to eat animal food to shorten their sinful lives. Soon after the flood the race began to rapidly decrease in size, and in length of years.” (Counsels on Diet and Foods, p. 373)

Development of Chronic Diseases

After another thousand years we find God’s people working as slaves in Egypt. Egypt was at that time one of the most advanced civilizations as can be seen in their sculptures and pyramids. However, they had an unhealthy lifestyle, eating lots of meat, having little physical activity – because the Israelites worked for them – and living a depraved moral life. The consequence was the decline of this great nation.



Scientists have studied the well preserved mummies to discover their diseases. X-rays were taken to examine their bones and arteries. Then the mummies were dissected in order to examine their organs. They found that the Egyptians suffered from several chronic diseases – atherosclerosis, obesity, dental decay, cancer and arthrosis – that are the result of a wrong lifestyle. These are the same chronic diseases that predominate in developed countries today.

God Presents the Health Message



God's plan to have a holy, healthy and happy nation (Exodus 19:5,6; Deuteronomy 26:18,19; 1 Peter 2:9) could not be realized under such circumstances in Egypt. He therefore had to intervene again with mighty power and take His people out into a new country where they could worship Him freely and practice a healthy lifestyle.

However, before they could enter into the promised land of Canaan, they had to be instructed about everything necessary to be a holy nation, an example for all other nations around. He took them into a quiet place – the desert – where nothing would detract their attention. They had to build a sanctuary to learn lessons of God's great plan of salvation from sin. The sacrifice of a lamb pointed to Jesus who would give His own life for the redemption of humanity. "I am the good shepherd. The good shepherd gives His life for the sheep." (John 10:11)



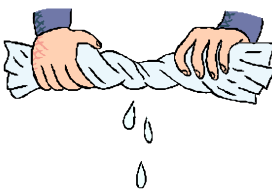
They had to be instructed that "disease is an effort of nature to free the system from conditions that result from a violation of the laws of health." The Egyptians had quite different ideas about the causes of disease. They also had to learn that "in case of sickness, the cause should be ascertained. Unhealthy conditions should be changed, wrong habits corrected. Then nature is to be assisted in her effort to expel impurities and to re-establish right conditions in the system." (Ministry of Healing, p. 127)



"In the teaching that God gave to Israel, the preservation of health received careful attention. The people who had come from slavery with the uncleanly and unhealthy habits which it engenders, were subjected to the strictest training in the wilderness before entering Canaan. Health principles were taught and sanitary laws enforced." (Ministry of Healing, 277)

In order to prevent future misunderstandings and because of the decreased capacity of the memory, the instructions were written by Moses. God Himself wrote the 10 commandments on tables of stone. Please notice, that because of the presence of diseases, God had to give the Israelites more detailed instructions on how to prevent and cure them, as the simple instructions given to Adam and Eve in their state of total health.

Same Health Principles Still Valid Today



The Israelites were instructed about the importance of **hygiene** of their bodies and to wash their clothes. "Whoever touches the man who has a discharge must wash his clothes and bathe with water, and he will be unclean till evening." (Leviticus 15:7) "And the LORD said to Moses, 'Go to the people and consecrate them today and tomorrow. Make them wash their clothes...'" (Exodus 19:10) Those principles are still valid today. Many diseases in developing countries result from the lack of clean water and hygiene.



Explicit instructions were given about **waste disposal**. “As part of your equipment have something to dig with, and when you relieve yourself, dig a hole and cover up your excrement.” (Deuteronomy 23:13) Again, the lack of proper waste disposal and latrines is another cause for infectious diseases and epidemics in certain countries! You may wonder why God put so much emphasis on the care of the body and included these instructions in the Bible. It is because there is no separation between physical, mental and spiritual health. God’s plan of salvation includes all three aspects as can be seen clearly in the instructions given to His people through His prophets.

Now we come to an interesting point. I’m sure the Israelites were anxiously looking forward to the country where “milk and honey” would flow and where they would be free from slavery. But in the center of the 10 commandments God repeated the importance of **physical work**: “Six days you shall labour and do all your work.” (Exodus 20:9) What a surprise! However, physical activity is one of the most important key factors for physical, mental and spiritual health. This is being stressed more and more in the medical literature today (see “Diet, Nutrition and the Prevention of Chronic Diseases”, World Health Organization, 2003).

Of course, regular **rest** is also necessary. The center of all our activities should be to **worship** and to glorify our Creator. Therefore the commandment says “Remember the Sabbath day by keeping it holy...the seventh day is a Sabbath to the LORD your God. On it you shall not do any work, neither you, nor your son or daughter, nor your manservant or maidservant, nor your animals, nor the alien within your gates.” (Exodus 20:8-10) Please notice that this commandment is not only for the benefit of the Israelites but for all people. God cares for the foreigners and also for the animals! He desires the wellbeing of His entire creation.



Many other counsels and recommendations for health are given throughout the Bible. See for example the emphasis to **abstain from alcohol**: “Do not gaze at wine when it is red, when it sparkles in the cup, when it goes down smoothly! In the end it bites like a snake and poisons like a viper.” (Proverbs 23:31, 32) Alcohol is the public health problem number one in the world today.

Finally, in 2003, the World Health Organization made a clear statement against the use of alcohol: “Although regular low to moderate consumption of alcohol is protective against coronary heart disease, other cardiovascular and health risks associated with alcohol do not favour a general recommendation for its use.” (Diet, Nutrition and the Prevention of Chronic Diseases, WHO, 2003, p. 90)



Is the use of alcohol a moral issue or a medical one? Alcohol affects the body and the mental functions as well. God is interested in our total wellbeing!

How different would the world be if we would pay attention to God’s recommendations in the Bible!

Relationship between Body and Mind



Now we come to another interesting aspect of life, the importance of mental health. It is only during the last decades that the impact of our thoughts and emotions on our immune system is been increasingly understood. The Bible mentions this already thousands of years ago by stating that “A merry [rejoicing] heart doeth good like a medicine.” (Proverbs 17:22)

“Anxiety in the heart of man causes depression, but a good word makes it glad.” (Proverbs 12:25)

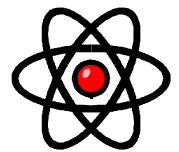
“The spirit of a man will sustain him in sickness, but who can bear a broken spirit?” (Proverbs 18:14)

“Be joyful always; ...give thanks in all circumstances, for this is God’s will for you in Christ Jesus.” (1 Thessalonians 5:16, 18)



Ellen G. White further explains that “Gratitude, rejoicing, benevolence, trust in God’s love and care – these are health’s greatest safeguard. To the Israelites they were to be the very keynote of life. . . . ‘Rejoice in every good thing which the Lord thy God hath given unto thee, and unto thine house, thou, and the Levite, and the stranger that is among you.’ Deuteronomy 26:11” (Ministry of Healing, p. 281) Can you imagine the impact it would cause on the people around us if they would see how grateful and happy the Christians are? Wouldn’t they want to learn more about the secret of such a joyful life?

Let’s understand that “the laws of nature, being the laws of God, are designed for our good. Obedience to them promotes happiness in this life, and aids in the preparation for the life to come.” (Ministry of Healing, p. 146)



Special Promises of Health

After giving all these instructions about a healthful living, God assures His blessing: “If you listen carefully to the voice of the LORD your God and do what is right in his eyes, if you pay attention to his commands and keep all his decrees, I will not bring on you any of the diseases I brought on the Egyptians, for I am the LORD, who heals you.” (Exodus 15:26) What a loving God we have!

Jesus Combines Physical and Spiritual Healing

Another thousand five hundred years passed by and God’s people forgot again about the plan of salvation. Despite repeated warnings by the prophets the people fell back to their old lifestyle. At this time God decided to send His own son in person.

“During His ministry, Jesus devoted more time to healing the sick than to preaching. His miracles testified to the truth of His words, that he came not to destroy, but to save.” (Ministry of Healing, p. 19) Why did Jesus spend so much time in healing and did not only preach the gospel? Because the gospel includes the whole person, body, mind and spirit. There is no separate gospel for the body and another gospel for the soul.



“For God so loved the world that he gave his one and only Son, that whoever believes in him shall not perish but have eternal life. For God did not send his Son into the world to condemn the world, but to save the world through him.” (John 3:16, 17) The life that God gives is complete; it is not only the spirit that will float around as some religions teach. Let us not fall in the same error! Eternal life is only possible in the absence of disease. Even here on this old earth the quality of life and the capacity to be productive depend on the level of physical, mental and spiritual health.

That is the reason why there are so many recommendations in the Bible, without making distinction between body and soul. We have a responsibility to take care for our body that is the temple of the Holy Spirit. “Or do you not know that your body is the temple of the Holy Spirit



who is in you, whom you have from God, and you are not your own? For you were bought at a price; therefore glorify God in your body and in your spirit, which are God's." (1 Corinthians 6:19, 20) "Everyone who competes in the games goes into strict training. They do it to get a crown that will not last; but we do it to get a crown that will last for ever." (1 Corinthians 9:25) "So whether you eat or drink or whatever you do, do it all for the glory of God." (1 Corinthians 10:31)

The World's Health Situation Today

Let's focus now on our time at the 21st century. Is the general situation of the world improving since Jesus left? In fact, the modern and post-modern society presents many new and difficult situations in every area of the life: in the family life, in the working place, in the education of the children, in the economical world and in healthcare. We can be thankful to God that He gave us additional advice through Ellen G. White. It is only since a few years ago that the medical science is discovering the important relations between the lifestyle and physical and mental health.



The World Health Organization is now stressing the importance of a vegetarian diet and physical activity to prevent the chronic diseases that are prevalent today. "Population subgroups consuming diets rich in plant foods have lower CHD [coronary heart disease] rates than the general population. For example, Seventh-day Adventists in the Netherlands and Norway have CHD rates that are one-third to one-half of those in the general population. Californian Seventh-day Adventists who eat meat have higher rates than do those who are vegetarians..." (Diet, Nutrition and the Prevention of Chronic Diseases, WHO, 1990, p. 57)

"Although the primary purpose of the Consultation was to examine and develop recommendations for diet and nutrition in the prevention of chronic diseases, the need for sufficient physical activity was also discussed and is therefore emphasized in the report." (Diet, Nutrition and the Prevention of Chronic Diseases, WHO, 2003, p. 3)

Health Promotion: The Best Evangelistic Method

Ellen White insists that we should follow the example of Jesus Christ and unite the health message with the preaching. "Christ, the great Medical Missionary, is our example.... He healed the sick and preached the gospel. In His service, healing and teaching were linked closely together. Today they are not to be separated." (Counsels on Health, p. 395)



"When properly conducted, the health work is an entering wedge, making a way for other truths to reach the heart." (Counsels on Diet and Food, p. 73)

"To preach the gospel means much more than many realize. It is a broad, far-reaching work. Our sanitariums have been presented to me as most efficient means for the promotion of the gospel message." (Counsels on Health, p. 540)

"In new fields no work is so successful as medical missionary work.... Medical missionary work brings to humanity the gospel of release from suffering. It is the pioneer work of the gospel. It is the gospel practiced, the compassion of Christ revealed. Of this work there is great need, and the world is open for it." (Medical Ministry, p. 239)

The mission of the health message is

- To promote a healthy lifestyle for the best function of body, mind and soul (1Thessalonians 5:23) to God's glory (1Corinthians 10:31).
- To restore the moral image of God in man by healing the wounds which sin has made (General Conference Bulletin, April 24, 1901).
- To assist in the proclamation of the gospel as the right arm assists the body (Testimonies vol. 6, p. 288).

Position of the SDA Church concerning the Health Ministry

“The Seventh-day Adventist Church believes that man was made originally in the image of God. The entrance of sin into the world marred the image and resulted in a separation of man from his Maker, to his detriment physically, mentally, and spiritually. The church believes that the health ministry in the relief of suffering and the treatment of disease may contribute directly to the restoration of the whole man. The health ministry of the church – by education, by precept and example, and by making the laws of healthful living understood and accepted – can assist mankind in avoiding these illnesses caused by the violations of health principles. Thus the health ministry may contribute to the avoidance of illness, to the restoration of health here on earth, and to the reconciliation of man to God, which is a preparation for eternal life hereafter.” (General Conference Action at the Autumn Council 1969)

Following God's advice, the SDA church placed great emphasis in promoting health reform. Hospitals, clinics and dispensaries were established throughout the world. However, there is a declining in the establishment of new hospitals today because of their great cost. Instead, the church places now great emphasis in health promotion through seminars, NEWSTART® programs, and Health-EXPOs. These have proven to break down prejudice and to reach the hearts of all kinds of people regardless of their social status or religion. A healthy lifestyle not only prolongs life but also increases the quality of life.



Plan of Salvation Completed – Total Health Restored

Unfortunately, suffering and death are still part of human experience until Jesus returns to eradicate completely sin and its consequences. Then the plan of salvation will be completed. This earth will be restored and the original plan of God will be accomplished.

Then “There will be no more death or mourning or crying or pain, for the old order of things has passed away.” (Revelation 21:4)

May this be soon!



-o-O-o-

CHAPTER 2

FACTORS OF LONGEVITY

“My son, do not forget my teaching, but keep my commands in your heart, for they will prolong your life many years and bring you prosperity.” (Proverbs 3:1, 2)

Longevity is, in general, an indicator of good health. It is therefore logic to assume that those factors that prolong life will also help to improve overall health. The above text of Proverbs infers that a life in obedience to God’s commandments will result in a long and prosperous life. There are abundant counsels in the Word of God, which when practiced will protect us from countless evils and suffering in life. Many scientific studies have been done and others are still on their way to find out which lifestyle habits are linked to better health and longevity. Details on the large Adventist Mortality Study and the Adventist Health Studies I and II being done at the Loma Linda University in California can be found on the Internet at www.llu.edu/llu/health .

Most of the reconditioning programs being offered in Seventh-day Adventist lifestyle centers around the world are based on the NEWSTART®¹ concept. A new acronym was created by the General Conference Health Department – CELEBRATIONS – that includes some additional important factors².

In this section, however, we will focus on a well known study done thirty five years ago by two eminent researchers, Breslow and Belloc, in the USA. 6’900 people living in the Alameda County, in California, completed comprehensive questionnaires about their lifestyle. These people were then followed for 9 years to see who lived and who died. As a result, they found seven basic health habits that were related to longevity:

1. Adequate sleep, 7-8 hours per day
2. Eating breakfast daily
3. Regular meals, not snacking frequently
4. Moderate or no use of alcohol
5. Not smoking
6. Weight in a healthy range
7. Regular physical activity

Note: The “Healthage” computer software commonly used at the Health EXPOs (see www.healthexpobanners.com) is based on this study of Breslow and Belloc.

Let’s now examine each one of these habits.

¹ The NEWSTART acronym was created by a group of physicians and teachers of the Weimar Institute in California (www.newstart.org) and stands for the 8 natural remedies mentioned in “Ministry of Healing” on page 127: **N**utrition, **E**xercise, **W**ater, **S**unshine, **T**emperance, **A**ir, **R**est, and **T**rust in God.

² CELEBRATIONS stands for **C**hoice, **E**xercise, **L**iquids, **E**nvironment, **B**elief, **R**est, **A**ir, **T**emperance, **I**ntegrity, **O**ptimism, **N**utrition, **S**ocial Support.

1. Adequate Sleep, 7-8 Hours per Day

Lack of sleep is a major stressor, affecting both physical and mental health. Fatigue has the following effects:

- Mental - memory is impaired
- Emotional - person is more easily upset or frustrated
- Social - person is more difficult to get along with
- Productivity - shows less initiative and is less efficient
- Safety - less alert, judgment impaired, more accidents
- Health - immune system depressed

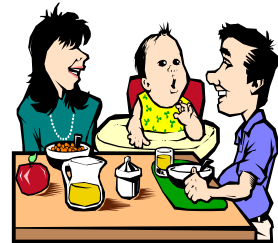


Individuals who get 7-8 hours sleep daily have lower mortality rates than those who get less than this amount.

2. Eating Breakfast Daily

Breakfast should be the most important meal of the day. It has the following advantages:

- Provides nutrition and energy to the body and mind.
- Enhances attention span and learning.
- People who eat breakfast have fewer accidents.
- Helps prevent midday “burn out”.
- Helps prevent snacking on less nutritious food.



In this study, people who ate breakfast lived longer than those who didn't eat breakfast.

“Your child has a nervous temperament, and her diet should be carefully guarded. . . . Never let her go from home to school without her breakfast. Do not venture to give full scope to your inclinations in this matter. ... It is the custom and order of society to take a slight breakfast. But this is not the best way to treat the stomach. At breakfast time the stomach is in a better condition to take care of more food than at the second or third meal of the day. The habit of eating a sparing breakfast and a large dinner is wrong. Make your breakfast correspond more nearly to the heartiest meal of the day.” (Child Guidance, p. 390)

3. Regular Meals, Not Snacking Frequently

Snack foods are generally high in - fat, salt, sugar, and calories.

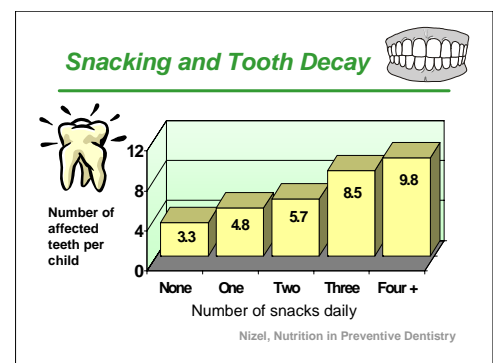
Snacks are low in - fiber, vitamins, and minerals.

Snacks often replace more nutritious foods generally eaten at meal times.

Frequent snacking increases dental decay.

“After the regular meal is eaten, the stomach should be allowed to rest for five hours. Not a particle of food should be introduced into the stomach till the next meal. In this interval the stomach will perform its work, and will then be in a condition to receive more food.

“Regularity in eating is of vital importance. There should be a specified time for each meal. At this time let everyone eat what the system requires and then take nothing more until the next meal. There are many who eat when the system needs no food, at irregular intervals, and between meals, because they have not sufficient strength of will to resist inclination. When



traveling, some are constantly nibbling if anything eatable is within their reach. This is very injurious. If travelers would eat regularly of food that is simple and nutritious, they would not feel so great weariness nor suffer so much from sickness.” (Counsels on Diet and Foods, p. 179)

“Regularity in eating should be carefully observed. Nothing should be eaten between meals, no confectionery, nuts, fruits, or food of any kind. Irregularities in eating destroy the healthful tone of the digestive organs, to the detriment of health and cheerfulness. And when the children come to the table, they do not relish wholesome food; their appetites crave that which is hurtful for them.” (Counsels on Diet and Foods, p. 180)

4. Moderate or No Use of Alcohol

This aspect deserves more attention. Some people see here a justification for moderate drinking of alcohol, especially because of the different translations given to the word εγκρατεία “egkrateia” in Galatians 5:23 and 2 Peter 1:6. The Strong’s definition is: “self-control (the virtue of one who masters his desires and passions, especially his sensual appetites)”. Here are some examples of translations:

English, Old King James – temperance

English, New King James – self-control

German, Luther – Keuschheit (= chastity), Mässigkeit (= moderation)

German, Elberfelder – Enthalttsamkeit (= abstinence)

French, Louis Segond – tempérance

Portuguese, Almeida – temperança

Spanish, Reina-Valera – dominio propio (= self control)

Ellen G. White asserts that “true temperance teaches us to dispense entirely with everything hurtful, and to use judiciously that which is healthful.” (Child Guidance, p. 398; Patriarchs and Prophets, p. 562) From the medical standpoint, only total *abstinence* is the correct attitude concerning alcohol because it is a poison. There is superabundant evidence about its harmful effects in many medical and social aspects. Alcoholism is considered the public health problem number ONE.

Despite so clear evidences, moderate drinking, especially of red wine, was promoted during many years by the media and doctors as well, based on a study done in France. That study received a lot of publicity and also criticism. Today this matter is known as the “French Paradox”. It refers to the observation that people in France suffer relatively low incidence of coronary heart disease, despite having a diet relatively rich in saturated fats. It has been suggested that France’s high red wine consumption is a primary factor in the trend. Red wine contains several polyphenoles, like resveratrol, quercetin and procyanidins, which have been shown to have a positive effect on the cardio-circulatory system. These compounds, also called phytochemicals, are abundantly found in the colored skins of red grapes, berries, fruits, but also in walnuts, olive oil and other plants.



Some investigators have attributed the benefit of the red wine to the alcohol itself. On the whole, there is no medical consensus about the mechanism of association between moderate alcohol consumption and longevity. It is obvious that the overall lifestyle of the people living in South France also influences their longevity, like the mild climate, social behavior and support, high consumption of fruits and vegetables, more outdoor physical activities during the leisure time, etc.

The fact is that Breslow and Belloc found a positive relation between no use or moderate use of alcohol and longevity. As shown above, there could be different reasons for this association.

The important question that follows is: Should we recommend moderate drinking of red wine or other alcoholic beverages to prolong life? The clear answer is NO. There are several reasons for such decision:

1. There are more harmful effects of drinking alcohol than benefits.
2. There are much better methods to protect the heart and to prolong life by following a healthy lifestyle overall, as will be seen later.
3. The Bible clearly recommends abstention from fermented wine.

“Do not gaze at wine when it is red, when it sparkles in the cup, when it goes down smoothly! In the end it bites like a snake and poisons like a viper.” (Proverbs 23:31, 32)

Finally, we should consider the following recent conclusion of the World Health Organization (WHO):



“Although regular low to moderate consumption of alcohol is protective against coronary heart disease, other cardiovascular and health risks associated with alcohol do not favour a general recommendation for its use.” (Diet, Nutrition and the Prevention of Chronic Diseases, WHO, 2003, p. 90)

5. Not Smoking

There is no doubt about smoking being detrimental to health in many ways.

According to the Surgeon General, “Smoking is the single greatest preventable cause of premature death.” In 2002, 20% of all deaths in the U.S. were due to smoking – 430,000 premature deaths.

A smoker loses one day of life for every eight days he or she smokes.

Smoking increases the risk for heart disease, cancer, stroke, emphysema, high blood pressure, ulcers, and colds.

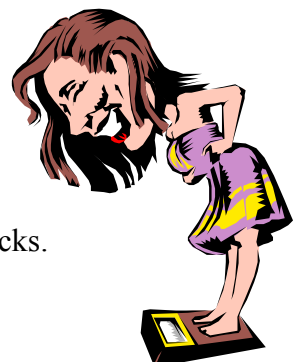
In pregnancy, smoking may cause low birth weight and birth defects (physical and mental).



6. Weight in a Healthy Range

It is surprising to see how many men are proud of their prominent belly! However, there is a range of ideal weight. Obesity is a known risk factor for several diseases and will eventually affect longevity. Here are some short and practical recommendations for those wishing to reduce their weight to normal:

1. Avoid crash diets. Adopt a healthy lifestyle that you can follow for life.
A weight loss of no more than 250 - 500 g / week is recommended.
2. Choose foods low in fat, especially animal fats.
3. Limit desserts, snacks, and foods high in sugar.
4. Eat more fruits and vegetables; 5+ servings per day are recommended.
5. Choose whole-grain breads and cereals.
6. Don't skip meals; it leads to bingeing later on.
7. Eat a good breakfast, a moderate dinner, and avoid late night snacks.
8. Be physically active 30-60 minutes daily.
9. Get adequate rest and keep stress manageable.
10. Enlist help of family, friends, and support groups.



7. Regular Physical Activity

It is important to notice that of all of the good health practices, physical activity was the best predictor of longevity in this study. Physical activity promotes our health in many ways, especially by improving the blood circulation but also by direct influence on cell metabolism. Here is a summary list of the benefits of exercise:

- Improves body appearance and increases strength
- Strengthens the heart muscle
- Improves the circulation
- Increases mineral content of bones
- Reduces blood pressure
- Helps reduce weight in obese persons
- Increases HDL-cholesterol in blood
- Improves blood sugar control in diabetes
- Helps stress control
- Strengthens immune system
- Produces feeling of wellbeing



Exercise has such an impact on the prevention of chronic diseases – together with nutrition – that the World Health Organization also included recommendations for physical activity in its report on nutrition.

“Although the primary purpose of the Consultation was to examine and develop recommendations for diet and nutrition in the prevention of chronic diseases, the need for sufficient physical activity was also discussed and is therefore emphasized in the report.” (Diet, Nutrition and the Prevention of Chronic Diseases, WHO, 2003, p. 3)

Research shows that, on the average, for every hour you exercise, you increase your life span by two hours.

Active people are sick less often, have more energy, manage their weight better, cope better with stress, and seem to have a better self-image.

Physical exercise has the advantage that it can be adapted to practically all people able to move their body and does not require special equipment. The common question is, what is the best exercise and how much is necessary? There are a few basic principles in this regard:

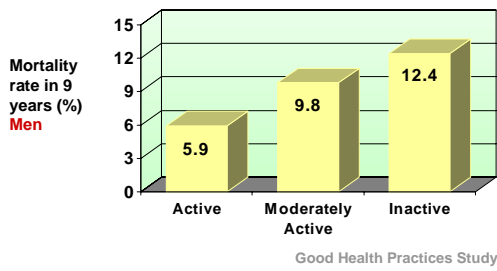
1. The type of exercise should be safe and not expensive. Walking in fresh air or working in the garden are of the best kind. Not only because of the exercise itself but also because of the fresh air and the mental activity related to it. It is good for the mind to contemplate God’s creation, the colorful flowers and to hear the birds singing. Competitive exercises are not recommended.
2. The exercise should be done regularly, if possible every day. Even moderate physical activity has significant health and longevity effects when done regularly. The various daily activities have a cumulative effect.



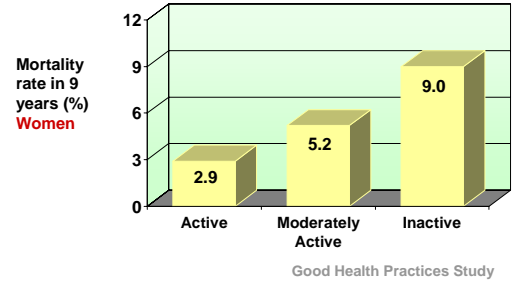
“Every adult should accumulate 30 minutes or more of moderate-intensity physical activity on most, preferably all, days of the week.” (Centers for Disease Control and Prevention, and the American College of Sports Medicine.)

3. The exercise should not be exhausting but comfortable and be increased progressively.

Physical Activity and Longevity



Physical Activity and Longevity



Conclusions:

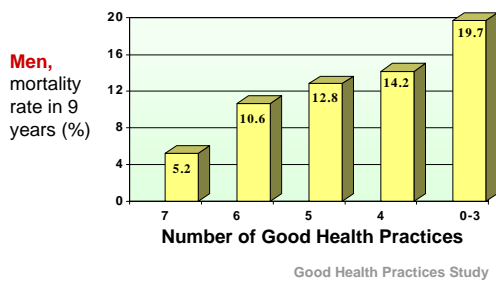
People who followed 6-7 of the good health practices lived 10-12 years longer than those following only 0-3 good health practices.

The average person could add 5 or more years to his or her life expectancy if he or she adopted a healthier lifestyle.

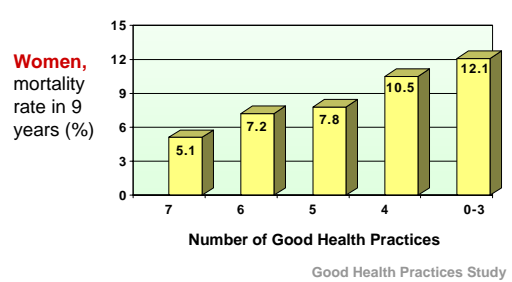
Those following a healthy lifestyle enjoyed a level of health approximately 20-30 years younger than those not following a healthy lifestyle.

Mortality rates were directly related to the number of poor health practices followed (see following chart).

Number of Good Health Practices and Mortality Rate



Number of Good Health Practices and Mortality Rate

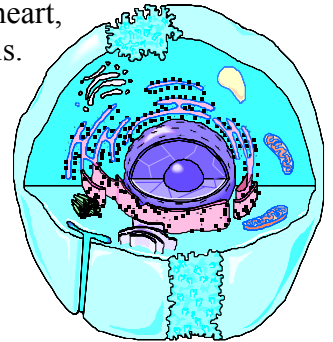


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CHAPTER 3

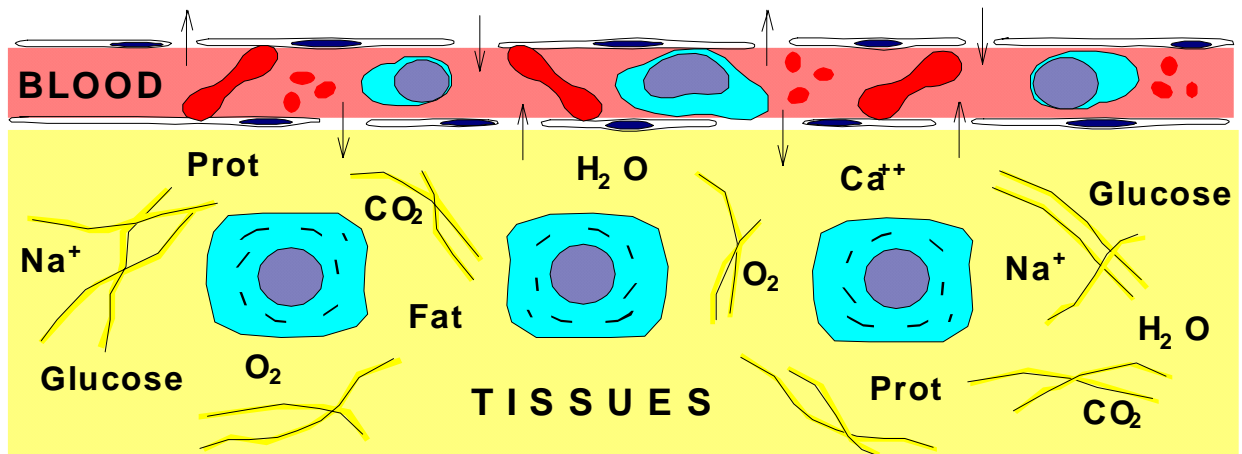
LIFESTYLE AND IMMUNE SYSTEM

The human body is composed by millions of cells. The liver, the heart, the brain and the kidneys, all are composed of many individual cells. These cells may have different shapes and functions but all of them have five basic needs:



1. Oxygen
2. Water
3. Nutrients
4. Waste elimination
5. All poisons kept out

Only when those needs are satisfied can the cells live healthy and fulfill their functions. It is the blood that supplies all these needs.



The blood itself is composed by different types of cells with different functions. The *red blood cells (erythrocytes)* carry oxygen from the lungs to all cells of the body and return the carbon dioxide to the air. The plasma transports the water and the necessary nutrients for the building, repair and production of energy in the cells. In turn, it carries back all metabolic waste products to be eliminated by the respective organs. It is therefore important to supply the best quality food and air in order to have good blood and to keep all harmful substances out of it. Any toxic substances in the blood must be eliminated through the kidneys, liver, lungs, skin and bowel. The *white blood cells (leucocytes)* compose the defense system, also called the immune system. The *platelets* are responsible for the coagulation in case of an injury. In reality, the blood is a liquid system. We could say that the blood is the central system of life. This is in agreement with the Bible, because we read that “the life of every creature is its blood.” (Leviticus 17:14)

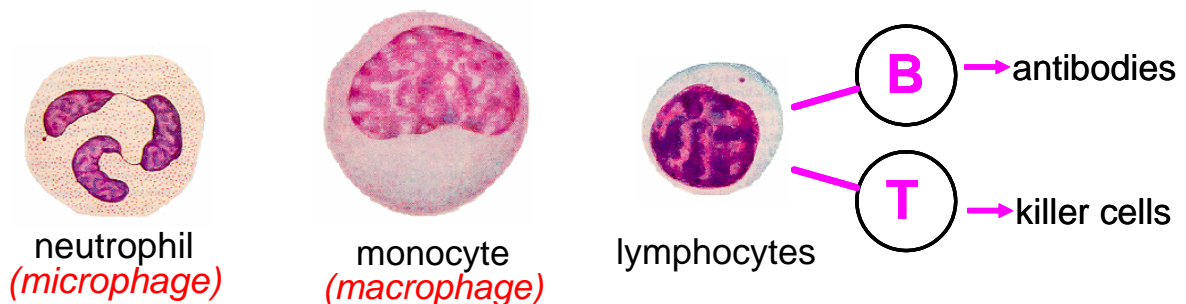
“In order to have good health, we must have good blood; for the blood is the current of life. It repairs waste and nourishes the body. When supplied with the proper food elements and when cleansed and vitalized by contact with pure air, it carries life and vigor to every part of the system. The more perfect the circulation, the better will this work be accomplished.

“At every pulsation of the heart the blood should make its way quickly and easily to all parts of the body. Its circulation should not be hindered by tight clothing or bands, or by insufficient clothing of the extremities. Whatever hinders the circulation forces the blood back to the vital

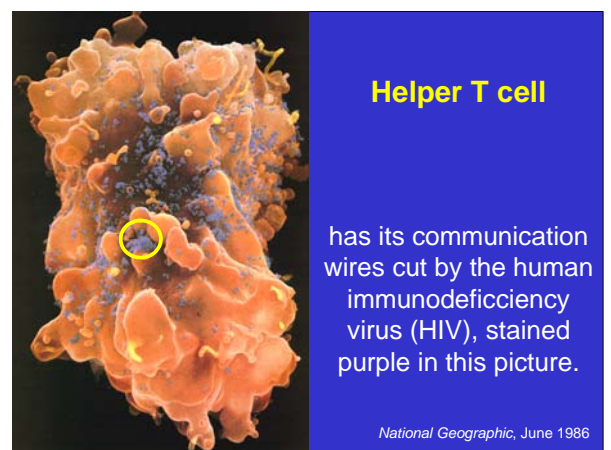
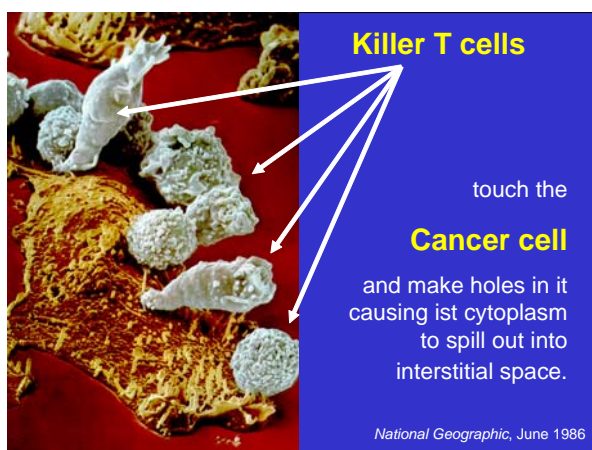
organs, producing congestion. Headache, cough, palpitation of the heart, or indigestion is often the result.” (Ministry of Healing, p. 271)

Cells of the Immune System

Let us now examine some specific white blood cells. The neutrophils or *microphages* are a kind of soldiers who kill and clean up all kinds of bacteria and foreign substances they find. They engulf small particles and digest them. When many of them die on this process a thick yellowish mass results called pus. The monocytes, also called *macrophages*, are larger but basically do the same. Sometimes they even join together forming giant cells that are characteristic for some diseases.



The lymphocytes are the smallest white blood cells and live for several years. They carry a kind of “memory” when foreign substances (antigens) enter the body. These are recognized because of their different proteins. There are basically two kinds of lymphocytes, called B-cells and T-cells. Externally they look similar but their specific functions are different. When the B-cells leave the blood vessels and enter into the tissues, they are called plasma cells and produce antibodies against specific foreign substances (humoral immunity). The T-cells receive messages to attack strange cells (cellular immunity). They are then called killer cells. They even recognize cancer cells and destroy them.

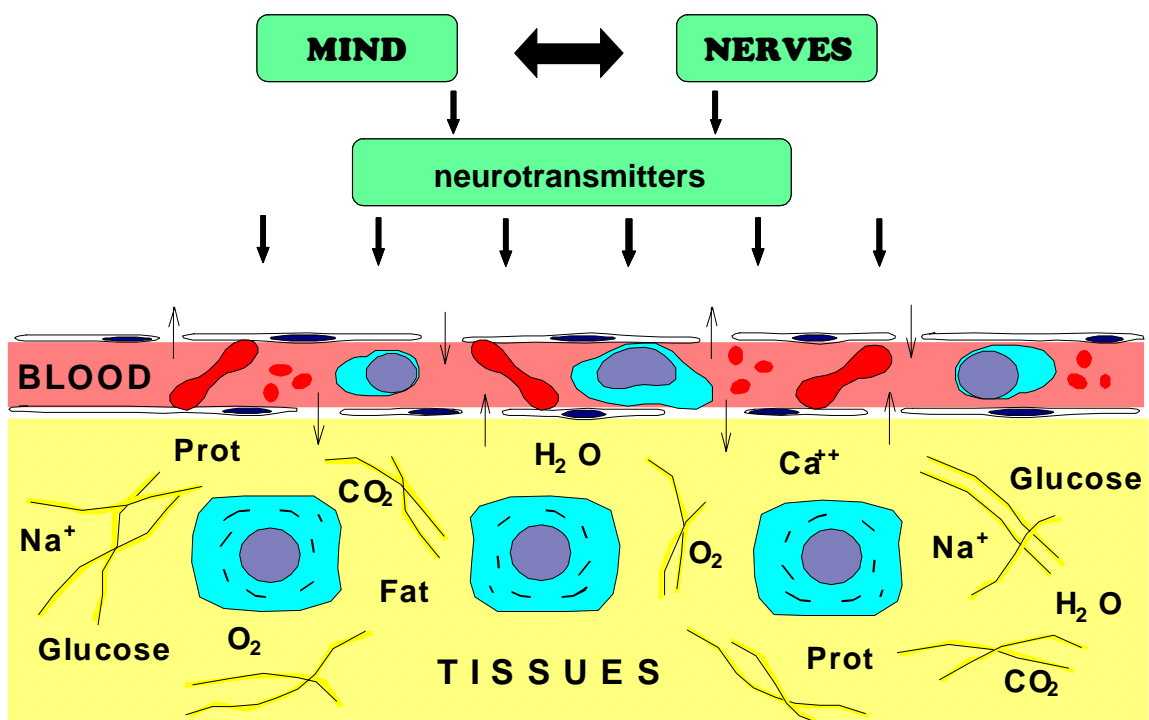


When a person is infected by the human immunodeficiency virus (HIV), the receptors of the T-lymphocytes are destroyed resulting in the loss of the ability to recognize foreign cells or substances. The person therefore loses his immune system and may die from any kind of infectious disease. This situation is called AIDS. So far, there has not been found any cure for AIDS.

Regulation of the Psycho-Neuro-Immune System

The cells of the immune system can be compared to the police or army of a nation. They swim peacefully along with all the other components of the blood to all corners of the organism. This is one of the reasons why it is so important to maintain a good circulation of the blood. But how do these cells know when and where they must enter in action? All metabolic mechanisms are quite complex and interact with each other. The regulation is done through feedback mechanisms and coordination of at least three other systems: the nervous system, the endocrine system, and our emotions. The communication is done by chemical substances called neurotransmitters. These either stimulate or depress the activity of the immune cells. Science is discovering progressively the interaction between the mind and the body. For this reason the immune system is today called the psycho-neuro-immune system.

Psycho - Neuro - Immune System



We could truly say that the immune system is a miracle. Science is just beginning to understand the marvelous mechanisms God made to preserve our health in best condition. It functions day and night without any noise. We can join the psalmist when he exclaims, "I praise you because I am fearfully and wonderfully made!" (Psalms 139:14)

Factors That Influence the Immune System

The mechanisms just mentioned operate at all times. The blood is involved with normal construction and remodeling activities during growth, with all adaptation mechanisms and stress management, as well as fighting diseases of all and every kind. Since all maintenance functions in health and disease depend on the optimal performance of the immune system, the logic question is, "what strengthens the immune system and what depresses it?" Life and death depend on it.

Some years ago there was an international congress at Loma Linda, California, on the Psycho-Neuro-Immune System. They came to the following conclusions:

Influences Upon the Immune System	
Strengthen	Depress
<ul style="list-style-type: none"> • Moderate exercise • Balanced nutrition • Optimism • Adequate rest 	<ul style="list-style-type: none"> • Insufficient or excess of exercise • Too much fat, cholesterol • Lack of Fe, Cu, Co, Zn, Se, Mg, vit. E • Depression • Alcohol, tobacco, drugs

The factors mentioned in this table remind us of the “natural remedies” represented in the NEWSTART® program. Let us briefly review each one of them.

Respiration

“In order to have good blood, we must breathe well. Full, deep inspirations of pure air, which fill the lungs with oxygen, purify the blood. They impart to it a bright color and send it, a life-giving current, to every part of the body. A good respiration soothes the nerves; it stimulates the appetite and renders digestion more perfect; and it induces sound, refreshing sleep.

“The lungs should be allowed the greatest freedom possible. Their capacity is developed by free action; it diminishes if they are cramped and compressed. Hence the ill effects of the practice so common, especially in sedentary pursuits, of stooping at one's work. In this position it is impossible to breathe deeply. Superficial breathing soon becomes a habit, and the lungs lose their power to expand. A similar effect is produced by tight lacing. Sufficient room is not given to the lower part of the chest; the abdominal muscles, which were designed to aid in breathing, do not have full play, and the lungs are restricted in their action.

“Thus an insufficient supply of oxygen is received. The blood moves sluggishly. The waste, poisonous matter, which should be thrown off in the exhalations from the lungs, is retained, and the blood becomes impure. Not only the lungs, but the stomach, liver, and brain are affected. The skin becomes sallow, digestion is retarded; the heart is depressed; the brain is clouded; the thoughts are confused; gloom settles upon the spirits; the whole system becomes depressed and inactive, and peculiarly susceptible to disease.

“The lungs are constantly throwing off impurities, and they need to be constantly supplied with fresh air. Impure air does not afford the necessary supply of oxygen, and the blood passes to the brain and other organs without being vitalized. Hence the necessity of thorough ventilation. To live in close, ill-ventilated rooms, where the air is dead and vitiated weakens the entire system. It becomes peculiarly sensitive to the influence of cold, and a slight exposure induces disease. It is close confinement indoors that makes many women pale and feeble. They breathe the same air over and over until it becomes laden with poisonous matter thrown off through the lungs and pores, and impurities are thus conveyed back to the blood.” (Ministry of Healing, p. 272-274)

Exercise

What is the benefit of having good blood if it does not circulate properly to nourish all parts of the organism? An adult has about 5 liters of blood. This amount is not equally distributed throughout the body. The small arteries (arterioles) have muscular walls that regulate the blood

flow to the respective organs. Active organs receive more blood, according to their needs, and resting organs receive less. It is an economical system. It is therefore important to activate all different parts of the body regularly in order to provide them with fresh blood and to take away the waste products. Regular exercise and fresh air are both important to maintain good health.

“The chief if not the only reason why many become invalids is that the blood does not circulate freely, and the changes in the vital fluid, which are necessary to life and health, do not take place. They have not given their bodies exercise nor their lungs food, which is pure, fresh air; therefore it is impossible for the blood to be vitalized, and it pursues its course sluggishly through the system. The more we exercise, the better will be the circulation of the blood.

“More people die for want of exercise than through overfatigue; very many more rust out than wear out. Those who accustom themselves to proper exercise in the open air, will generally have a good and vigorous circulation. We are more dependent upon the air we breathe than upon the food we eat. Men and women, young and old, who desire health, and who would enjoy active life should remember that they cannot have these without a good circulation. Whatever their business and inclinations, they should make up their minds to exercise in the open air as much as they can. They should feel it a religious duty to overcome the conditions of health which have kept them confined indoors, deprived of exercise in the open air.” (Counsels on Health, p. 173)

In the leading medical journal of the USA we read: “There is no drug in current or prospective use that holds as much promise for sustained health as a lifetime program of physical exercise.” (Bortz: Journal of American Medical Association: 1982:248, 1203)

Benefits of Exercise

Exercise of the long muscles of the arms and legs produces endorphins. Happy and positive thoughts and feelings release endorphins in the brain. Endorphins are also generated in the lungs and bowl. Endorphins strengthen the immune system and produce a feeling of well-being. Here is a summary list of the benefits of exercise:

- Improves body appearance and increases strength
- Strengthens the heart muscle
- Improves the circulation
- Increases mineral content of bones
- Reduces blood pressure
- Helps reduce weight in obese persons
- Increases HDL-cholesterol in blood
- Improves blood sugar control in diabetes
- Helps stress control
- Strengthens immune system
- Produces feeling of wellbeing



Notice that either excess or lack of exercise is detrimental to the immune system. For health benefits a moderate exercise is best. The pulse rate should be accelerated but the person should not run “out of breath”. The minimum duration for health benefits should be at least half an hour per day. This does not have to be all at once. An intermittent exercise has similar effects when accumulated. Especially not trained people should make short pauses in between to relax. The intensity of exercise can be adapted to every person’s needs. If there is a cardiac problem or any doubt consult your physician first. An important principle is to practice physical activity regularly, every day, if possible, because the physiological effects last only for 12 or 24 hours, depending on the intensity of the exercise.

It is not possible to say absolutely, which kind of activity is best. It is important to use as many as possible of the joints and muscles in order to maintain overall flexibility and to promote circulation to all organs. The chosen activity should be joyful, safe, useful and inexpensive. Walking in the fresh air or working in the garden are excellent and can be recommended to everyone.

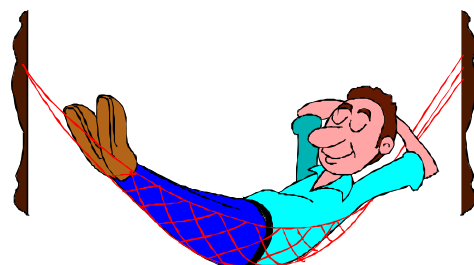
“Walking, in all cases where it is possible, is the best remedy for diseased bodies.... There is no exercise that can take the place of walking. By it the circulation is greatly improved.” (Counsels on Health, p. 200)

“Exercise in the open air should be prescribed as a lifegiving necessity. And for such exercise there is nothing better than the cultivation of the soil. Let patients have flower beds to care for, or work to do in the orchard or vegetable garden. As they are encouraged to leave their rooms and spend time in the open air, cultivating flowers or doing some other light, pleasant work, their attention will be diverted from themselves and their sufferings.” (Ministry of Healing, p. 265)



Rest

All functions in our body need a regular alternation of activity and rest. It is during the sleep hours that our body restores its spent energies. As we have seen in the study on longevity, lack of sleep is a major stressor, affecting both physical and mental health. An adult person needs an average of 7-8 hours of sleep daily. For elderly people 5 to 6 hours may be sufficient. It is important to have the sleep hours regularly. Workers in factories or hospitals with frequent changing shift hours have hard time to adjust their internal clock (circadian cycles). We know, for example, that in children and adolescents the growth hormone is released mainly during the hours before midnight.



Of course, the quality of sleep is also important. Here are some inspired counsels to improve the quality of sleep:

“I know from the testimonies given me from time to time for brain workers, that sleep is worth far more before than after midnight. Two hours’ good sleep before twelve o’clock is worth more than four hours after twelve o’clock.” (Manuscript Releases, vol. 7, p. 224)

“Another pernicious habit is that of eating just before bedtime. The regular meals may have been taken; but because there is a sense of faintness, more food is taken. By indulgence this wrong practice becomes a habit and often so firmly fixed that it is thought impossible to sleep without food. As a result of eating late suppers, the digestive process is continued through the sleeping hours. But though the stomach works constantly, its work is not properly accomplished. The sleep is often disturbed with unpleasant dreams, and in the morning the person awakes unrefreshed and with little relish for breakfast. When we lie down to rest, the stomach should have its work all done, that it, as well as the other organs of the body, may enjoy rest. For persons of sedentary habits late suppers are particularly harmful. With them the disturbance created is often the beginning of disease that ends in death.” (Ministry of Healing, p. 303; Child Guidance, p. 389)

“In most cases two meals a day are preferable to three. Supper, when taken at an early hour, interferes with the digestion of the previous meal. When taken later, it is not itself digested

before bedtime. Thus the stomach fails of securing proper rest. The sleep is disturbed, the brain and nerves are wearied, the appetite for breakfast is impaired, the whole system is unrefreshed and is unready for the day's duties." (Education, p. 205)

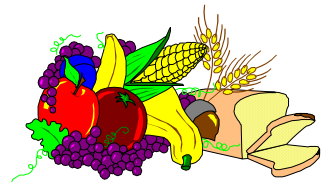
Nutrition

The blood needs nutrients. As mentioned in the beginning, a "balanced nutrition" is necessary for the proper functioning of the immune system. Some people believe that a *balanced* diet means to eat something from everything. This is definitely not the case. In the next chapter we will see more details about a healthy diet based on the recommendations of the World Health Organization. Here are only a few basic thoughts to begin.

God revealed to Ellen G. White that "The grains, with fruits, nuts, and vegetables, contain all the nutritive properties necessary to make good blood. These elements are not so well or so fully supplied by a flesh diet." (Ministry of Healing, p. 316)

Above statement is supported by experts of the World Health Organization who confirmed that "The nutrient goals indicate that the health needs of the population are best met by a high-carbohydrate, low-fat diet, rich in starchy foods (e.g., cereals, tubers, and pulses) and including a substantial intake of vegetables and fruit." (Diet, Nutrition and the Prevention of Chronic Diseases, WHO, p. 158)

"A substantial amount of epidemiological and clinical data indicates that a high intake of plant foods and complex carbohydrates is associated with a reduced risk of several chronic diseases, especially coronary heart disease, certain cancers, hypertension, and diabetes." (Diet, Nutrition and the Prevention of Chronic Diseases, WHO, p. 99)



On the negative side we saw before that "too much fat, especially cholesterol" depresses the immune system. Such diet is typically based on animal products like meat, fish, fowl, eggs, butter, milk and cheese. Dr. Colin T. Campbell, Professor Emeritus of Nutritional Biochemistry at Cornell University, speaking about autoimmune diseases, states that "of those diseases studied in relation to nutrition, the consumption of animal-based foods – especially cow's milk – is associated with greater disease risk." (The China Study, 2004, p. 199)

Also on the negative side is the lack of minerals like iron, copper, cobalt, zinc, selenium, magnesium and vitamin E. We must be careful, however, not to consider these elements as wonder drugs that boost the immune system, as the media often advertise to promote the use of supplements.

Alcohol

The pharmacological effect of alcohol is a depression of the nervous system under all circumstances. It is not used as a general anesthetic because of the very small margin between the pharmacological action and toxicity.

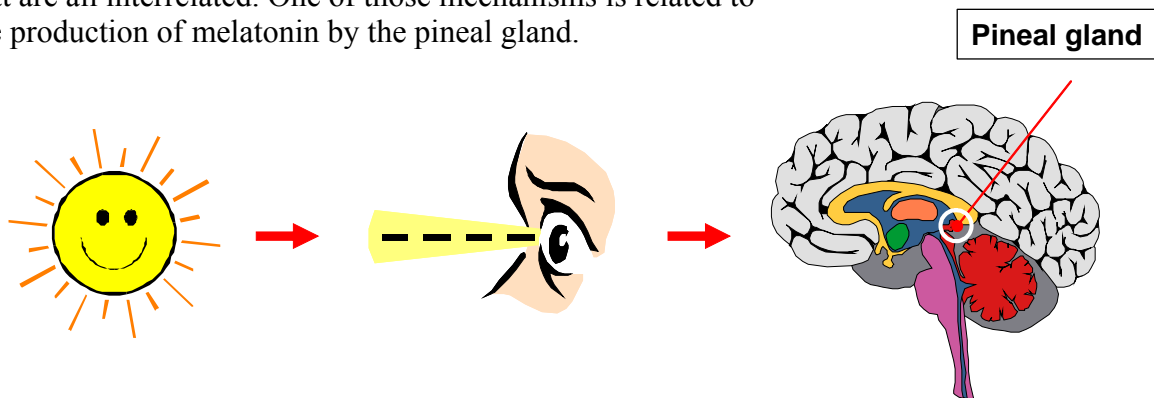


The WHO has identified alcohol drinking as one of the top-10 risks for global burden of disease. (WHO Press release, 28 March 2007, www.iarc.fr/ENG/Press_Releases/pr175a.htm) It is of no surprise that the Bible has many warnings against its use. "Do not gaze at wine when it is red, when it sparkles in the cup, when it goes down smoothly! In the end it bites like a snake and poisons like a viper." (Proverbs 23: 31, 32) "Wine is a mocker and beer a brawler; whoever is led astray by them is not wise." (Proverbs 20: 1)

Regarding its effects upon the immune system “Alcohol should be considered as an immunosuppressive drug with far-reaching effects.” (MacGregor, RR, “Alcohol and Immuno Defense”, JAMA, Set 19, 1986, vol. 256, no. 11) There could be no stronger statement to express its negative effects on health, besides many other well known disadvantages. Concerning the debate about its possible benefits for the heart, the World Health Organization finally came to the following conclusion: “Although regular low to moderate consumption of alcohol is protective against coronary heart disease, other cardiovascular and health risks associated with alcohol do not favour a general recommendation for its use.” (Diet, Nutrition and the Prevention of Chronic Diseases, WHO, 2003, p. 90)

Sunshine

Although everybody knows that life depends on sunshine, very little is being said about the application of sunshine as a treatment. More often we hear about the danger of sunburns and the possible promotion of skin cancers in white people. Here, as in everything else, it is important to find the right amount, not too less and not too much. Another basic principle in health and disease is that health (or disease) depends in general on several factors and complex mechanisms that are all interrelated. One of those mechanisms is related to the production of melatonin by the pineal gland.



Melatonin has several important functions in the human body:

- Regulates circadian rhythm
- Antioxidant
- Against fatigue
- Improves sleep efficiency
- Helps recover from stress
- Stimulates immune system
- Lowers cholesterol

(Proof Positive, p. 193-207)

Another important role of sunshine is the production of vitamin D in the skin and its ulterior transformation into active 1,25 D in the kidneys. Lack of sunshine is an important factor in the incidence of several autoimmune diseases. In the northern hemisphere, communities that are farther north tend to have more type 1 diabetes, multiple sclerosis, rheumatoid arthritis, osteoporosis, breast cancer, prostate cancer, colon cancer, vitiligo, in addition to other diseases. (T. C. Campbell, The China Study, 2004, p. 362-368)

A simple rule is to avoid baking your skin in the noon hours from 10 am to 3 or 4 pm and to start with only 10-15 minutes. There are great variations in skin sensitivity and individual care must be taken.

Here are some valuable instructions from Ellen G. White:

“Invalids too often deprive themselves of sunlight. This is one of nature’s most healing agents. It is a very simple, therefore not a fashionable remedy, to enjoy the rays of God’s sunlight and beautify our homes with its presence. Fashion takes the greatest care to exclude the light of the sun from parlors and sleeping rooms by dropping curtains and closing shutters, as though its rays were ruinous to life and health. It is not God who has brought upon us the many woes to which mortals are heirs. Our own folly has led us to deprive ourselves of things that are precious, of blessings which God has provided and which, if properly used, are of inestimable value for the recovery of health. If you would have your homes sweet and inviting, make them bright with air and sunshine. Remove your heavy curtains, open the windows, throw back the blinds, and enjoy the rich sunlight, even if it be at the expense of the colors of your carpets. The precious sunlight may fade your carpets, but it will give a healthful color to the cheeks of your children. If you have God’s presence and possess earnest, loving hearts, a humble home made bright with air and sunlight, and cheerful with the welcome of unselfish hospitality, will be to your family, and to the weary traveler, a heaven below.” (Testimonies vol. 2, p. 527)

“Those who have the aged to provide for should remember that these especially need warm, comfortable rooms. Vigor declines as years advance, leaving less vitality with which to resist unhealthful influences; hence the greater necessity for the aged to have plenty of sunlight, and fresh, pure air.” (Ministry of Healing, p. 275)

Mental Factors

Positive emotions and feelings promote the health and provide strength, endurance, well being and productivity. Negative feelings, on the other hand, promote diseases like asthma, peptic ulcers, hypertension, cancer, migraine, and heart attacks. Such are known as psychosomatic diseases. It is well known that mourning and sorrow weaken the immune system and make people more susceptible to infectious diseases and cancer. Psychosomatic medicine developed in the seventies. However, Ellen G. White wrote over hundred years ago something that scientists in her days did not even suspect:

“The condition of the mind affects the health to a far greater degree than many realize. Grief, anxiety, discontent, remorse, guilt, distrust, all tend to break down the life forces. Disease is sometimes produced, and is often greatly aggravated, by the imagination. Courage, hope, faith, sympathy, love, promote health and prolong life.” (Ministry of Healing, p. 241)

Also, since about 20 years ago there are an increasing number of scientific articles and studies showing that faith in God and active religiosity improve health and prolong life. The social support proper of religious communities, singing and praising God in worship, intercessory prayer, forgiveness, and other factors relating to a healthy lifestyle, all strengthen the immune system.

The American Association of Family Physicians made the following statement in January 2001: “Over the past several years, it has been suggested that spirituality is another important, yet often neglected, factor in the health of patients.” (www.aafp.org/afp/20010101/81.html) They also suggest that a spiritual assessment be included in the regular medical practice.

Long ago, the German priest and one of the founders of the Naturopathic medicine movement, Sebastian Kneipp (1821-1897) confessed that “only when I began to bring order into the souls of my patients, I was successful.” Although most commonly associated with “cold water treatment”, Kneipp was the proponent of an integral system of healing, which rested on five main tenets: hydrotherapy, herbalism, exercise, nutrition, and spirituality.

Ellen G. White, who lived at the same time, declared in 1872 that “The religion of the Bible is not detrimental to the health of the body or of the mind. The influence of the Spirit of God is the very best medicine that can be received by a sick man or woman.” (Medical Ministry, p. 12)

NEWSTART

Putting now all facts together, we can see that the NEWSTART® program fits perfectly into the psycho-neuro-immune system. The NEWSTART acronym was created by physicians and teachers of the Weimar Institute in California (www.newstart.com) based on the eight natural factors of health mentioned by Ellen G. White: “Pure air, sunlight, abstemiousness, rest, exercise, proper diet, the use of water, trust in divine power – these are the true remedies. Every person should have a knowledge of nature’s remedial agencies and how to apply them.” (Ministry of Healing, p. 127)

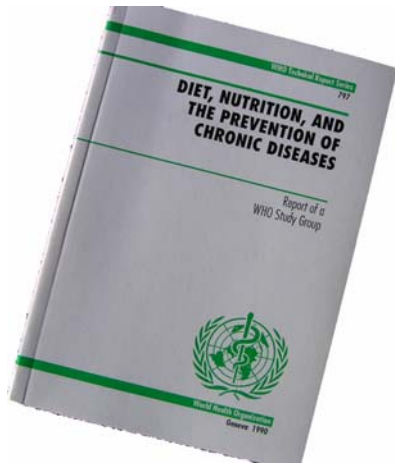
In summary we can emphasize the following points:

1. Life is governed by natural laws. Disobedience to these results in disease.
2. The natural laws together with the moral laws – all made by God – have the purpose to keep man completely healthy, happy and holy.
3. The physiological mechanisms that regulate life processes are represented by the psycho-neuro-immune system. That means that the mind, the soul and the body act together and influence each other.
4. The blood is the central vehicle for water, nutrients, hormones and immune cells. Health depends on the correct composition and circulation of the blood.
5. Long sustained disturbances in the composition and/or circulation of the blood lead to chronic (lifestyle) diseases, in contrast to acute diseases (accidents, infections, poisonings, etc.)
6. The organism has many ways to compensate deficiencies and incorrections. Chronic diseases are therefore usually the result of more than one factor. The more risk factors come together, the higher the likelihood to get sick.
7. Most genetic predispositions require the presence of an additional lifestyle factor to be expressed, according to the aphorism, “genetics charge the bullet – lifestyle pulls the trigger”.
8. The NEWSTART® program encompasses all main lifestyle factors and is scientifically sound.
9. The two factors where most mistakes are made and where corrections show best results are exercise and nutrition. Together with alcoholism and cigarette smoking they are responsible for most suffering on this world.
10. The ultimate author of health is not nature itself nor inherent life forces, but God, the Creator. “If you listen carefully to the voice of the LORD your God and do what is right in his eyes, if you pay attention to his commands and keep all his decrees, I will not bring on you any of the diseases I brought on the Egyptians, for I am the LORD, who heals you.” (Exodus 15:26)
11. Eternal life is possible only through Jesus Christ. “For God so loved the world that he gave his only Son, that whoever believes in him should not perish but have eternal life.” (John 3:16 RSV)

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CHAPTER 4

RECOMMENDATIONS ON NUTRITION



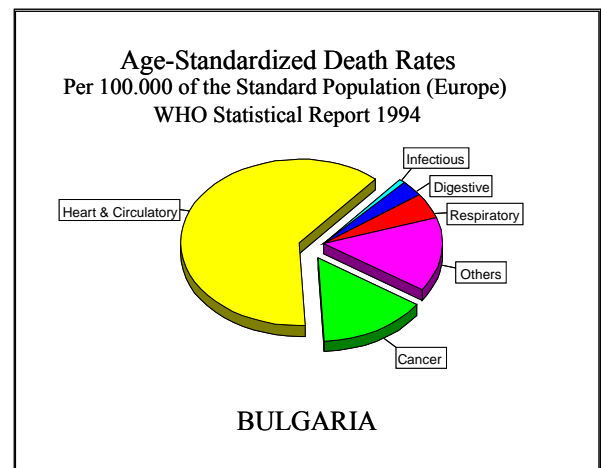
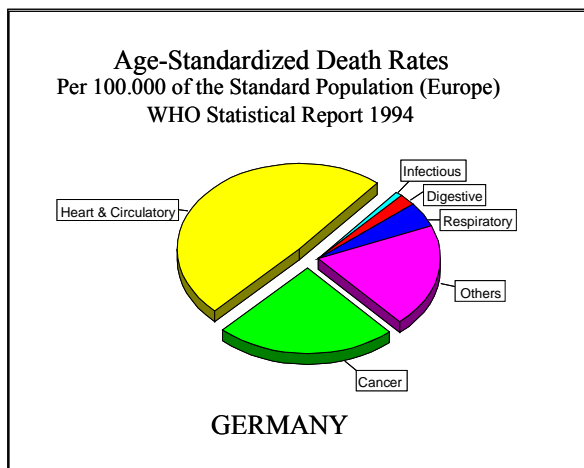
From all the factors involved in the development of chronic diseases, physical activity and nutrition are the ones where most mistakes are made and where corrections can be made easiest. Nobody will object the fact that we need more physical activity, but when it comes to the question of eating, many cultural traditions, popular beliefs, and economical interests may conflict with scientific knowledge.

The remarks of the present chapter are based to a large extent on a report of a special World Health Organization study group on “Diet, Nutrition and the Prevention of Chronic Diseases” published in 1990 and a follow up report of a joint WHO/FAO¹ expert consultation twelve years later. At the inaugural session Dr. Hu Ching-Li, representative of the WHO, said: “The amount and type of food eaten are fundamental determinants of human health.”

A few pages ahead we read that “a range of chronic diseases can be prevented to a substantial extent by life-style changes, among which diet plays a crucial role.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 39)

Diet and Chronic Diseases

The main causes of death in developed countries are cardiovascular diseases and cancer. Both together make up grossly three quarters (75%) of all deaths. There is not much difference between West and East Europe as can be seen in the following graphics; and since the risk factors of these diseases are basically the same, we can study them together.



In first place it was noticed that there were “inappropriate public perceptions in developing countries of what constitutes a better diet, ... with high contents of fat, sugar, and salt.” (Diet,

¹ Food and Agriculture Organization of the United Nations.

Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 15) At the same time the risk factors for cardiovascular diseases and cancer are precisely related to such diet:

- excess of fat
- excess of free sugars
- deficiency of complex carbohydrate foods
- cigarette smoking

(Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 11, 56)

They also realized that “these chronic diseases [coronary heart disease, cancer, hypertension, diabetes] are, in part, manifestations of nutrient excesses and imbalances in the »affluent« diet, so they are in principle, largely preventable.” (Id, p. 14)

By way of contrast, “a substantial amount of epidemiological and clinical data indicates that a high intake of plant foods and complex carbohydrates is associated with a reduced risk of several chronic diseases, especially coronary heart disease, certain cancers, hypertension, and diabetes.” (Id, p. 99)

Consequently, “in several Western European countries and in North America, there have been sustained public education campaigns, that aim to change the public's eating patterns. ... Unfortunately, the idea that medical opinion is divided and that policies are uncertain is often used to inhibit change, despite the remarkable consistency of views put forward by expert groups over several decades.” (Id, p. 129)

It is sad to realize that many wives and mothers are not aware that the health of their spouse and children depends largely upon the food they prepare for their families. Here are some pertinent counsels:

“There are very many girls who have married and have families, who have but little practical knowledge of the duties devolving upon a wife and mother. They can read, and play upon an instrument of music; but they can not cook. They can not make good bread, which is very essential to the health of the family.... To cook well, to present healthful food upon the table in an inviting manner, requires intelligence and experience. The one who prepares the food that is to be placed in our stomachs, to be converted into blood to nourish the system, occupies a most important and elevated position. The position of copyist, dress-maker, or music teacher can not equal in importance that of the cook.” (Testimony Studies on Diet and Foods, p. 94)

“It is sacred duty for those who cook to learn how to prepare healthful food. Many souls are lost as the result of poor cookery. It takes thought and care to make good bread; but there is more religion in a loaf of good bread than many think. There are few really good cooks. Young women think that it is menial to cook and do other kinds of housework; and for this reason, many girls who marry and have the care of families have little idea of the duties devolving upon a wife and mother. Cooking is no mean science, and it is one of the most essential in practical life. Every woman who is at the head of a family and yet does not understand the art of healthful cookery should determine to learn that which is so essential to the well-being of her household.” (Ministry of Healing, p. 302)

The present chapter does not pretend to be a detailed textbook on nutrition but rather I would like to emphasize some major aspects that are commonly misunderstood.

Cancer and Diet

Is there any relation between cancer and diet? Can the risk of cancer be reduced by diet? To begin, here are some statements from scientific authorities.

“Vegetables and fruits are a rich source of a number of nutrients.... There is consistency in the evidence that vegetables and fruits play some protective role in preventing the development of cancers.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 98)

The director of the National Cancer Institute’s division of Cancer Prevention and Control of the USA concluded: “A greater number of studies have shown that a diet rich in fruits and vegetables has a protective effect against cancer. Persons with high fruit and vegetable intakes have about half the risk of people with low intakes.” (Better Nutrition, May 1994, p. 20)

Finally here is an important inspired statement from Ellen G. White that is fully in accordance with the previous assertions: “Cancer, tumors, and all inflammatory diseases are largely caused by meat-eating. From the light which God has given me, the prevalence of cancers, and tumors is due to gross living on dead flesh.” (Spalding and Magan Collection, p. 47)

It is interesting to notice that E. G. White also mentions “inflammatory” diseases. “The Adventist Health Study reported a 50% greater prevalence of rheumatoid arthritis and other forms of arthritis among non-vegetarians compared with vegetarians. ... The mechanisms have not been explained yet.” (Gary E. Fraser, Diet, Life Expectancy and Chronic Disease, 2003, p. 144-146)

Fats and Cholesterol

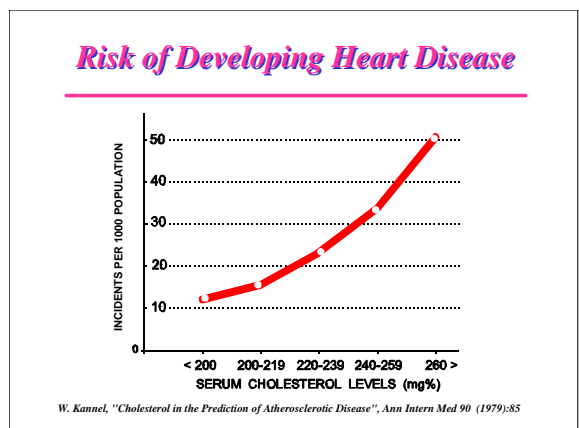
For the understanding of this section we presuppose a basic knowledge about fats. We will limit our explanations to some facts related to chronic diseases.

It is well documented that high serum cholesterol levels are a risk factor for coronary heart disease. The usually considered “normal” values of 200 mg% are too high. Ideally the serum cholesterol level should be 150 mg% or lower. This may sound frightening because very few people in Western societies have such low values.

When studies showed that a high consumption of saturated fats, mostly of animal origin, tends to raise serum cholesterol levels, a movement begun towards the use of polyunsaturated fats, as found in corn oil, sunflower oil and others, because they tend to lower blood cholesterol levels. Care must be taken, however, because polyunsaturated oils, including omega-3 fatty acids, are not very stable. Soon margarine appeared on the market to substitute butter. However, the issue relating to fats is not that simple. Persons with high cholesterol levels should avoid all animal fats (butter, meat, cheese) in first place, because cholesterol is found ONLY in animal products. Besides of that, the total amount of fat consumed should be reduced. In a typical Western cuisine the total consumption of fat is too high.

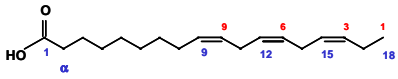
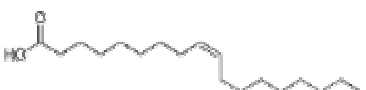

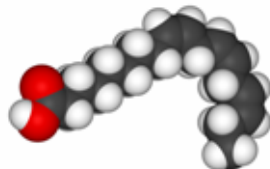
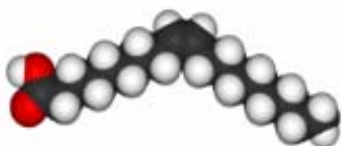

Heating and frying fats, especially polyunsaturated oils, should be minimized because heating may produce **trans-fatty acids** and other harmful substances. This is one reason why cold pressed extra virgin oils are better than oils extracted using heat.

Trans-fatty acids do not occur in nature, they are the result of artificial processing. “Fast foods, chips, baked goods, and other commercially prepared foods are high in fats containing up to 50 percent trans-fatty acids. Overall, consumers are eating more fats containing trans-fatty



acids than ever before and they are eating them in the form of processed foods.” (Sizer & Whitney, Nutrition - Concepts and Controversies, p. 166)

Trans-fatty acids tend to raise LDL-cholesterol and lower HDL-cholesterol. Instead of acting as the natural *cis* fatty acids, *trans* fatty acids compete and hinder them. There is a consensus that *trans*-fatty acids increase the risk of both, cardiovascular diseases and cancer. Today, the labels must show the amount of trans-fatty acids contained in industrial foods.

Unsaturated Fatty Acids		
<i>Cis</i>	<i>Cis</i>	<i>Trans</i>
		
		
Alpha-linolenic acid is a polyunsaturated omega-3 <i>cis</i> -fatty acid. It is found in many common vegetable oils and is important to human nutrition.	Oleic acid is a <i>cis</i> -fatty acid, contained by 55-80% in olive oil. The melting point is at 13.5 °C.	Elaidin acid is a <i>trans</i> -fatty acid contained in milk and is also found in hydrogenated plant oils. The melting point is at 46.5 °C.

(Wikipedia)

At this point we must mention the **omega-3 and omega-6 fatty acids**. These essential fatty acids are not new. They are present in linseed, nuts, soybeans, seeds, and other vegetable foods. There is now more knowledge about the mechanisms of their actions in health and disease. Fish get the α -linolenic acid (ALA) from algae and transform it in their body into eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) that are physiologically more active. Researchers believe the ideal omega-6 intake should be no more than 4-5 times that of our omega-3 intake. The media and industry took chance of these “new discoveries” and now encourage eating more fish or taking supplements of fish oil. However, “consumers of oily fish should be aware of the potential presence of heavy metals, in particular mercury, lead, nickel, arsenic and cadmium, and fat-soluble pollutants like PCBs [polychlorinated biphenyls] and dioxins which may accumulate up the food chain.” (www.fda.gov/bbs/topics/news/2004/NEW01115.html, US Food and Drug Administration)

“Omega supplementation in food has been a significant recent trend in food fortification, with global food companies launching omega-3 fortified bread, pizza, yoghurt, orange juice, children's pasta, milk, confections and infant formula.” (Wikipedia)

It is not necessary to resort to fish or fish oil supplements in order to get sufficient amount of essential fatty acids in the right proportion. Flax (*Linum usitatissimum*) and its oil are perhaps the most widely available botanical source of omega-3. Flaxseed oil consists of ca. 55% ALA (α -linolenic acid) in a proportion of 3 times as much omega-3 as omega-6. However, we must be

aware that flax seed oil becomes rancid very fast and should always be freshly prepared and used within three weeks. The easiest and more practical way perhaps is to mill the flax seeds (1 tablespoon) in a small coffee mill just before eating and spread this powder over the breakfast cereal or foods at lunch. There is plenty of omega-3 in walnuts, soybeans and dark leafy vegetables.

To conclude this section it is worth to pay attention to the following wise counsels of Ellen G. White:

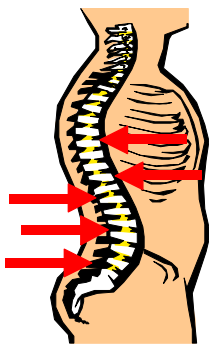
“When properly prepared, olives, like nuts, supply the place of butter and flesh meats. The oil, as eaten in the olive, is far preferable to animal oil or fat. It serves as a laxative. Its use will be found beneficial to consumptives, and it is healing to an inflamed, irritated stomach.” (Ministry of Healing, p. 298)

“Food should be prepared with simplicity, yet with a nicety which will invite the appetite. You should keep grease out of your food. It defiles any preparation of food you may make. Eat largely of fruits and vegetables.” (Counsels on Diet and Foods, p. 200)

“Your appetites are morbid, and because you do not relish a plain, simple diet, composed of unbolted wheat flour, vegetables and fruits prepared without spices or grease, you are continually transgressing the laws which God has established in your system. While you do this, you must suffer the penalty; for to every transgression is affixed a penalty. Yet you wonder at your continued poor health.” (Counsels on Diet and Foods, p. 123)

Calcium and Osteoporosis

Almost every mature adult and elderly person in the western world today is concerned about osteoporosis. What is the reason? Popular health magazines have headlines on the prevention of osteoporosis; advertising of calcium supplements and dairy products are increasing, but osteoporosis is still becoming more frequent. This issue is on hot debate. However, there are some unequivocal facts that should be considered.



First of all, what are the factors contributing to osteoporosis? The WHO study group mentions several main factors involved in calcium metabolism:

- lack of estrogen
- immobility
- smoking
- alcohol
- calcium intake

And they explain that “it is by no means certain that calcium intake is the key feature determining bone density and bone loss in adult life. High-protein and high-salt diets are known to increase bone loss.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 82)

Lack of exercise is one of the important risk factors and is being stressed more and more. But have you ever heard that smoking and alcohol promote osteoporosis? This fact is taboo. What about high-protein diets?

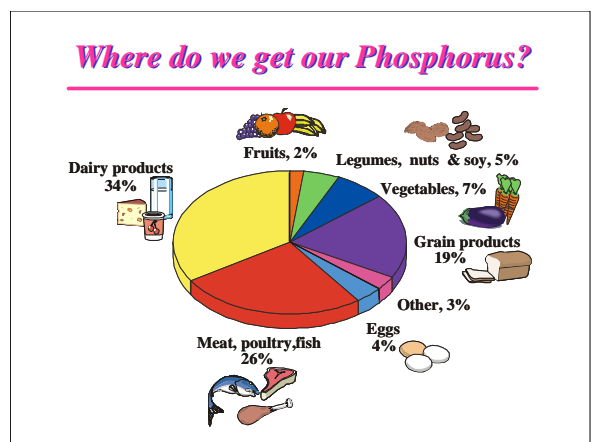
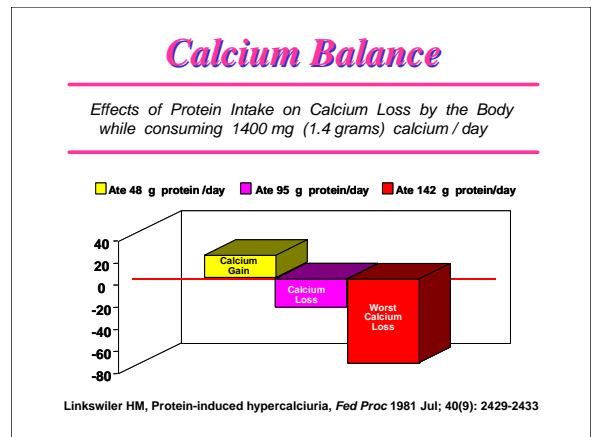
Linkswiler did an experiment on calcium balance comparing 3 groups of people. They all consumed 1400mg of calcium per day. But their protein intake was different. The group that received only 48 g of protein/day showed a positive calcium balance whereas the groups receiving more protein showed calcium loss proportional to their protein intake. (Linkswiler HM, Protein-induced hypercalciuria, Fed Proc 1981 Jul; 40 (9): 2429-2433)

A high protein intake also increases the risk of kidney stones.

The recommended daily allowance (RDA) for calcium vary greatly according to different countries. For example, the USA and Germany recommend 1200 mg for adults, including pregnant or lactating women. Such high amount cannot be reached by vegetarians without including dairy products into their diet or without taking calcium supplements. The WHO recommends only 400-500 mg daily.

It is also known that high phosphorus intake promotes calcium loss. The major sources of phosphorus are meat and dairy products.

Another study was done by Marsch und Sanchez who examined the mineral content of the bones of 1600 women. At age 60 these women still had the full mineral content. Twenty years later they were examined again. The ladies using a lacto-ovo-vegetarian diet still had 82% of their mineral content whereas those with a mixed diet, containing also meat, had only 65% left. (A. Marsh, T. Sanchez, Vegetarian lifestyle and bone mineral density, American Journal of Clin. Nutr. 1988; 48)



The Calcium Paradox

Let's talk about some important concepts in medicine. You may have noticed in the beginning of this chapter the words "imbalances" and "excesses". In the past, science was concerned with diseases caused by nutritional "deficiencies". Consequently the minimum daily needs were determined and people were happy to get as much as possible; the more the better. This idea was found to be wrong. For good health everything must stay within a certain normal range; not more and not less. But what is *normal* and how can it be determined? Usually, a group of apparently healthy people are taken and their average values were considered as normal. Later it was found that other groups of also healthy people, sometimes in other areas of the world, had quite different values. Just as an example, can we say that serum cholesterol levels of 200 mg% are normal for Americans and abnormal for Japanese? Are human beings that different? This shows that we are continuously learning and what was considered normal in the past may not be considered as normal today.

Another important point is that nutrients may behave differently in the organism if they are consumed isolately than in conjunction with others. This fact has changed the whole direction of nutritional research. Whereas investigators in the past studied the effect of isolated nutrients (vitamins, minerals, etc.), today the trend is to study whole foods. This approach is much more realistic but also more difficult. This may explain some of the apparent contradictions in the results of different studies. Good examples of this are the "French paradox" related to alcohol, mentioned in the chapter of longevity, and now the "calcium paradox" in relation to osteoporosis. Here is what the WHO says about:

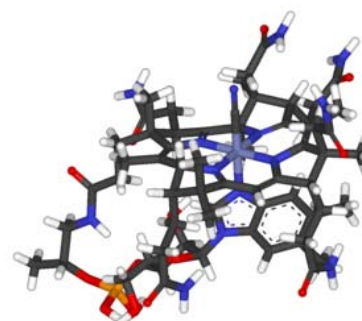
“The paradox (that hip fracture rates are higher in developed countries where calcium intake is higher than in developing countries where calcium intake is lower) clearly calls for an explanation. To date, the accumulated data indicate that the adverse effect of protein, in particular animal (but not vegetable) protein, might outweigh the positive effect of calcium intake on calcium balance.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 2003, p. 131)

Iron

Many are afraid that a total vegetarian diet (vegan) does not contain sufficient iron. However, the experts of the WHO affirm: “The iron obtained from vegetarian diets may be all in the inorganic form,... However, the absorption of inorganic iron is enhanced by the simultaneous consumption of vitamin C, which is abundant in most plant foods.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 100)

Vitamin B₁₂

Vitamin B₁₂ or cyanocobalamin is the most chemically complex of all the vitamins. It is important for the normal functioning of the brain and nervous system and for the formation of blood. Vitamin B₁₂ is produced by bacteria; it is not available in plants, except as contamination. “Fermented soy products, such as miso and tempeh, shiitake (dried mushrooms) and algae such as spirulina and nori practically contain no vitamin B₁₂. While these foods are sold in health food stores as excellent sources of B₁₂ and are widely used by the macrobiotic community, they actually contain little, if any B₁₂. Instead they contain analogs of B₁₂ that are not active and may actually block the absorption of true vitamin B₁₂.” (W. Craig, Nutrition and Wellness, p. 218)



Cyanocobalamin

For absorption, vitamin B₁₂ must first be combined with the intrinsic factor, a protein made by the parietal cells in the stomach. Then it is absorbed in the small bowel. The large bowel of humans also has bacteria that manufacture vitamin B₁₂ but the place of absorption is already passed. Patients with atrophy of the gastric mucosa or total stomach resection require intramuscular injections.

The needs of vitamin B₁₂ are very small, less than 1 microgram (µg) daily. The recommendation is 2 µg/day. Since there isn't a reliable and adequate source of B₁₂ in plant foods, vegans should obtain their dietary needs either from foods fortified with B₁₂ or from the regular use of a vitamin B₁₂ supplement. This is especially important for pregnant or nursing women. Interestingly, not all vegans have a B₁₂ deficiency. Total vegetarians should have their vitamin B₁₂ blood level analyzed.

The Protein Myth

Many are afraid that a total vegetarian diet (vegan) does not contain sufficient protein. However, the experts of the WHO affirm that: “Protein requirements are readily met in children and adults eating a varied diet based predominantly on cereals and pulses,... There are no known advantages from increasing the proportion of energy derived from protein, and high intakes may

have harmful effects in promoting excessive losses of body calcium and perhaps in accelerating an age related decline in renal function.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 90)

“Although most vegetarian diets meet or exceed the Recommended Dietary Allowances for protein, they often provide less protein than non-vegetarian diets. This lower protein intake may be associated with better calcium retention in vegetarians and improved kidney function in individuals with prior kidney damage. Further, lower protein intakes may result in a lower fat intake with its inherent advantages, because foods high in protein are frequently high in fat also.” (Journal of American Dietetic Association, 1993; 93:1317-1319)

In other words, we could say that the vegetarian diet is not deficient in protein; it is the omnivorous diet that has *excess* of protein. But what about the quality of plant protein? We learned in the school that animal protein is of high quality and that vegetable proteins do not have all aminoacids. Different plants have different proteins. This is why a vegetarian should have variety in the diet. “Progressively it is recognized that, even in totally vegetarian diets containing a diversity of foods, plant sources tend to complement one another in amino acid supply.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 19)

“Plant sources of protein alone can provide adequate amounts of the essential and nonessential amino acids, assuming that dietary protein sources from plants are reasonably varied and that caloric intake is sufficient to meet energy needs. Whole grains, legumes, vegetables, seeds, and nuts all contain essential and nonessential amino acids. Conscious combining of these foods within a given meal, as the complementary protein dictum suggests, is unnecessary.” (Journal of American Dietetic Association, 1993; 93:1317-1319)

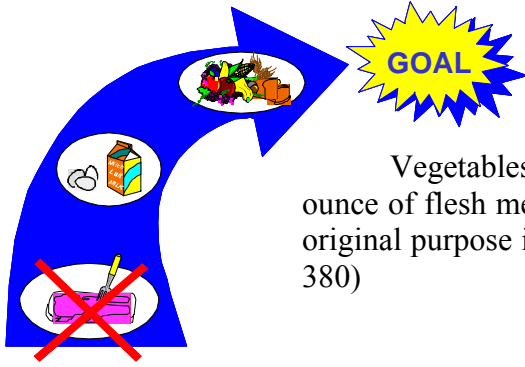
Here again we see the wisdom of the inspired counsel long before nutrition science existed. E.G. White wrote in 1868: “There should not be many kinds at any one meal, but all meals should not be composed of the same kinds of food without variation.” (Counsels on Diet and Foods, p. 200)

The WHO expert group’s recommendations for a healthy diet are intended for all ethnical groups, rich and poor alike. After considering all circumstances and scientific facts, they came to the following conclusion: “The nutrient goals indicate that the health needs of the population are best met by a high-carbohydrate, low-fat diet, rich in starchy foods (e.g., cereals, tubers, and pulses) and including a substantial intake of vegetables and fruit.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 158)



We realize that a whole plant based diet is the only one that provides proteins in right amount and proportions, low percentage of fats, but of best quality and free from cholesterol and trans-fatty acids, plenty of complex carbohydrates with fiber and phytochemicals, vitamins and minerals.

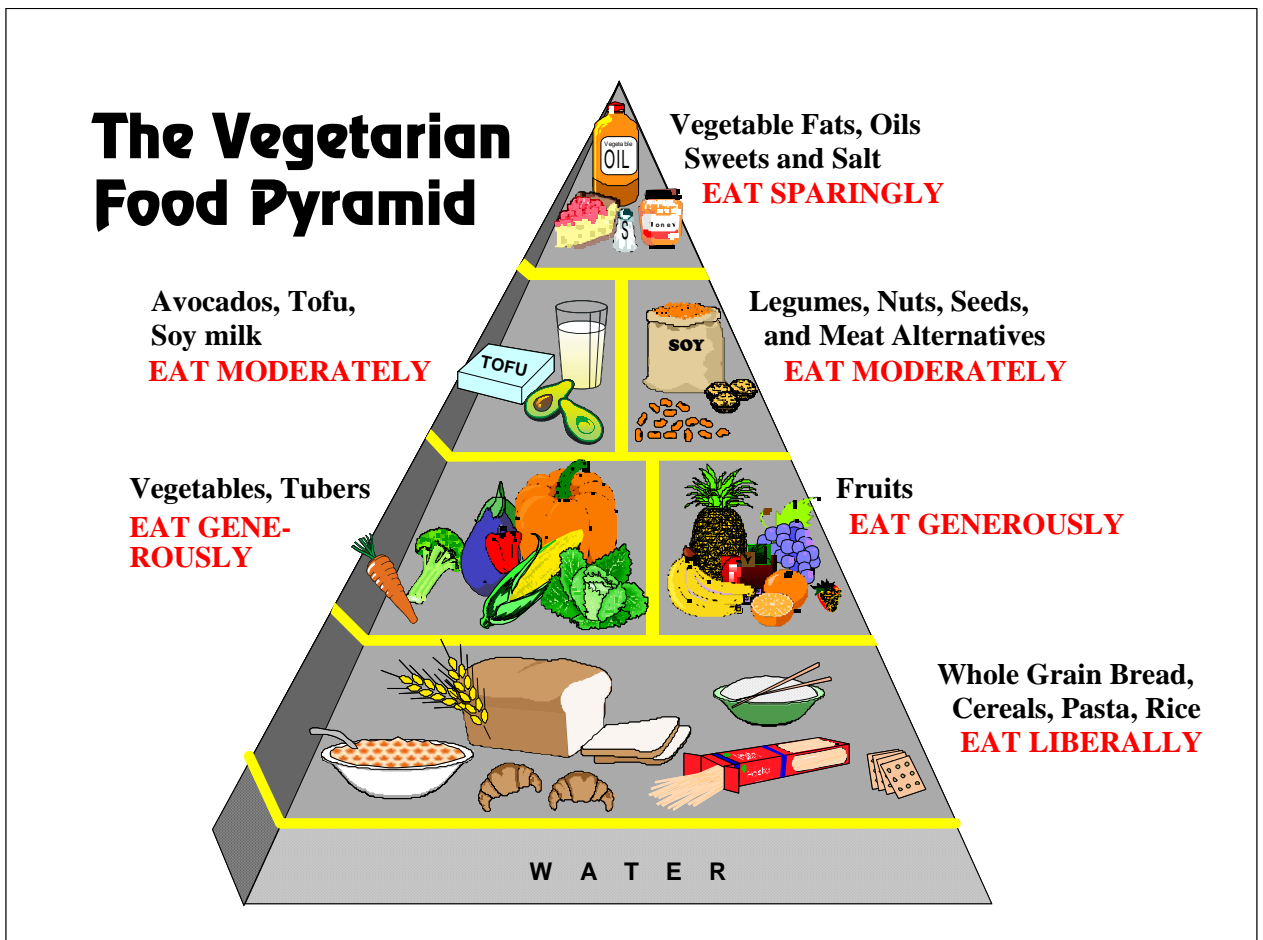
We could say that the World Health Organization finally discovered the original diet that God gave to mankind several thousand years ago. “Then God said, ‘I give you every seed bearing plant on the face of the whole earth and every tree that has fruit with seed in it. They will be yours for food.’” (Genesis 1:29)



“Again and again I have been shown that God is trying to lead us back, step by step, to His original design, – that man should subsist upon the natural products of the earth.

Vegetables, fruits, and grains should compose our diet. Not an ounce of flesh meat should enter our stomachs. We are to return to God's original purpose in the creation of man.” (Counsels on Diet and Foods, p. 380)

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CHAPTER 5

GUIDELINES FOR STRESS MANAGEMENT

The traditional approach in stress management is usually to teach relaxation techniques as opposed to stress = tension. Here we will have a different approach. The basic concepts relating to stress, of course, will remain the same.

First of all, let's clarify that "stress" is not something new that only a few privileged people have to deal with. Stress is necessary for life and health. The only place on earth without stress is the cemetery. Before we get confused let's look at some terminology.

Stressor – is the actual circumstance causing stress.

Eustress – is a "healthy" stress, that stimulates our body to action.

Distress – is the "bad" stress. In reality, as we will see later, the difference between *good* and *bad* stress depends on the reaction of each individual.

Basic Concepts

- In all our topics we found that our organism functions as a physical, mental, spiritual and social unity in harmony with the WHO definition of health as "the complete physical, mental, and social well-being and not merely the absence of disease or infirmity." We also have seen that there are intimate relationships between the immune system, nutrition, exercise, rest, spiritual behavior, stress management, etc.

- According to Rene Dubos, good stress management equals health, and being overcome by stress leads to disease. We will find many similarities between stress management and the psycho-neuro-immune system.

- The Canadian physician Hans Selye coined the notion "general adaptation syndrome" in relation to stress. This is an important concept. We have to adapt ourselves constantly to a changing environment in all four areas: physical, mental, spiritual, and social. It can be temperature, light, sound, physical work, relationship to God and to other people, physical or emotional injury, etc. There can be variations in intensity and also combination of different "stressors". The *general adaptation syndrome* implies that our organism reacts always in a similar way when confronted with an acute stressing situation, independent of the nature of that situation, be it physical, mental, spiritual, or social.

- There are minor and major stressors. They sum together. The more intensive the sum of stressors become, on a scale from 1 to 100, the more they affect our health.

- Stress is in essence, not the situation itself – although they are generally confounded –, but our response to it. Our response is modified by our perception, attitude, and previous experience. This means that we have at least some control over our responses to life events.


Physiological Effects of Stress on the Organism

The immediate physiological effects of an acute stress can be seen on the picture. They correspond to the phase of alarm of the *general adaptation syndrome*¹. We could say that such reactions are normal because these are the physiological mechanisms necessary to be ready to either “fight” or “flight”. In general, these effects disappear after the acute phase is over without leaving detrimental consequences behind. The problem arises when the stressor is: too strong, too long, or out of place.

Constant stress without necessary phase of recovery leads to the stage of exhaustion, which may result in several health problems, like peptic ulcers, hypertension, decreased libido, anorexia, depressed immune system, and finally depression. These are also called psycho-somatic diseases. Today we know that the mind and body affect each other in a much closer way than ever expected.

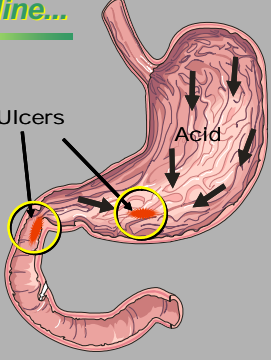
Physiological effects on the body

- ❖ Immediate effects
 - outpouring of adrenaline
 - blood pressure rises
 - heart beat accelerates
 - more blood to muscles
 - less blood to kidneys & bowel
 - pupils dilate
 - mental activity sharpens




Cortisol, adrenaline...

- Peptic ulcers
- Hypertension
- Decreased libido
- Anorexia
- Depressed immune system
- Depression



Physiological effects on the body

- ❖ Effects of prolonged stress
 - lower resistance to disease
 - mental exhaustion
 - anxiety, irritability
 - reduced self-esteem
 - emotional hypersensitivity
 - tendency to use alcohol & drugs
 - loss of faith and meaning of life



As we mentioned already, the causes of stress can be in any one of the four areas, physical, mental, spiritual, social, or a combination of these. Independent of the origin of the stress, all these areas will be affected because our organism functions as a unity. Some individuals may suffer more in the physical area while others perhaps will feel the consequences more in the emotional or social area, according to their individual peculiarities. There are great variations.

Infections and cancer are more frequent during the three years that follow major losses.

How comes that some people are more able to bear or to handle stress than others? More resistant individuals will respond with a less intensive reaction. These individual differences can be in either one or several of the four areas mentioned before. We can train ourselves to be able to support and manage heavier loads. This can be done through education and through a healthy lifestyle that strengthens our resistance and ability to cope, as we will see later.

¹ Stages of the general adaptation syndrome: 1) Alarm, 2) Resistance, 3) Exhaustion.

Response to Stress

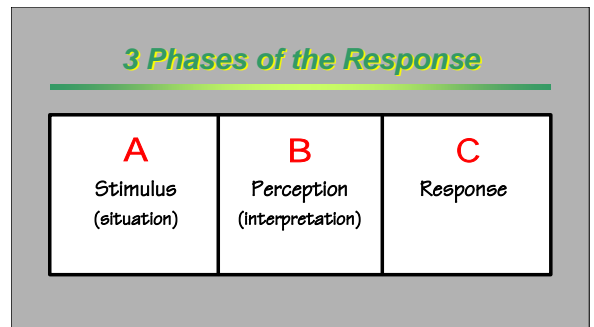
The 3 phases of response are:

- A. The stimulus or stressor. We cannot avoid all stressors but we can learn how to avoid some of them.
- B. Our conscious response depends in great measure on how we perceive or interpret the situation. Our perception varies according to our beliefs, education and previous experience. When a baby cries at night, the father will probably perceive it as annoying while the mother may perceive it quite differently.

What about the man caressing a tarantula? Even if I knew that the spider would not bite me, I would feel quite nervous and prefer to stay away from it.

Different cultures and religions have different beliefs and sometimes superstitions that can greatly influence the behavior of their believers. By correcting wrong beliefs we may help to reduce stress. Many unnecessary fears, for example, are caused by a wrong image of God.

- C. The initial alarm reaction depends on the autonomous nervous system and the endocrine system and is known as the “general adaptation syndrome”. We have not much influence on this mechanism except for our general physical and emotional health, which can be improved. We can also educate our conscious subsequent behavior to successfully cope with the situation, and this can make a big difference.



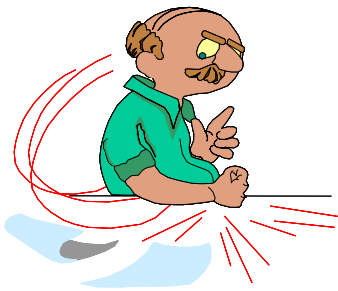
Inadequate Solutions

Under stressful situations some people lose “their head” and cause even more harm. It is easy to notice that such behavior does not help to solve the problem. It is therefore surprising how often people fall into such behavior without thinking. A good stress management requires training and repeated exercise in dealing with minor problems. You will be surprised to see how fast your capability to cope with stressful situations will grow or, at least, to bear with them.

Inadequate solutions

- ❖ denial of the problem
- ❖ use of tranquilizers
- ❖ drink alcohol
- ❖ smoke
- ❖ blame others
- ❖ to curse

Practical Applications



There are countless different stressful situations in life making it impossible to give specific unfailing recipes for each one of them. You will find innumerable books on the market about how to be successful in the school, in the job, in marriage, in human relations, etc. Nevertheless, most stressful situations can be grouped into a few categories and by following certain general principles lots of pain can be avoided, making life truly enjoyable and successful.

Time



In modern life where things get more and more accelerated, time management has become one of the most important matters. Many people start the day tired, late and unprepared. Their emotional tank is low. While dressing they listen to a few frightening news on the radio and then swallow a cup of coffee. No time for a nourishing breakfast nor for filling up the emotional tank from the all-power source from heaven! Then follow the many big and little duties of the day. And this pattern repeats day after day.

This arrangement must be changed drastically if you wish to survive in the long run. First, go to bed early – that means: no evening TV. The sleep before midnight is the most valuable. Some people say that they are owls and can't change. Oh yes, you can change but it requires a few days and perseverance. Second, get up early. Getting up at five gives you plenty of time for physical exercise, a good breakfast and worship. You will feel overflowing of energy and ready to face the challenges to come.

Usually there are more things to do than would fit into the available time frame. Therefore successful people have learned to set priorities. There are things that are important and some are urgent. Some are both and some are neither important nor urgent. No matter how you arrange things, there will not be time for all. So start with the important and leave out unnecessary things, even if they may be pleasant and good. Make a plan, a written list. The best time to do this is the evening before and then revise it early in the morning. Learn to delegate – it is not easy! Start small, persevere, it is a life-long learning process.

Be diligent!

“Whatever you do, work at it with all your heart, as working for the Lord, not for men.” (Colossians 3:23; see also Ecclesiastes 9:10)

“Go to the ant, O sluggard; consider her ways, and be wise.” (Proverbs 6:6)

See also Proverbs 13:4; 20:4; 31:10-31.

“Our time belongs to God. Every moment is His, and we are under the most solemn obligation to improve it to His glory. Of no talent He has given will He require a more strict account than of our time....

“The value of time is beyond computation. Christ regarded every moment as precious, and it is thus that we should regard it. Life is too short to be trifled away.... We have no time to waste, no time to devote to selfish pleasure, no time for the indulgence of sin....

“We are admonished to redeem the time. But time squandered can never be recovered. We cannot call back even one moment. The only way in which we can redeem our time is by making the most of that which remains,...



“Life is too solemn to be absorbed in temporal and earthly matters, in a treadmill of care and anxiety for the things that are but an atom in comparison with the things of eternal interest....

“Upon the right improvement of our time depends our success in acquiring knowledge and mental culture. ... A few moments here and a few there, that might be frittered away in aimless talk; the morning hours so often wasted in bed; the time spent in traveling on trams or railway cars, or waiting at the station; the moments of waiting for meals, waiting for those who are tardy in keeping an appointment – if a book were kept at hand, and these fragments of time were improved in study, reading, or careful thought, what might not be accomplished. A resolute purpose, persistent industry, and careful economy of time, will enable men to acquire knowledge and mental discipline which will qualify them for almost any position of influence and usefulness....

“It is the duty of every Christian to acquire habits of order, thoroughness, and dispatch. There is no excuse for slow bungling at work of any character. When one is always at work and the work is never done, it is because mind and heart are not put into the labor. The one who is slow and who works at a disadvantage should realize that these are faults to be corrected. He needs to exercise his mind in planning how to use the time so as to secure the best results. By tact and method, some will accomplish as much in five hours as others do in ten.” (Christ’s Object Lessons, chapter 25 – Talents: Time, p. 342-344)

Money



There is lots of poverty in this world. However, money cannot buy happiness. Many stresses and sufferings are caused by wrong distribution of available funds and for wanting more than we have.

Perhaps the most obvious and basic principle in money management is: Do not spend more than what you have. Of course, there are ways to finance a car or a house during several years, making it possible to buy necessary things you otherwise could not. But there are many, many things that are not really necessary and could wait. Just to mention some common things poor people spent money on, even lacking means for important things: Cigarettes, alcohol, cookies, soft drinks, radio, television, newspapers, fancy clothing, silly toys for their children, cinema, videos, popular music, etc.

One frequent cause of family fights and political trouble is because of divergent opinions about the use of money. The elaboration of a monthly budget would help many families to better distribute their scarce resources and to prevent funds slipping away through small holes. As much as possible, we should avoid making debts.



A basic principle that will help us to make correct decisions in regard to money is to recognize that everything belongs to God and we are only His stewards. “‘The silver is mine and the gold is mine,’ declares the LORD Almighty.” (Haggai 2:8)

God requires faithfulness in the administration of His means and promises rich blessings. “‘Bring the whole tithe into the storehouse, that there may be food in my house. Test me in this,’ says the LORD Almighty, ‘and see if I will not throw open the floodgates of heaven and pour out so much blessing that you will not have room enough for it.’” (Malachi 3:10) Those who have been faithful in tithe and generosity can tell many wonderful experiences about the paradox mathematics that “less is more” with God’s blessings. Solomon witnessed God’s faithfulness

when he looked back on his long life: “I was young and now I am old, yet I have never seen the righteous forsaken or their children begging bread.” (Psalms 37:25)

Here are some more counsels from Christ’s parables:

“Our money has not been given us that we might honor and glorify ourselves. As faithful stewards we are to use it for the honor and glory of God. Some think that only a portion of their means is the Lord’s. When they have set apart a portion for religious and charitable purposes, they regard the remainder as their own, to be used as they see fit. But in this they mistake. All we possess is the Lord’s, and we are accountable to Him for the use we make of it. In the use of every penny, it will be seen whether we love God supremely and our neighbor as ourselves....

“Money has great value, because it can do great good. In the hands of God’s children it is food for the hungry, drink for the thirsty, and clothing for the naked. It is a defense for the oppressed, and a means of help to the sick. But money is of no more value than sand, only as it is put to use in providing for the necessities of life, in blessing others, and advancing the cause of Christ....

“The more means we expend in display and self-indulgence, the less we can have to feed the hungry and clothe the naked. Every penny used unnecessarily deprives the spender of a precious opportunity of doing good.” (Christ’s Object Lessons, chapter 25 – Talents: Money, p. 351-352)

People



Nobody lives for himself. We were created as social beings and great part of our happiness and success in life depends on our relationships to other people. Dale Carnegie once said that “friends are worth more than money”. However, since sin came into this world our relationships have been marred. No wonder that the 10 commandments deal with our relationship to God and to our fellow men! “The commandments, ‘Do not commit adultery,’ ‘Do not murder,’ ‘Do not steal,’ ‘Do not covet,’ and whatever other commandment there may be, are summed up in this one rule: ‘Love your neighbour as yourself.’” (Romans 13:9)

Much has been written about improvement of human relations and it is worth studying some of these books or participating in a pertinent seminar. Here we will only mention three small secrets with big consequences: smile, be thankful, and listen before you speak.

A smile is the most contagious thing in the world. Solomon said that “A cheerful heart is good medicine, but a crushed spirit dries up the bones.” (Proverbs 17:22)

Say “thank you” more often, even when it is not necessary! These two small words produce miracles and may change an entire critical situation. Everybody loves a thankful person. Again, Solomon in his wisdom states that “A gentle answer turns away wrath, but a harsh word stirs up anger.” (Proverbs 15:1)




The third one is not so easy to do; it requires a lot of practice and patience. To listen is more than just to be quiet until the other party finishes speaking. To listen requires active attention and empathy. By trying to putting yourself in the shoes of the other person you may understand her better and be merciful, even if you can’t agree. Whenever you disagree or need to rebuke somebody, cool down before you begin and try to follow the rules of courtesy expressed in the accompanying picture. Don’t expect that everybody will agree with you even if you have the best arguments. But, as the apostle Peter said: “Do not repay evil with

evil or insult with insult, but with blessing, because to this you were called so that you may inherit a blessing.” (1 Peter 3:9)

And the Apostle Paul adds, “If it is possible, as far as it depends on you, live at peace with everyone.” (Romans 12:18)

Tackle the Problem

- chose adequate time and place for discussion
- think before you speak
- begin with positive aspects
- don't downgrade the ideas of others
- never use bad wording, be objective
- respect the viewpoints of others, even if they are different



Listen before you speak!

Disease



Any disease, be it in the own flesh or of a beloved one, is always a cause of stress, especially chronic diseases or cancer. When the situation arises it is the domain of the treating physician to indicate the best way to proceed. In the context of stress management, however, we must say that it doesn't help anyone to blame the sick person or anybody else for the condition. No matter what the situation may be, keep your faith in God and hold on to His promises. Jesus said, “Come to me, all you who are weary and burdened, and I will give you rest.” (Matthew 11:28)

Worries



Everyone has worries. Quite often people are distressed about things that do not concern them, and even worse, about things they cannot even change. The media are full of bad news: a tornado in some far distant country; several car accidents over the weekend; tourists kidnapped by terrorists; and so on... Of course, such news are sad and should induce us to search for ways to proclaim the gospel in order to hasten Jesus' return and the establishment of a better world where “There will be no more death or mourning or crying or pain.” (Revelation 21:4) Bad news consume emotional energy that is necessary for the management of the daily challenges.

The following statement of Jesus is sometimes misinterpreted. “Do not worry, saying, ‘What shall we eat?’ or ‘What shall we drink?’ or ‘What shall we wear?’ For the pagans run after all these things, and your heavenly Father knows that you need them. But seek first his kingdom and his righteousness, and all these things will be given to you as well.” (Matthew 6:31-33) He is not saying that we should not care for health, and make no provision whatever for sustenance, but rather, He is speaking about setting the correct priorities in life. “Seek first”, he says, then “all these things will be given to you as well.” It is still a wonderful promise! Why not try it?



How to Increase Our Resistance

Although most circumstances cannot be changed a great deal, we learned some specific things we can do to minimize and better handle the most common stressful situations. In this world we will never be totally stress-free. However, here is the good news: We can do a lot to improve our capacity to bear the hardships of life. A healthy lifestyle will provide physical,

mental, and spiritual strength to adapt and cope with the daily challenges, including the social dimensions. In my experience, this is a most vital aspect for successful stress management.

Each one of the healthy habits listed on the picture is important by itself and should be implemented in the best possible way. You can see that this lifestyle affects each detail of life: sleeping patterns, activity, nutrition, friendships, and even your emotions and beliefs. There is no quick-fix for stress management.

By following these instructions the quality of life will greatly improve; the immune system will be strengthened; self-esteem will increase; family and working tensions will be handled more calmly; the stressors will appear smaller; sleep will be deeper; and with a clean conscience and trust in God you will face life with a positive and victorious attitude!



How to increase your resistance

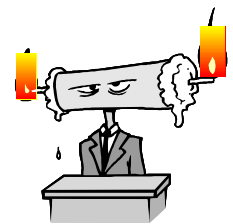
A healthy lifestyle

- ❖ sufficient sleep
- ❖ physical activity daily
- ❖ eat regularly, healthy foods
- ❖ avoid tobacco, alcohol, drugs
- ❖ cultivate good friendships
- ❖ have a clean conscience, and trust in God

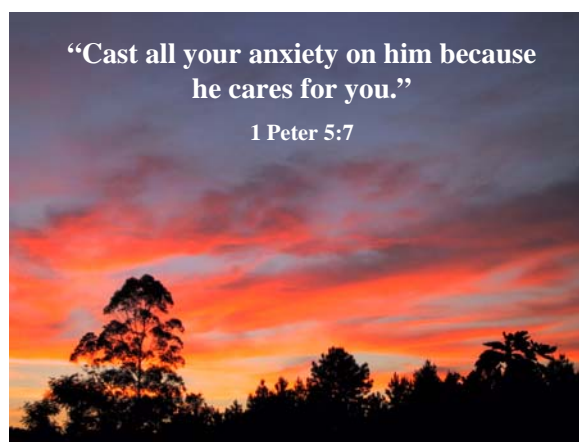
Friendships are powerful !

The “First Universal Stress Security Bank”

Finally, stress management can be compared with a bank account. Energy goes in and out. Each handling of a stressful situation consumes physical and emotional energy, some more, others less. A faulty lifestyle also depletes the physical, mental and spiritual reserves. When the bank account is empty you are in the stage of exhaustion, depression, breakdown or burnout. It is like burning a candle on both extremes at the same time.



It is important to maintain your energy account always in a positive balance. Good, regular sleep and rest will restore the energies. Fresh air and a wholesome nutrition will supply energy to body and mind for the daily activities. Good friendships will lift you up when you are down and provide the extra moral (and sometimes material) support that you may need. A clean conscience is the best tranquilizer of the world. And finally, dealing with all challenges of life requires supernatural power and wisdom. God is the source of all power and He promised, “I am with you always, to the very end of the age.” (Matthew 28:20)



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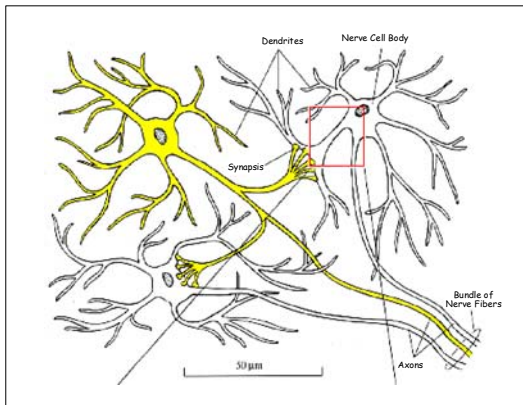
CHAPTER 6

THE MYSTERY OF THE FRONTAL LOBE

We saw that the prevention of chronic diseases depends largely on a healthy lifestyle throughout many years. This may require making some changes in our habits. The understanding of what would be best to do, what to avoid, the decision making, and the necessary willpower to put such decisions into practice, all these processes take place in the frontal lobe of the brain. It is therefore important to know at least a little bit of how the brain functions.

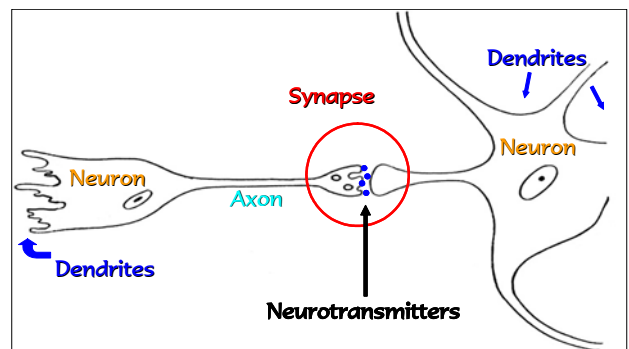


Anatomophysiology

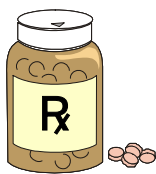


The nervous system is made of millions of nerve cells that form an intricate network. Each nerve cell has a *body* that contains the nucleus, which maintains the cell alive, and many branches, called *dendrites*. The dendrites receive information from many other nerve cells. From the nerve body also departs a long extension called *axon* that sends messages to other nerve cells, muscle cells, or other organs. A bundle of axons form what we actually call a *nerve*. The place of junction where the nerve cells communicate with each other to send or receive information is called *synapse*. The synapses are quite complicated

structures where the electrical impulses release chemical substances called *neurotransmitters*. The neurotransmitters are produced in small vesicles of the terminal bud of the sending neuron; then they are released into the *synaptic cleft* (= synaptic gap), that is the space between the two neurons, and finally they connect to specific *receptors* of the post-synaptic neuron to produce specific functions. Basically such actions can be classified into stimulation, inhibition, and modulation.



Some neurotransmitters are actually aminoacids, like glutamate and aspartate, others are hormones, like melatonin, insulin, and oxytocin. Even some gases, like nitric oxide and carbon monoxide, have physiological effects as neurotransmitters. (Wikipedia)



The most common neurotransmitters produced by the body are acetylcholin, serotonin, adenosin, and dopamin. Many medications prescribed by physicians produce their pharmacological effects (and side effects) at the level of the synapses. Among them we can mention tranquilizers, sleeping pills, and medications against allergy, asthma, colds, high blood pressure, etc.

Drugs (legal and illegal), and foods contain substances that are either neurotransmitters or work in conjunction with them. There are many known, and probably many more unknown

substances in nature that affect the synapses and stimulate, depress or modify the physiological functions. This may result in diverse sorts of effects like a sense of well-being, somnolence, reduced pain sensitivity, cardiac arrhythmia, hallucinations, psychosis, changes in personality, convulsions and death. The fast adaptation of the nerve system to such abnormal substances produces *dependency*.

Science is just barely understanding the intimate relationships between diet and behavior. It is certainly worth to think about the following inspired statement: “If the stomach is not properly cared for, the formation of an upright, moral character will be hindered. The brain and nerves are in sympathy with the stomach. Erroneous eating and drinking result in erroneous thinking and acting.” (Testimonies for the Church, vol. 9, p. 159)

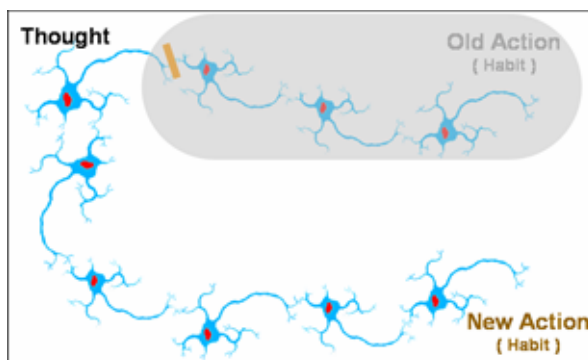
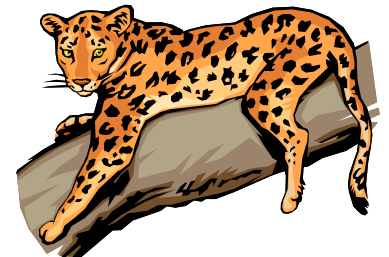
Habits and Instincts

The innumerable connections in the nerve network constitute the anatomical basis for infinite possibilities of thought combinations and other functions of the brain that coordinate and control all processes of life, conscious and unconscious as well. Frequently repeated processes result in the formation of “pathways” that are then utilized without conscious thought or decision taking. These are called *habits*.

Good habits are useful, energy-saving, and even life-saving. Bad habits are destructive and a hindrance to health and happiness.

Instincts are congenital habits programmed into the genetic code. They determine how each creature will behave.

Complex habits consist of a long chain of neurons with many synapses. Once habits are formed they are very difficult to change because the nervous pathways are already established. The Bible asks a question, “Can the Ethiopian change his skin or the leopard its spots?” And it also gives the answer, “Neither can you do good who are accustomed to doing evil.” (Jeremiah 13:23)



The best thing to do is to actively and consciously form new habits. The old ones remain dormant and may awake as soon as specific circumstances trigger them off. This explains why a “dry alcoholic” may fall back into his old habit after long time by just tasting a small dose of alcohol.

Recognizing the power of his habits and his own impotence to change them, the apostle Paul exclaimed in despair: “I do not understand my own actions. For I do not do what I want, but I do the very thing I hate.” (Romans 7:15 RSV) On the other hand he knew that there is a superior power capable to transform even the most profound traits of character. Therefore he could also declare with conviction: “I can do all things through Christ who gives me strength.” (Philippians 4:13)

“No matter what may be our inherited or cultivated tendencies to wrong, we can overcome through the power that God gives. The Holy Spirit is our Helper.” (Manuscript Releases, vol. 18, p. 139)

“The change of the natural, inherited, and cultivated tendencies of the human heart, is that change of which Jesus spoke when he said to Nicodemus, ‘Except a man be born again, he cannot see (discern) the Kingdom of God.’... The change of heart represented by the new birth can be brought about only through the effectual working of the Holy Spirit.” (The Paulson Collection of Ellen G. White Letters, p. 412)

“Therefore, if anyone is in Christ, he is a new creation; old things have passed away; behold, all things have become new.” (2 Corinthians 5:17)

Key Points to Habit Change

We have seen that inherited tendencies and acquired habits can only be changed with God’s help. However, there are things that the person has to do on his side in this process. Let’s analyze them briefly:

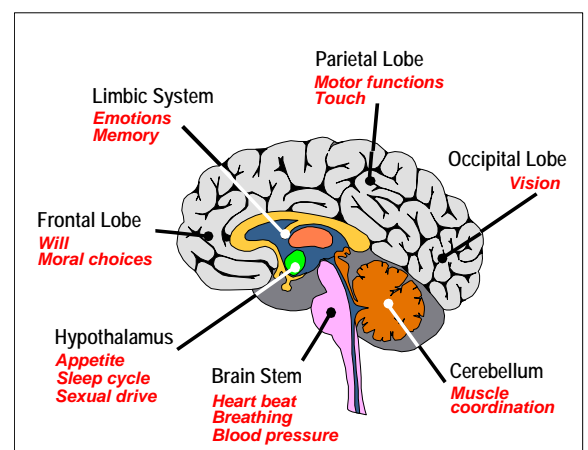
1. Analyze your habit(s). – The “old” action must become conscious in order to make possible changes. Determine what factors are involved and how they can be avoided.
2. Focus on only one or two at a time. – You will need clear and concentrate efforts, otherwise your energies will get diluted.
3. Use will power properly: Make choices not promises! – Broken promises are discouraging and will destroy your self-confidence. However, if an effort fails, you have only lost one battle, but not the war. Keep fighting!
4. Replace old with new habits. – Physiologically speaking, habits cannot be “undone” but new pathways must be created.
5. Make a strong initial effort. – Habits are strong and need to be addressed in a decided manner.
6. Ask God for help. – Bad habits are a consequence of sin. Only God can overcome the power of the evil forces. “For we do not wrestle against flesh and blood, but against principalities, against powers, against the rulers of the darkness of this age, against spiritual hosts of wickedness in the heavenly places.” (Ephesians 6:12)
7. Live a balanced, wholesome lifestyle. – No matter what the area of concern may be, chronic diseases, stress management, or changing habits, a healthy lifestyle will give you the needed physical, mental, and spiritual strength.
8. Avoid temptations. – Don’t stick your finger in the lion’s mouth!

Functions of the Frontal Lobe

The brain controls all vital functions. There are different areas and centers where specific functions are located as can be seen in the annexed figure.

The moral functions – reasoning, judgement, decision, and willpower – are located in the frontal lobe. Individual with compromised frontal lobes show


- Impairment of moral principle
- Social impairment (loss of love for family)
- Lack of foresight



- Impairment of abstract reasoning
- Diminished mathematical understanding
- Loss of empathy
- Lack of restraint

For best performance in intellectual activities, physical work, social relations, stress management and so on, the frontal lobe must function properly. The brain is an organ, like all other organs of the body, and needs oxygen, proper nutrition, mental exercise, protection from harmful substances and physical injuries. It is the most delicate of all organs and is easily affected by changes in the chemical composition of the blood.

Functions of the frontal lobe:



- Discrimination
- Judgement
- Self-control
- Willpower

They are adversely affected by:

- Decreased oxygen supply
- Over-eating or undernutrition
- Fatigue
- Alcohol
- Mind-altering drugs
- Certain lectures, TV, and music

Dr. Mervyn Hardinge,
A Philosophy of Health,
p. 138-148

We owe to Dr. Mervyn Hardinge, founder and director emeritus of the Loma Linda School of Public Health, in California, the following summary of the factors that compromise the frontal lobe functions (see picture).

Again we recognize the factors of the known NEWSTART® program. A healthy lifestyle is necessary for the best functioning of the brain, including spiritual growth.

Once more, I like to emphasize the great sensitivity of the brain compared with other organs.

Let's take for example the skin or the bones. They can survive without oxygen for several hours without apparent damage. The brain would cease to live after 5 minutes without oxygen or suffer severe permanent damage. The same happens with fatigue. A physically or mentally fatigued individual can hardly think clearly and has almost no energy to take right decisions, nor has he the willpower to act. How many good boys and girls have lost their moral integrity after a night in a disco! In such places occurs a sum of several detrimental circumstances: fatigue, lack of oxygen, alcohol and sometimes drugs, and noise. (See below under music.)

Harmful Substances in Food

All components of our blood – and therefore all substances that constitute our cells – come from the air we breathe, the water we drink, and the food we eat. All necessary nutrients (proteins, fats, carbohydrates, vitamins, minerals, phytochemicals, etc.) are available in the foods we eat, but there are also many harmful substances, either occurring naturally (many poisons and drugs), or as a result of fermentation (alcohol, vinegar), or industrial processing (benzopyrene, acrylamide, trans-fatty acids, etc.). Besides, there are often imbalances of good substances in the diet, either insufficient or in excess. It is therefore vital to learn how to select, combine and prepare wholesome, nutritious dishes for best functioning of our organism and to avoid all that is harmful.

Alcohol



The pharmacological action of alcohol is general anesthesia. The nervous system is most vulnerable because alcohol dissolves quickly in the cerebrospinal fluid and because the nerve cells are very delicate. The frontal lobe is the first one to be anesthetized and then it continues down according to *Jackson's law of descending paralysis*: Brain cortex → subcortical centers → spinal cord → brain stem (respiratory center). The effect of alcohol is therefore divided in four stages:

1. Reduced manual skill and self-criticism, euphoria, increased errors. The euphoria is NOT a stimulation of the mental functions but lack of frontal lobe control! The individual is very sociable and apparently still functioning. However, this is the stage of the accidents!
2. Loss of emotional control, incoordination, liberation of animal instincts. This is the stage of crimes of all kinds! At least half of the crimes are committed by individuals who would never act in such way without alcohol.
3. Sleep, unconsciousness, coma.
4. Skin is wet, cold, defecation, involuntary urinating, respiratory paralysis and death.

“Results of autopsy studies show that patients with a history of chronic alcohol consumption have smaller, lighter, more shrunken brains than nonalcoholic adults of the same age and gender. This finding has been repeatedly confirmed in living alcoholics using structural imaging techniques, such as computed tomography (CT) and magnetic resonance imaging (MRI). ... Imaging reveals shrinkage to be more extensive in the folded outer layer (i.e., cortex) of the frontal lobe, which is believed to be the seat of higher intellectual functions. ... Shrinkage also occurs in deeper brain regions, including brain structures associated with memory, as well as in the cerebellum, which helps regulate coordination and balance.” (National Institute on Alcohol Abuse and Alcoholism, No. 47, April 2000, <http://pubs.niaaa.nih.gov/publications/aa47.htm>)

What about **alcohol-free beer**? The law permits the label “alcohol-free” up to 0.5% of alcohol content. Watch the following advice: “Despite the low alcohol content it is certainly not recommendable to give alcohol-free beer to children. This could produce a conditioning towards the beer taste making it easier to surpass the threshold to alcohol containing beer.” (Dr. Helmut Oberitter, Director for Research, German Nutrition Society, Medical Tribune, nr. 37, September 1991)



The only safe attitude towards alcohol is total abstinence! “Do not gaze at wine when it is red, when it sparkles in the cup, when it goes down smoothly! In the end it bites like a snake and poisons like a viper.” (Proverbs 23: 31-32) I urge my fellow believers not to drink alcohol-free beer or wine to give a good example to our youth!

Coffee



Coffee is one of the most commonly used beverages. Because it is addictive most coffee drinkers say that “they need it” to function. *Caffeine* is present in many beverages like coffee, tea, cocoa, mate, guarana, cola, soft drinks, and energy drinks.



“The immediate effect of caffeine is a stimulation of the central nervous system, the heart, the digestive tract, and the kidneys. By exciting the brain, it gives an illusionary sense of energy and well-being without in any way giving relaxation or rest, or increasing muscle power. The brain is stimulated to a more rapid flow of thought until the excitement subsides, then depression and fatigue follow.” (M Hardinge, *A philosophy of Health*, p. 132)

“While it is commonly believed that caffeine increases mental alertness and speeds up motor performance, it can affect motor skill adversely when delicate muscular coordination and accurate timing are required.” (Goodman & Gilman, *The Pharmacological Basis of Therapeutics*, 1970, p. 358-368)

“This is strictly illustrated in the effect of caffeine on the ability of spiders to build geometrically designed webs. Instead of a beautiful orb, the caffeine web is a ragged distortion of what it ought to be.” (Witt, Reed, Peakall, *A Spider’s Web*, p. 60-61)

The main problem of coffee is not the stimulation of the brain itself but its many other undesired effects on coronary disease, blood pressure, gastric secretion, blood sugar and cholesterol levels. It also has been associated, at least as a potentiator, with cancers of the bladder and pancreas. In high doses it also can lead to psychiatric disorders like anxiety and sleep disorders.

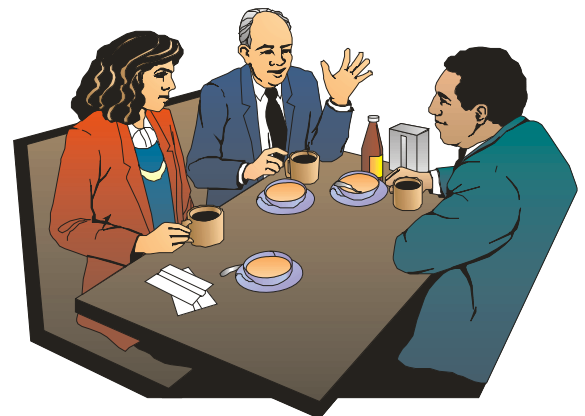
“In large amounts, and especially over extended periods of time, caffeine can lead to a condition known as ‘caffeinism.’ Caffeinism usually combines ‘caffeine dependency’ with a wide range of unpleasant physical and mental conditions including nervousness, irritability, anxiety, tremulousness, muscle twitching (hyperreflexia), insomnia, headaches, respiratory alkalosis and heart palpitations. Furthermore, because caffeine increases the production of stomach acid, high usage over time can lead to peptic ulcers, erosive esophagitis, and gastroesophageal reflux disease. However, since both ‘regular’ and decaffeinated coffees have been shown to stimulate the gastric mucosa and increase stomach acid secretion, caffeine is probably not the sole component of coffee responsible.” (<http://en.wikipedia.org/wiki/Caffeine>)



Here follow some inspired counsels of Ellen G. White written in 1890:

“Coffee is a hurtful indulgence. It temporarily excites the mind to unwonted action, but the aftereffect is exhaustion, prostration, paralysis of the mental, moral, and physical powers. The mind becomes enervated, and unless through determined effort the habit is overcome, the activity of the brain is permanently lessened. All these nerve irritants are wearing away the life forces, and the restlessness caused by shattered nerves, the impatience, the mental feebleness, become a warring element, antagonizing to spiritual progress. ...

“Those who resort to tea and coffee for stimulation to labor, will feel the evil effects of this course in trembling nerves and lack of self-control. Tired nerves need rest and quiet. Nature needs time to recuperate her exhausted energies. But if her forces are goaded on by use of stimulants, there is, whenever this process is repeated, a lessening of real force. For a time more may be accomplished under the unnatural stimulus, but gradually it becomes more difficult to rouse the energies to the desired point, and at last exhausted nature can no longer respond....



“The habit of drinking tea and coffee is a greater evil than is often suspected. Many who have accustomed themselves to the use of stimulating drinks, suffer from headache and nervous prostration, and lose much time on account of sickness. They imagine they cannot live without the stimulus, and are ignorant of its effect upon health. What makes it the more dangerous is, that its evil effects are so often attributed to other causes.” (Counsels on Diet and Foods, p. 421- 422)

“When these tea and coffee users meet together for social entertainment the effects of their pernicious habit are manifest. All partake freely of their favorite beverages, and as the stimulation influence is felt, their tongues are loosened, and they begin the wicked work of talking against others. Their words are not few or well chosen.” (Temperance, p. 79)

Ellen G. White's writings indicate that people should drink coffee and tea only for rare medicinal purposes.

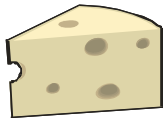
Meat



“Another food chemical that causes brain problems is *arachidonic acid*. This compound interferes with the manufacture and storage of acetylcholine, the important neurotransmitter mentioned earlier that is extensively involved with frontal lobe function. A decrease in brain acetylcholine is associated with impaired mental functioning. Thus, the result of arachidonic acid is to decrease the ability of the frontal lobe to function efficiently. One of the most common dietary sources of arachidonic acid is meat. In fact, arachidonic acid is found almost exclusively in animal products.” (N Nedley, Proof Positive, p. 275)

“Eating much flesh will diminish intellectual activity. Students would accomplish much more in their studies if they never tasted meat. When the animal part of the human nature is strengthened by meat-eating, the intellectual power diminishes proportionately. A religious life can be more successfully gained and maintained if meat is discarded, for this diet stimulates into intense activity lustful propensities, and enfeebles the moral and spiritual nature. ‘The flesh warreth against the spirit, and the spirit against the flesh.’ Gál. 5:17.” (Counsels on Diet and Foods, p. 389)

Cheese



“*Tyramine* is found abundantly in cheeses, wines, and other rich foods. No doubt, some of tyramine’s frontal lobe impairment results from its stimulation of the body’s stress hormone system. When this agent is ingested, the sympathetic nerve endings are stimulated to release a chemical called norepinephrine, which is the primary chemical that triggers the body’s stress response.

“Another related chemical that causes brain transmission problems is *tryptamine*. Like tyramine it is classed as a ‘biogenic amine.’ Tryptamine is known for its mind-altering effects. It has been associated with nightmares and is even classed with drugs like LSD and psilocybin because it can cause hallucinogenic effects. Interestingly, food sources of tryptamine often contain tyramine as well. Examples of foods with reported concentrations of these mind-destabilizing elements include cheese, fish, and sausages.” (N Nedley, Proof Positive, p. 275)

Sugar



“Other parts of the body can use fat, protein, or carbohydrate for energy, but not the brain. The brain uses glucose almost exclusively as its source of energy. Apparently as a result of the brain’s very rapid metabolism, it is dependent on minute-to-minute supplies of this simple carbohydrate. This becomes easier to appreciate when you understand that the brain has a metabolic rate 7.5 times greater than the average body tissue. Although it makes up only 2 percent of our body’s mass, the brain accounts for 15 percent of our total metabolism.

“The brain, however, does not have much room to store nutrients – space is extremely limited by the hard shell of the skull. Thus, for peak performance, the frontal lobe requires blood with a steady and adequate glucose level. A diet containing lots of refined foods can cause the blood sugar to rise quickly, and then fall below normal. Such food options abound at snack machines and dessert counters. They are best left out of our diets. It would be better to eat liberally of a wholesome variety of complex carbohydrates such as those found in potatoes, rice, whole grain breads, and cereals.

“Years ago when scientists first discovered that the brain functioned best with carbohydrate fuel, some people began referring to candy bars as ‘brain food.’ Eventually we learned that, for sustained performance, refined sugar was not brain food at all; it was just the opposite.

“One study of 46 five-year old boys was particularly revealing. Boys with little sugar in their diet had superior attention spans and more accurate responses than their high-sugar consuming peers. The difference could not be explained by IQ or the parent’s social or education status. When tested, the boys on a low refined-sugar diet performed the equivalent of one whole grade letter higher in school.” (N Nedley, Proof Positive, p. 273)

Ellen G. White gives the following short explanation about sugar:

“I frequently sit down to the tables of the brethren and sisters, and see that they use a great amount of milk and sugar. These clog the system, irritate the digestive organs, and affect the brain. Anything that hinders the active motion of the living machinery, affects the brain very directly. And from the light given me, sugar, when largely used, is more injurious than meat.” (Testimony Studies on Diet and Foods, p. 121)

“Sugar is not good for the stomach. It causes fermentation, and this clouds the brain and brings peevishness into the disposition.” (Counsels on Diet and Foods, p. 327)

Drugs



There are many illegal psychoactive drugs on the street. They all act at the synapses producing pleasant feelings and/or other strange sensations to fill the emotional emptiness of the individual. He or she may feel like being in another world, out of reality. There are several problems with the use of these substances:

1. The sensations are far from being normal. Sometimes the individual loses connection with reality and behaves abnormally.
2. Overdoses often produce coma and death. Long term use damages the liver, is frequently associated with poor health, and certainly damages the frontal lobe. With time the individual changes his social behavior and seeks other companions. Priorities in life change and are centered on the drug.
3. After the “high” is over the individual suffers a “down”, which is accompanied by very unpleasant physical and psychical *withdrawal symptoms* thus causing dependency (addiction). The down is often so awful that the individual desperately seeks another dose just to return to “normal”. Abrupt withdrawal, also called *cool turkey* may be very painful and individuals need to be protected from harming themselves, jumping out the window, etc.
4. The best protection from drugs is to never experiment them, not touching them, and to react with a decided NO when tempted by friends.

Other Foods That Influence the Brain

Television



The eyes are the most potent receptors of the brain. The retina of the eyes is histologically an extension of the brain cortex. Mental hygiene starts with a careful selection of what we see and behold.

Talking about television, we must consider two aspects. First, the content of the program, and everybody knows that most TV programs are loaded with immorality and violence. Their illusionary scenes provide a distorted view of reality (comparable to the psychoactive drugs). Such should be avoided as being “bad food” for the mind. Secondly, the way in which the messages are presented. It is this aspect we want to focus because it is often overlooked.

The following thoughts are excerpts from Dr. Nedley’s book *Proof Positive*, p. 278-286:

Let’s start with **hypnosis**. “The connection between hypnotism and the frontal lobe comes as no surprise to those who understand this technique. Hypnosis, by design, bypasses the frontal lobe as it helps the subject enter into a trance-like state. Dr. Freda Morris, a former professor of medical psychology at UCLA, has written several books on hypnosis. In her words, hypnosis is a state characterized by a single-minded focus on only one thing, ‘like a bird watching a snake’. While hypnotized, the subject is inattentive to all other environmental cues. A hypnotist can often induce such a state first by helping the subjects to remain quiet and still, free from all outside diversions. Next, the hypnotist helps them develop that new focus ‘on a certain point’. Once they enter a hypnotic state, they are encouraged to follow the hypnotist’s mind.

“If brain waves were measured with an EEG (electroencephalogram) during this process, we would see that the hypnotized person loses beta waves from the brain. This beta activity indicates sound thinking that involved dynamic frontal lobe activity. In the hypnotized state, however, an alpha brain pattern is operative, during which we do not critically analyze incoming information. Alpha waves are brain waves of a lower frequency than beta waves. In this state, an individual will record information and suggestions without interpretation and without frontal lobe filtering.

“A flickering light that trains the eyes to focus in one place has been noted to easily induce a hypnotic state. During the hypnotic state, individuals can receive information of various kinds, and can mentally record the duties the hypnotist asks them to perform. Indeed, their memory works well, their emotions work fine, and they can laugh and cry. But as they continue to focus on the flickering light they do not critically analyze the information they receive. None of the information is filtered according to their sense of values or moral worth; their very reasoning powers are being bypassed. The frontal lobe has been short-circuited.”

“The classic setting for TV watching is similar to a typical environment for hypnotism induction: a darkened room, a flickering light (the TV set) as a single-minded focus, and freedom from all outside diversions.... Does what you watch make any difference on your mind and character? The answer is both yes and no. Although the content you view exerts a powerful effect on your mind, the medium itself also appears to have profound mental effects. Evidence suggests that the very vehicle of television is – in itself – usually detrimental. This deleterious frontal lobe effect appears to be the result of the camera-switching work in most videos and other programming. The technical problem with the filming technique is referred to as a ‘rapidly changing scene of reference.’ Specifically, the average television program changes its scene of reference every three to five seconds. The perspective from which you are viewing the event suddenly changes many times each minute, whether you want it to or not. This is in sharp contrast to how we normally view the world around us: we see real life scenes from one

perspective (where we are located at the time the events happen). We can change our perspective only by voluntarily moving.

“Dr. Morris sites television’s rapid change of reference as contributing to the hypnotic-type effect. Research by Dr. Thomas Mulholland looked at children’s EEGs as they watched their favorite television programs. The researchers assumed that since these programs were their favorite shows, the kids would be mentally involved with what they were viewing and would experience an oscillation between alpha brain wave activity and beta. Instead, after just two or three minutes of the show, they sat back and stayed almost entirely in an alpha pattern. This meant that while they were watching they were ‘not reacting, not orienting, not focusing, just spaced-out.’” (N. Nedley, Proof Positive, p. 278-286)

The effects of television are far-reaching as can be seen in the following list:

- Trains in non-reaction
- Increases aggressiveness
- Reduces sensitivity to violence
- Increases daydreaming
- Decreases creativity
- Reduces discernment
- Is addictive
- Less interest in reading and learning
- Poor health habits
- Poor attitudes
- Earlier and increased sexual activity



Music



“Sing to the LORD with thanksgiving; make music to our God on the harp.”
(Psalms 147:7)

Music is very powerful, it is the universal language understood by every being. It can transmit positive, ennobling thoughts but also can produce detrimental effects on the mind and immune system. It can be soft and soothing or intensive and irritating.

Basically, music has three components:

- Harmony – that influences mostly the thoughts.
- Melody – that affects largely the feelings.
- Rhythm – that incites movement.

Of course, any music is a mixture of all these three components in various proportions causing an entire spectrum of effects. It is easy to appreciate such effects by turning on a radio and search for different stations. There may be a vivid classical music on one station, followed by a traditional church choral, then perhaps a feminine soprano voice singing an aria, or the frenetic beat of a rock band. You will immediately feel the differences and such will be the effects on your system! There is no need for rationalization.

A lot has been written about the influence of music by individuals who were once active rock stars and later became converted. I refer to such literature for more insight.¹

¹ Look for books or cassettes from Bryan Neumann, Louis Torres, and others or attend one of their seminars about music.

At this place I wish to emphasize an important point that is often overlooked. One thing is to **sing actively** and another is to listen passively.

“With a song, Jesus in His earthly life met temptation. Often when sharp, stinging words were spoken, often when the atmosphere about Him was heavy with gloom, with dissatisfaction, distrust, or oppressive fear, was heard His song of faith and holy cheer.” (Education, p. 166)

“The history of the songs of the Bible is full of suggestion as to the uses and benefits of music and song. Music is often perverted to serve purposes of evil, and it thus becomes one of the most alluring agencies of temptation. But, rightly employed, it is a precious gift of God, designed to uplift the thoughts to high and noble themes, to inspire and elevate the soul.

“As the children of Israel, journeying through the wilderness, cheered their way by the music of sacred song, so God bids His children today gladden their pilgrim life. There are few means more effective for fixing His words in the memory than repeating them in song. And such song has wonderful power. It has power to subdue rude and uncultivated natures; power to quicken thought and to awaken sympathy, to promote harmony of action, and to banish the gloom and foreboding that destroy courage and weaken effort.

“It is one of the most effective means of impressing the heart with spiritual truth. How often to the soul hard-pressed and ready to despair, memory recalls some word of God's – the long-forgotten burden of a childhood song, – and temptations lose their power, life takes on new meaning and new purpose, and courage and gladness are imparted to other souls!

“The value of song as a means of education should never be lost sight of. Let there be singing in the home, of songs that are sweet and pure, and there will be fewer words of censure and more of cheerfulness and hope and joy. Let there be singing in the school, and the pupils will be drawn closer to God, to their teachers, and to one another.

“As a part of religious service, singing is as much an act of worship as is prayer. Indeed, many a song is prayer.” (Education, p. 167-168)

When you sing you have to think about the words. Your mind – thoughts and feelings – focus on your song. Your endocrine constellation will adapt to your mood. You cannot cry and sing at the same time. You can sing while you are walking or hum while you are working. You wish to overcome the stresses of life and be a winner! Follow the example of Jesus: “Just keep praising God, and when the devil tempts you, sing. When Christ was a child He was tempted in every way, and what did He do? He sang psalms, and praised God, and there was music in His voice. And there was an impression made upon the hearts and minds of those who heard Him.” (Sermons and Talks, vol. 1, p. 311)

The psalmist said, “I will sing to the LORD all my life; I will sing praise to my God as long as I live.” (Psalms 104:33)

The ears are the second large receptors of the brain. They cannot be closed and receive the information 24 hours a day, 7 days a week. Only mental blockage during sleep hours makes the individual unaware of the still present infiltration of subliminal messages.

Because of modern technology – radio, records, cassettes, CDs, MP3, iPod – many people restrict themselves to **passive listening** to music. Not even to listen actively and to enjoy a good piece of art, but most of the time just as a background noise during work, study, car driving, jogging, etc. Especially the radio music often goes on and on without any selection. Some people don't stop it even during a conversation. Such constant passive



receiving of information without discrimination by the frontal lobe fills the brain with lots of unnecessary bulk, when not even junk. According to Alvin Toffler, “Constant stimulation of the senses shuts down the analytical processes, and ultimately shuts down the ability to face life rationally. This leads to escape techniques that involve withdrawal, apathy, and rejection of disciplined thinking when faced with difficult duties and decisions.” (Toffler A. *Future Shock*. New York, NY: Random House Inc., 1970)

Like any other organ, the brain also needs phases of rest to recover energy and vigor for new tasks. In modern life, especially in the cities, there is almost no time for meditation and introspection. No time for thinking. No wonder that people become nervous, restless, irritable, impatient and insecure. Such an overloaded brain is at the border of breakdown and depression – a rapid increasing characteristic of modern civilization!

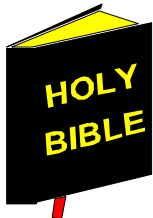
Best Food for the Brain

Whole Plant Based Foods

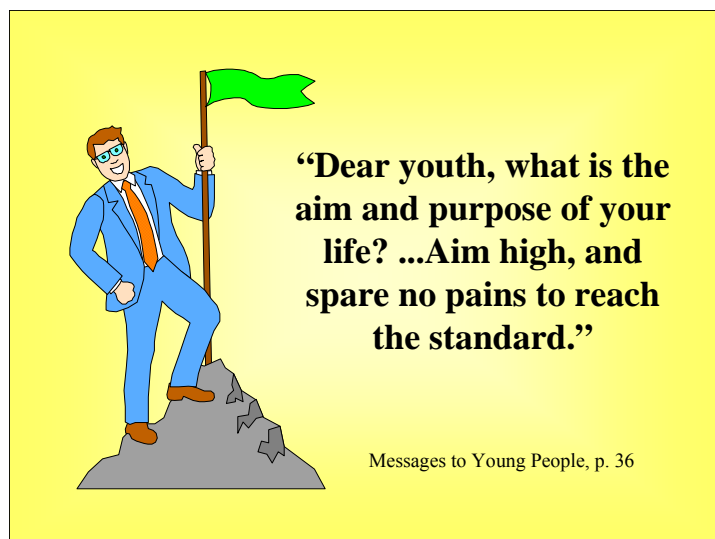


“Grains, fruits, nuts, and vegetables constitute the diet chosen for us by our Creator. These foods, prepared in as simple and natural a manner as possible, are the most healthful and nourishing. They impart a strength, a power of endurance, and a vigor of intellect that are not afforded by a more complex and stimulating diet.” (Ministry of Healing, p. 296)

Study of The Bible



“There is nothing more calculated to strengthen the intellect than the study of the Scriptures. No other book is so potent to elevate the thoughts, to give vigor to the faculties, as the broad, ennobling truths of the Bible. If God's word were studied as it should be, men would have a breadth of mind, a nobility of character, and a stability of purpose that is rarely seen in these times.” (Christian Education, p. 58)



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CHAPTER 7

WHAT YOU SHOULD KNOW ABOUT DIABETES

The name “diabetes mellitus” comes from the Greek and means “excessive sweet water excretion.” That happens when diabetes is not being treated. When people wanted to say that they are diabetic, they often said “I have sugar”. As a result from this thinking it was believed that diabetics should not eat anything containing sugars, that means carbohydrates, including sweets, fruits and starchy foods. Based on this concept doctors recommended eating predominantly meat and dairy products. This was exactly wrong counsel! Today we understand better the real pathophysiology of this disease and can give better advice.

What is Diabetes?

First it must be clarified that there are two types of diabetes. Type I (one) is a congenital defect in the production of insulin by the pancreas and needs insulin substitution. We will not talk about this here. Type II (two) depends on the lifestyle and appears at later age. Because of the progressively worse lifestyle the onset of type II is becoming earlier in life.

There are some false beliefs among the public about this disease:

1. Diabetes is just a too high blood sugar level. By lowering this level with insulin or other medication everything will be o.k.
2. People get diabetes because it is in their genes.
3. Once a person gets diabetes it is for the rest of the life and will require permanent medication.



Here are the truths:



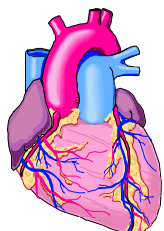
1. Diabetes is a complex metabolic disorder with serious consequences. Because it is mostly asymptomatic in the beginning, people only become aware of it as a result of a blood analysis for some other reason.
2. Some people have a hereditary tendency to diabetes but the lifestyle factor is necessary for its expression. Diabetes type II is one of the chronic lifestyle diseases that can be prevented. As the World Health Organization states:

“These chronic diseases (coronary heart disease, certain cancers, hypertension, and diabetes) are, in part, manifestations of nutrient excesses and imbalances in the »affluent« diet, so they are in principle, largely preventable.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 14)

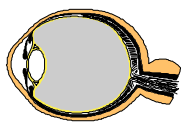
3. Diabetes type II can be reversed, and this is the good news! If the disease is too advanced the regression may not be complete but a good lifestyle program, that includes good nutrition, exercise and weight control usually helps to minimize the need for medication.
4. Diabetes damages the small arteries of the body with serious consequences:
 - Life expectancy is shortened by 5-10 years
 - 2-12 x higher risk for heart disease

- 2-4 x higher risk for stroke
- Number one cause of blindness in adults
- Greater susceptibility for infections

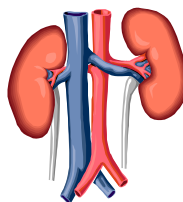
5. Some of the final complications of uncontrolled diabetes are the following:



Heart attack



Blindness



Renal failure
(Dialysis)



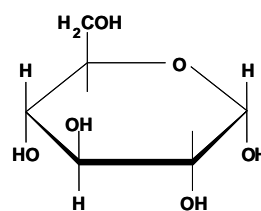
Gangrene
(Amputation)

Carbohydrates

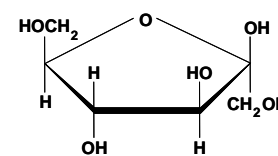
Carbohydrates are the most abundant organic compounds found in nature. They are produced by green plants through photosynthesis. The name refers to their chemical formula containing carbon and water.

The carbohydrate group is basically subdivided into *simple or oligosaccharides* (sugars) and *complex or polysaccharides* (starch, dextrin, cellulose).

The most important **simple sugars** are glucose (=dextrose), fructose (=laevulose), and sucrose (ordinary cane or beet sugar). Glucose and fructose are monosaccharides, each of them containing 6 atoms of carbon according to their simple formula $C_6H_{12}O_6$. However, their geometrical structure is quite different and so are their behavior and function. Glucose and fructose are found in all fruits and in honey. They provide fast energy because they don't need digestion.



Glucose



Fructose

When two monosaccharide molecules join together with the elimination of a molecule of water, yield a disaccharide, of which the most important is sucrose (ordinary cane or beet sugar). Lactose and maltose are also disaccharides. *Honey* is a mixture of glucose, laevulose, some sucrose and minor quantities of minerals and vitamins.

Polysaccharides are **complex carbohydrates** that have enormous molecules made up of hundreds of monosaccharide units. There are several types of polysaccharides or complex carbohydrates.

The *starches* are found mainly in cereals (wheat, oats, rye, rice, corn, etc.) and tubers (potato, sweet potato, cassava, etc.). Starches are important because the digestive process releases the individual glucose molecules progressively over several hours, thus avoiding a sudden raise of the blood sugar level. This contributes to maintain the blood sugar on a more stable level, helping therefore in the management of diabetes.

Glycogen is chemically similar to starch and represents the storage form of glucose in the liver of the animals. It constitutes a reserve of energy that the body can use by transforming it again back to glucose. The small amount of glycogen found in animal foods has little nutritious value.

Dextrines are fragments of starch obtained through the action of heat, acids or enzymes.

Cellulose and lignin – also called fibers – are the main structural elements of the plant cell walls. They are found in the roots, stems, leaves, fruits and outer parts of the cereal grains. White flour and polished rice lost most of their valuable bran. Fibers can not be digested by humans but nevertheless, they play important roles for our health.

Benefits of a high-fiber diet:

- improves gastrointestinal function
- reduces serum levels of cholesterol and triglycerides
- lowers high blood pressure
- helps regulation of blood sugar
- reduces insulin requirements
- reduces body weight in the obese
- reduces risk of heart disease



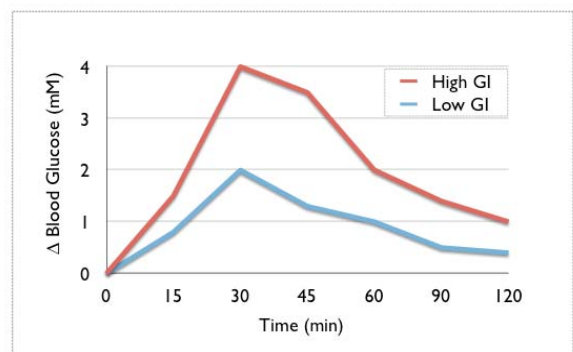
A healthy diet should contain abundant complex carbohydrates (starch and fiber) – up to 70% of the total energy intake – and only a minimum amount of free sugars (sugar, honey, glucose and fructose in isolated form). However, glucose and fructose as they are present in whole fruits are welcome because they are associated with plenty of fiber and other nutrients.

According to an expert group report of the WHO, “The nutrient goals indicate that the health needs of the population are best met by a high-carbohydrate, low-fat diet, rich in starchy foods (e.g., cereals, tubers, and pulses) and including a substantial intake of vegetables and fruit.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 158)

Glycemic Index

The glycemic effect of a food is the effect that food has on a person’s blood glucose and insulin response – how fast and how high the blood glucose rises, and how quickly the body responds by bringing it back to normal.

Although it is true that simple sugars produce a major surge in blood glucose whereas complex carbohydrates produce a flatter response curve, the overall glycemic effect of a given meal depends on the combination of foods consumed in that meal.



Energy From Food

Basically there are six classes of nutrients:

- Carbohydrates
- Fats
- Proteins
- Vitamins
- Minerals
- Water

During metabolism, the first three classes of nutrients provide energy the body can use. Some of this energy is released as heat, some is transferred into other body compounds (including fat), and some is used as fuel for your activities.

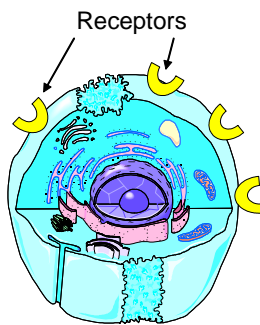
The amount of energy can be measured in **calories** (or more properly, kilocalories or kcalories). Technically, a calorie is the amount of heat necessary to raise the temperature of 1 g of water 1°C. Food energy is measured in kilocalories (thousands of calories), abbreviated kcalories or kcal. Most people, even nutritionists, speak of these units simply as calories, but on paper they are prefaced by a “k”. People think of “kcalories” as a constituent of foods, but strictly speaking they are only a measure of the energy in foods. Each gram of carbohydrates produces approximately 4 kcalories, of fats 9 kcalories, proteins 4 kcalories, and alcohol 7 kcalories.

Food energy can also be measured in **Joules (J)**. A kilojoule is the amount of energy expended when 1 kg is moved 1 meter by a force of 1 Newton. It is thus a measure of work energy, whereas the kcalorie is a measure of heat energy. Both are metric measures. One kcalorie equals 4.2 kJ. The kilojoule is the international unit of energy, but it is not in popular use yet. For those using kilojoules: 1 g carbohydrate = 17 kJ; 1 g protein = 17 kJ; 1 g fat = 37 kJ; and 1 g alcohol = 29 kJ.

Carbohydrates and Diabetes

The metabolism of sugar is very complex and depend on many factors and relay mechanisms. The following explanation is oversimplified. All living cells in our body need energy to work. This fuel is provided mostly by glucose. When the glucose and its reserves (in the form of glycogen) are used up, then the body will turn to fat and protein. The brain can only utilize glucose.

The blood sugar level must be maintained within a healthy range. When it is too low the brain and muscles cannot function properly; the person will feel weak, faint, and may enter in shock. A too high level also disturbs many functions like in the case of diabetes.



After eating simple sugars the blood glucose level raises quickly. The pancreas produces insulin in order to “open” the receptors at the cell walls so that the glucose can go in and be used. By doing so the glucose level in the blood will be lowered to normal and sometimes, if there is too much insulin secretion, the blood sugar level will even fall below normal. The person feels weak and hungry.

Of course, the cells cannot use up so much glucose so quickly. Some of the excess glucose in the blood will be stored as fat and some may be excreted by the kidneys.

Complex carbohydrates, e.g. starch, must be digested and will release glucose molecules slowly into the bloodstream over a period of several hours (see also “glycemic index” above). This saves the pancreas hard work and avoids too big fluctuations in the blood sugar level with its harmful consequences. In a diabetic person such diet helps to reduce the need for insulin, therefore facilitating the control of the blood sugar level.

“A substantial amount of epidemiological and clinical data indicates that a high intake of plant foods and complex carbohydrates is associated with a reduced risk of several chronic diseases, especially coronary heart disease, certain cancers, hypertension, and diabetes.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 99)

“Moreover, an increased intake of wholegrain cereals, vegetables and fruits (all rich in fiber) was a feature of the diets associated with a reduced risk of progression of impaired glucose tolerance to type 2 diabetes.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 2003, p. 75)

“Diets high in plant foods are associated with a lower incidence of diabetes mellitus. In a large follow-up study of Californian Seventh-day Adventists, the death rate from diabetes mellitus was approximately half that for all whites in the USA. Moreover, within the same group, vegetarians had a substantially lower risk than non-vegetarians of having diabetes as an underlying or contributing cause of death.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 75)



Fat and Diabetes

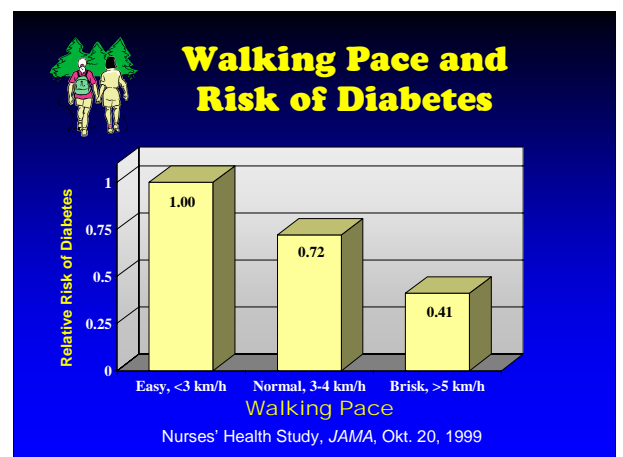
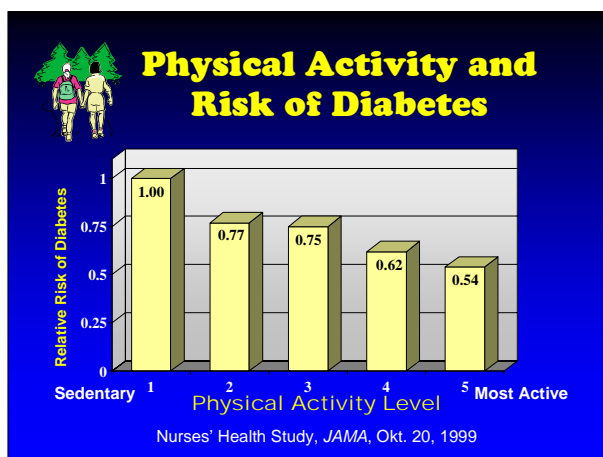
“In observational epidemiological studies, a high saturated fat intake has been associated with a higher risk of impaired glucose tolerance. ... Considered in aggregate these findings are deemed to indicate a probable causal link between saturated fatty acids and type 2 diabetes, and a possible causal association between total fat intake and type 2 diabetes.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 2003, p. 74-75)

Translating these research findings into simple words we would say that a high amount of fat in the diet, especially saturates fats from animal sources, will block the insulin receptors at the cell wall (see figure above).

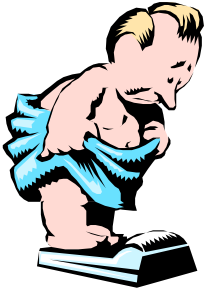
Exercise and Diabetes

“Longitudinal studies have clearly indicated that increased physical activity reduces the risk of developing type 2 diabetes regardless of the degree of adiposity.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 2003, p. 74)

Again, in pictorial words we could say that physical activity increases the number of insulin receptors at the cell wall. The following charts show clearly that physical activity reduces the risk for type 2 diabetes and so does also the walking pace.



Weight Control and Diabetes



“In all societies, overweight and obesity are associated with an increased risk of type 2 diabetes.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 2003, p. 73)

Quite often, mild type 2 diabetes in overweight people may normalize by merely returning to regular weight. A comprehensive lifestyle improvement program that includes a wholesome vegetarian diet and daily exercise, like the NEWSTART® program (see below), will help to reduce weight without having to suffer.

Summary of recommendations for prevention and management of diabetes

The following recommendations are applicable for both types of diabetes, 1 and 2:

1. Maintain body weight within normal limits.
2. Moderate or more intensive physical activity (e.g. brisk walking) for one hour or more per day on most days per week
3. Abundant complex carbohydrates (50-60% of total energy).
4. Minimize simple sugars (< 3% of total energy).
5. Reduce saturated fats (< 10% of total energy). Even less in high risk individuals.
6. Abundant fibers through regular consumption of wholegrain cereals, legumes, fruits and vegetables (minimum of 20 g fiber/day).
7. Limit the protein intake (12-20% of total energy).

(Diet, Nutrition and the Prevention of Chronic Diseases, WHO, 1990, p. 171 and 172; Diet, Nutrition and the Prevention of Chronic Diseases, WHO, 2003, p. 77)

Medical supervision

Diabetes is a serious disease and must be treated to avoid complications. However, medications should not be changed without medical supervision. There are simple methods to measure the excretion of glucose in the urine that can be done at home. Many patients even control their blood sugar using simple equipment with battery, which can be taken in the handbag when traveling.

Lifestyle Improvement Programs

Of all the common chronic diseases, diabetes is the one that responds best to lifestyle changes. This is what should be done in all cases of diabetes. Even in severe cases needing insulin, lifestyle modifications will help to manage better the disease. Here is what the WHO says:

“It has been demonstrated that improved lifestyles can reduce the risk of progression to diabetes by a striking 58% over 4 years. Other population studies have shown that up to 80% of cases of coronary heart disease, and up to 90% of cases of type 2 diabetes, could potentially be avoided through changing lifestyle factors, and about one-third of cancers could be avoided by eating healthily, maintaining normal weight and exercising throughout life.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 2003, p. 43-44)

The most effective way to achieve correct lifestyle changes for the prevention or treatment of chronic diseases is to participate as an inpatient in a NEWSTART® program. The program is basically the same for all chronic diseases – total vegetarian diet, walking for exercise,

abstinence from alcohol and tobacco, regular resting times, lectures on healthy living, cooking classes, physiotherapy, etc. The program is individually adapted for each patient and supervised by physicians and other medically trained personnel. According to the different institutions and needs of the patient the length of the program may vary from one to four weeks.



Such programs¹ are best carried out in so called *lifestyle centers* available in many countries on the world. Information about reversing diabetes can be found at www.reversingdiabetes.org and www.wellspringsource.org

Here is a partial list of available lifestyle centers (see also www.outpostcenters.org):

Argentina - Sanatorio Adventista del Plata, www.sanatorioadventista.com.ar

Brazil - Centro de Vida Saudável, www.cevisa.org.br
- Retiro da Saúde, www.retirodasaude.com.br

Germany - Die Arche, www.diearche.de

Malaysia - AENON, www.aenon.org.my

Norway - Fredheim, www.fredheim.org

Romania - Herghelia, www.herghelia.org

Spain - Son Natura, www.sonnatura.com

Ukraine - Our Home, www.ourhome.vin.ua

USA - Lifestyle Center of America, www.lifestylecenter.org
- Weimar Lifestyle Center, www.newstart.com
- Weimar Institute, www.weimar.org
- Wildwood Lifestyle Center, www.wildwoodlsc.org
- Uchee Pines, www.ucheevines.org

¹ The NEWSTART acronym stands for **N**utrition, **E**xercise, **W**ater, **S**unshine, **T**emperance, **A**ir, **R**est, **T**rust in God.

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Artificial Sweeteners¹

One way that people may attempt to limit their sugar intakes is by using artificial sweeteners or sugar substitutes. These do provide sweetness without sucrose, but people are curious about their safety. One set of alternative sweeteners is the **sugar alcohols** (mannitol, sorbitol, xylitol, and maltitol), which provide energy in a similar amount as sucrose. They are mainly used in special dietary products for their bulking and sweetening powers.

The **artificial sweeteners** (cyclamate, saccharin, and aspartame) are supersweet and have the advantage of being calorie-free. But are they safe? All substances are toxic if high enough doses are consumed.

Cyclamate was once approved but then banned in the United States when it was suspected, but never proved, to cause cancer in rats. In Canada, cyclamate is restricted to use as a tabletop sweetener on the advice of a physician and as a sweetening additive in medicines.

Saccharin is very popular but experiments suggested that it caused bladder tumors. For this reason, products containing saccharine must carry a warning label: “Use of this product may be hazardous to your health. This product contains saccharin, which has been determined to cause cancer in laboratory animals.”

Aspartame, also used under the name *Nutrasweet*, is found in dozens of products including diet drinks, candies, chewing gum, presweetened cereal, gelatins, baked goods and mixes, and pudding. Aspartame provides 4 calories per gram and a little protein, but because so little is needed it is virtually calorie-free. Because of its content of phenylalanine it should not be used by people with the inherited metabolic disease known as phenylketonuria.

Current evidence indicates that moderate intakes of artificial sweeteners pose no health risks. On the other part, experience has shown that the use of artificial sweeteners usually are not magic bullets to reduce weight because people usually continue to consume plenty of calories in their other meals.

Another product on the market that is rapidly calling attention is derived from the *Stevia rebaudiana* plant, also called *sugarleaf* or *sweetleaf*, with its extracts having up to 300 times the sweetness of sugar. However, health and political controversies have limited stevia’s availability in many countries. In some countries there are still restrictions or it is even banned, while in others it is being used widely, especially in East Asian countries.

For people wanting to reduce their intake of calories we suggest some other options:

1. Reduce the consumption of sweet beverages, especially soft drinks, and sweetened foods, like jams, ice cream, cookies, cakes, etc. Average soft drinks contain between 8-12 teaspoons of sugar! Pure water is still the healthiest beverage and fresh fruits provide a valuable amount of nutrients. The taste for sugar can be changed!
2. Reduce the consumption of fats overall. Watch for “invisible fats” hidden in fried foods and animal products in general.
3. Avoid snacking between meals.

¹ F. Sizer, E. Whitney, Nutrition, Concepts and Controversies, International Thomson Publishing Company, 1997, p. 141-144.

Honey

There is a belief that “white sugar (sucrose) is bad but honey is healthy”. We need to keep in mind that both, sucrose and honey are chemically very similar. Sucrose combines glucose and fructose in one molecule that needs to be digested to separate them, whereas honey contains them already as separate molecules. Both are, in essence, refined foods and should be consumed only in small amounts, mainly for pleasure. The other nutrients in honey are present in such small amounts that they cannot be counted for nutrition.

Comparative Analysis of White Sugar and Honey ESHA Research, 1998

100 g	Sugar	Honey	100 g	Sugar	Honey
Calories	387	304	Vitamin C	0	1 mg
Protein	0	.301 g	Vitamin D	0	0 mcg
Carbohydrates	99.5	82.3 g	Vitamin E- α Eq.	0	- mg
Fat	0	0 g	Calcium	1	5.99 mg
Cholesterol	0	0 mg	Copper	.043	.036 mg
Fiber	0	0 g	Iron	.06	.419 mg
Total Vit. A	0	0 RE	Magnesium	.5	2 mg
Thiamin-B ₁	0	0 mg	Manganese	.007	.08 mg
Riboflavin-B ₂	.019	.038 mg	Phosphorus	2	4.01 mg
Niacin-B ₃	0	.121 mg	Potassium	2	51.9 mg
Vitamin B ₆	0	.024 mg	Selenium	.3	.799 mcg
Vitamin B ₁₂	0	0 mcg	Sodium	1	4.01 mg
Folate	0	2 mcg	Zinc	.03	.22 mg
Pantothenic	0	.068 mg	Water	.04	17.1 g



“Eat honey, my son, for it is good; honey from the comb is sweet to your taste.” (Proverbs 24:13)

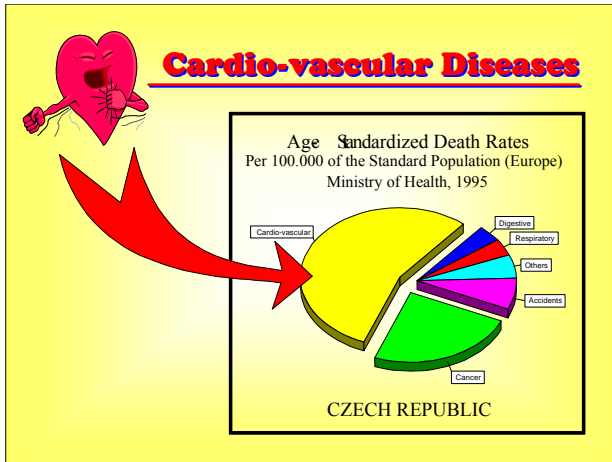
“It is not good to eat too much honey, ...”
(Proverbs 25:27)



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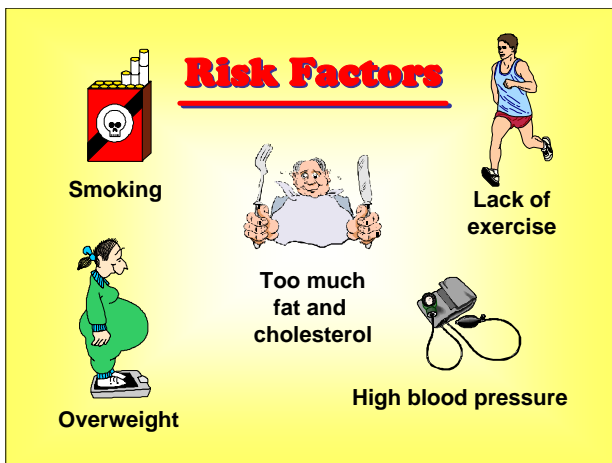
CHAPTER 8

CARDIOVASCULAR DISEASES



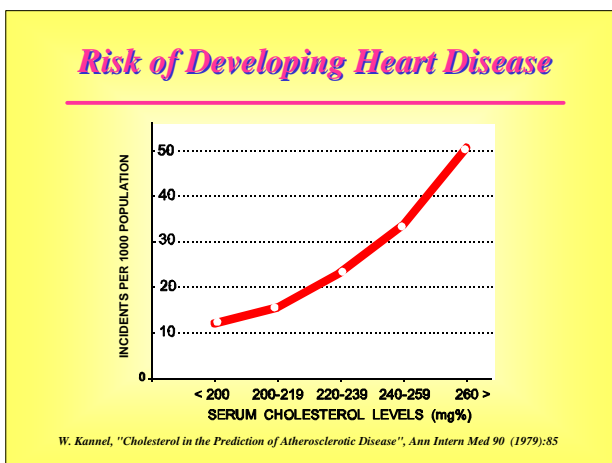
The purpose of this chapter is not to make a diagnosis and treatment but to show that cardiovascular diseases are lifestyle related and can be prevented and often treated by making correct lifestyle modifications. The pictures shall help the non-medical person understand the mechanism of arterial obstruction and infarct.

About half of all deaths in developed countries are due to cardiovascular diseases (see the yellow piece of pie). They are the result of obstruction of the arteries either by accumulations of cholesterol and calcium or thrombosis.



“Epidemiological studies carried out on middle-aged men provide clear evidence that the risk of CHD [coronary heart disease] in individuals is increased by three major factors: high serum total cholesterol, high blood pressure, and cigarette smoking.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 56)

“The ‘lag-time’ effect of risk factors for CVD [cardiovascular disease] means that present mortality rates are the consequence of previous exposure to behavioral risk factors such as inappropriate nutrition, insufficient physical activity and increased tobacco consumption. Overweight, central obesity, high blood pressure, dyslipidaemia, diabetes and low cardio-respiratory fitness are among the biological factors contributing principally to increased risk. Unhealthy dietary practices include the high consumption of saturated fats, salt and refined carbohydrates, as well as low consumption of fruits and vegetables, and these tend to cluster together.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 2003, p. 81)

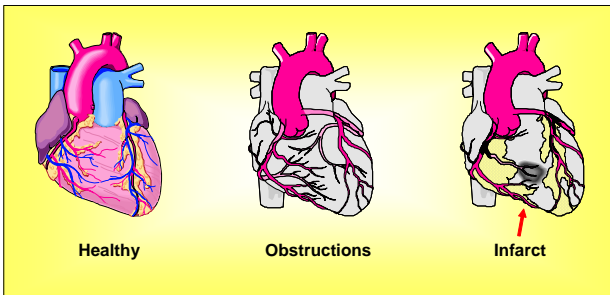


“Studies in rural parts of China indicate an average total cholesterol level of 3.24 mmol/l (125 mg/dl) and this population has an



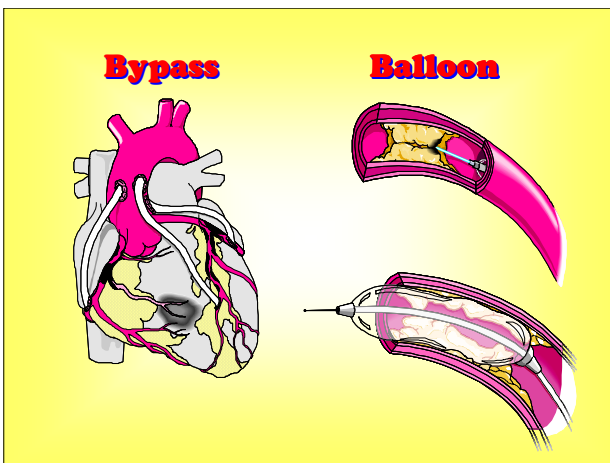
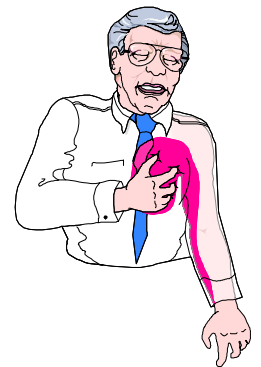
incidence of CHD of only 4% of that observed in Great Britain.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 55)

When cholesterol and calcium accumulate in the arteries the lumen gets smaller and less blood carrying oxygen can reach the tissues. At first the individual does not notice any difficulty. The symptoms begin when the disease is so advanced that the lumen has only 30% left.



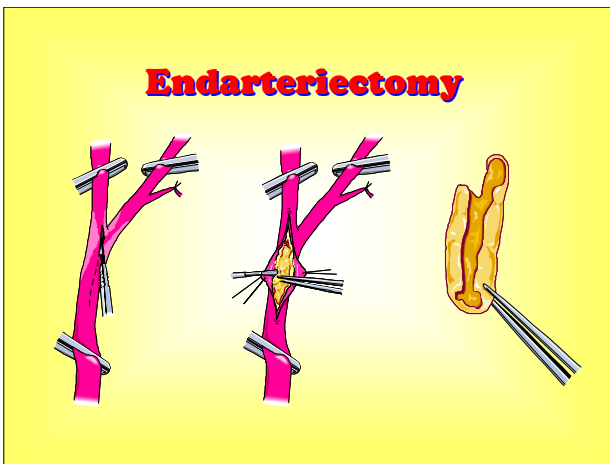
In many tissues and organs the blood vessels form a network so that the blood can bypass the obstruction. However, in the heart muscle this does not occur.

The tissue that receives insufficient oxygen supply hurts. This “obstructive” pain is called “angina”. When the oxygen supply is very low the affected tissue dies. This is called an “infarct”. Often the first symptom is sudden death!



If the obstruction is not too severe, a *balloon angioplasty* may be sufficient to open the arterial lumen without major surgery. However, dietary and other lifestyle changes are imperative to secure lasting results.

In more severe cases an *open heart surgery* may be needed to create bypasses from the aorta to the damaged tissue. These are major surgeries!



The obstruction may also affect large arteries, especially at the neck and thighs. The hard, calcified material can be taken out by opening the artery as seen in the picture. This surgery is called an *endarterectomy*. As said above, dietary and other lifestyle changes are necessary to secure lasting results. The best way to do this is by participating as an inpatient in a cardiac reconditioning program based on the NEWSTART® method (see also at the end of the chapter on diabetes). A vegetarian diet and a regular exercise are crucial components of such program.

Dietary changes may produce significant changes in blood levels of glucose, cholesterol and triglycerides after two or three weeks, but the organic lesions on the arteries may take several months to show measurable improvements. This can easily be understood when considering the fact that it took one or two decades to develop them.

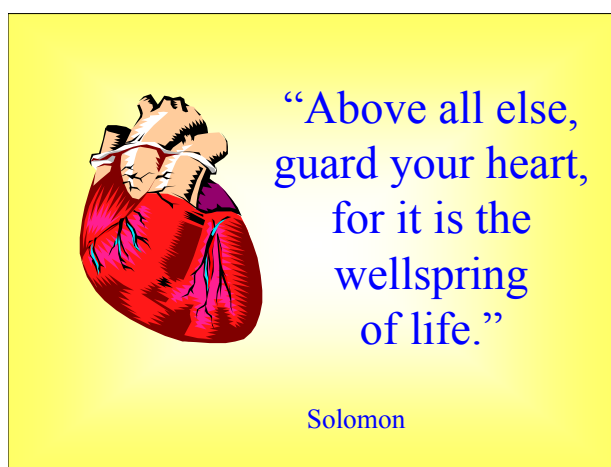
“A substantial amount of epidemiological and clinical data indicates that a high intake of plant foods and complex carbohydrates is associated with a reduced risk of several chronic diseases, especially coronary heart disease, certain cancers, hypertension, and diabetes.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 99)

“Population subgroups consuming diets rich in plant foods have lower CHD [coronary heart disease] rates than the general population. For example, Seventh-day Adventists in the Netherlands and Norway have CHD rates that are one-third to one-half of those in the general population. Californian Seventh-day Adventists who eat meat have higher rates than do those who are vegetarians, and British vegetarians have a 30% lower rate of CHD mortality than non-vegetarians once an allowance is made for their low rates of cigarette smoking. Serum cholesterol levels among vegetarians are significantly lower than among lacto-ovo-vegetarians and non-vegetarians.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 57)

Coronary Heart Disease, Water Intake, and Nuts

Statistics gathered from the Adventist Health Study, a massive research Project of the Loma Linda University (www.llu.edu/llu/health), showed that healthy people who drank five or more glasses of water per day had only half of the risk of coronary heart disease (CHD) compared with those who drank only two glasses of water per day. People who replaced some of the water by other fluids, such as fruit juice, milk, or soda did not have the same protection. In fact, their risk was even higher. (American Journal of Epidemiology, Vol. 155, No. 9, 2002)

Also “in the Adventist Health Study, people who ate nuts (mostly almonds and walnuts with lesser amounts of peanuts) one to four times per week had a 25% reduced risk of CHD, while those who ate nuts five or more times a week experienced a 50% reduction in risk of CHD, compared with people who ate nuts less than once a week.” (J. Sabaté, Vegetarian Nutrition, 2001, p. 350)



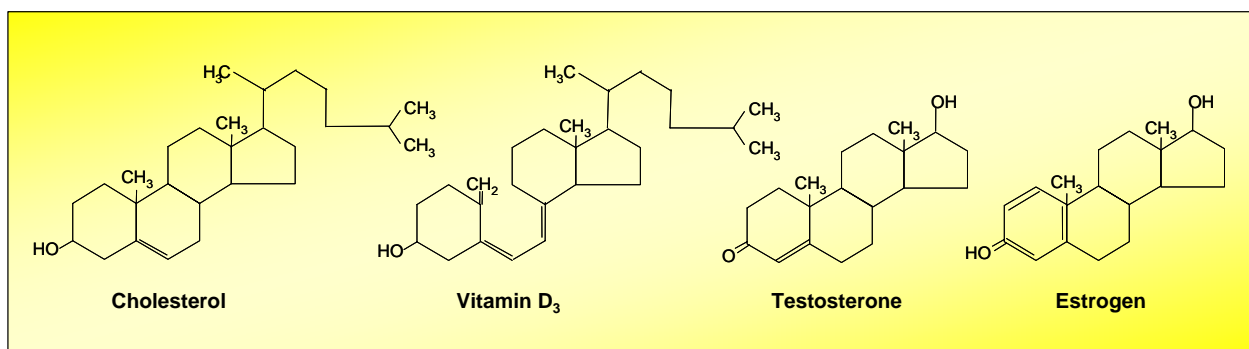
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CHAPTER 9

CANCER

The Mystery of Life

Before we start with cancer – that is abnormal cell reproduction – let's take a brief look at some of the mysteries of life. In essence, our organism is a super complicated array of chemical substances, which work together in a meaningful and productive way that we call "life". Such thing can not appear by chance and was created by our loving God and father. His wisdom is infinite. Observe for example the close similarities between cholesterol and vitamin D₃ or between testosterone and estrogen, the male and female hormones. Minimal changes in the connections between some atoms result in great differences in their functions. Men and women are so similar and so different...



It is therefore easy to comprehend how complicated must be the mechanisms to maintain the order in this complex system and how easy it could be disturbed. Think about how heat can change healthy *cis*-fats into harmful *trans*-fats. We live only through God's permanent power and grace. We have seen how the psycho-neuro-immune system and the endocrine system work together in all regulatory functions. It is easy to realize how important nutrition is to provide the correct amount and proportions of chemicals to maintain a healthy state.

Well, this was the perfect condition when man was created. "God saw all that he had made, and it was very good." (Genesis 1:31) Sin brought changes that caused a progressive decay. Ellen G. White makes a good description of the degeneration of man after the fall:

"Man came from the hand of God perfect in organization and beautiful in form. All his faculties of mind and body were fully developed and harmoniously balanced. His nature was in harmony with the will of God. His affections were pure; his appetites and passions were under the control of reason. His mind was capable of comprehending divine things. He stood before his Maker in the strength of manhood, the crowning glory of the creative work.



"In infinite wisdom, the world which God had newly formed was placed under fixed laws. Laws were ordained, not only for the government of living beings, but for the operations of nature. Man was created subject to law. He was to glorify God by a life of obedience to the divine laws, including those that relate to his physical organization." (Ellen G. White, *Pacific Health Journal*, February 1, 1902)

Degeneration of the Human Race

“Since the fall the tendency of the race has been continually downward, the effects of sin becoming more marked with every successive generation. But so great was the vitality with which man was endowed that the patriarchs from Adam to Noah, with a few exceptions, lived nearly a thousand years. Moses, the first historian, gives an account of social and individual life in the early days of the world’s history; but we find no record that an infant was born blind, deaf, crippled, or imbecile. Not an instance is recorded of a death in infancy, childhood, or early manhood. Obituary notices in the book of Genesis run thus: ‘And all the days that Adam lived were nine hundred and thirty years; and he died.’ ‘And all the days of Seth were nine hundred and twelve years; and he died.’ Concerning another, the record states, ‘He died in a good old age, an old man, and full of years.’ It was so rare for a son to die before his father that such an occurrence was thought worthy of record: ‘Haran died before his father Terah.’

BEFORE THE FLOOD		AFTER THE FLOOD	
NAME	AGE	NAME	AGE
Adam	930	Shem	600
Seth	912	Arphaxad	438
Enos	905	Salah	433
Cainan	910	Eber	464
Mahalaleel	895	Peleg	239
Jared	962	Reu	239
Enoch (translated)		Serug	230
Methuselah	969	Nahor	148
Lamech	777	Terah	205
Noah	950	Abraham	175
Average	912 Years	Age	rapidly decreasing

“Since the flood, the average length of life has been decreasing. Had Adam possessed no greater physical force than men now have, the race would before this have become extinct.

“At the time of Christ’s first advent, humanity had so degenerated that many endured a terrible weight of misery; and not only the old but the middle-aged and the young were brought to the Saviour from all the country around, to be healed of their diseases.

“Still more deplorable is the condition of the human family at the present time. Diseases of every type have been developed. Thousands of poor mortals with deformed, sickly bodies and shattered nerves, are dragging out a miserable existence. The infirmities of the body affect the mind, and lead to gloom, doubt, and despair. Even infants in the cradle suffer from diseases resulting from the sins of their parents.

“There is a close relation between the moral law and the laws that God has established in the physical world. If men would be obedient to the law of God, carrying out in their lives the principles of its ten precepts, the principles of righteousness that it teaches would be a safeguard against wrong habits. But as, through the indulgence of perverted appetite, they have declined in virtue, they have become weakened through their own immoral practices and their violation of physical laws. The suffering and anguish that we see everywhere, the deformity, decrepitude, disease, and imbecility now flooding the world, make it a lazar-house in comparison to what it might be even now if God’s moral law and the law which He has implanted in our being were obeyed. By his own persistent violation of these laws, man has greatly aggravated the evils resulting from the transgression in Eden.

“Against every transgression of the laws of life nature utters her protest. She bears abuse as long as she can; but finally retribution comes, and the mental as well as the physical powers suffer. Nor does the punishment fall on the transgressor alone; the effects of his indulgence are seen in his offspring, and thus the evil is passed on from generation to generation.

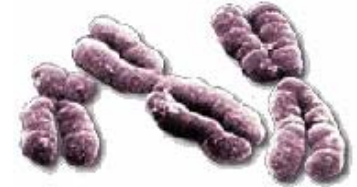
“Because mankind have, by the transgression of these laws, departed so far from God’s purpose in their creation, and have brought upon themselves such untold woe, a reform in habits relating to health has become an important branch of the great work of God in the earth. The soul temple has been polluted, and men are called upon to awake, and win back their God-given manhood.” (Ellen G. White, Pacific Health Journal, February 1, 1902)

With this background in mind it is easy to understand how delicate functions like cell reproduction can go wrong resulting in the growth of abnormal tissues called “cancer”.

Normal Cell Reproduction

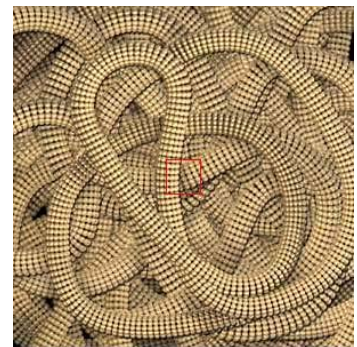
Our bodies are composed of more than a billion cells. Cells are continually dying and new cells are continually being formed. An identical copy of our hereditary material is found in the nucleus of each and every somatic cell. By viewing a nucleus under a microscope our chromosomes can actually be seen.

There are 46 **chromosomes** present in the nucleus of each human cell, which are subsequently divided into 23 pairs of x-shaped bundles. The arms of a chromosome are made up of long strands of DNA wound round in tight coils to form the chromosome. **DNA** is short for deoxyribonucleic acid, a special chemical that carries the hereditary information in almost all living things. The DNA tells the cell how to work and which particular characteristics it should have.



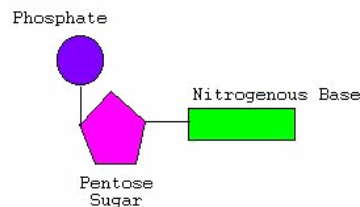
A section of DNA that tells the cell to display a certain characteristic, or produce a certain particular chemical is called a **gene**. Each cell in your body contains 40,000 different genes.

In a pair, each “arm” of the chromosome contains identical information along its length; e.g. both arms contain the gene for eye color, hair color etc. The genes are arranged in the same order in both arms. Each time a cell divides, each chromosome must be carefully replicated (copied).



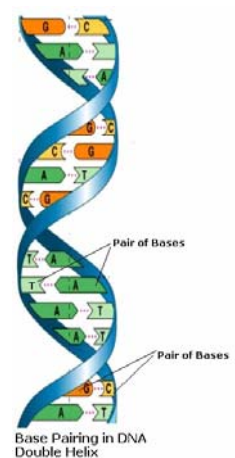
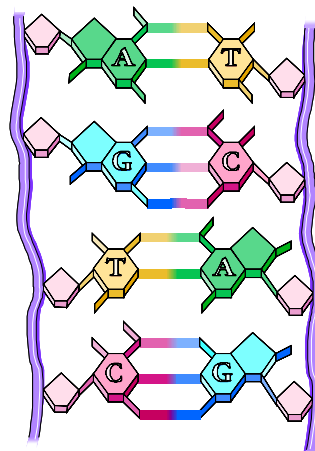
There are 4 different types of **nitrogenous bases** that can be found in the nucleotides of a DNA molecule. Each base is usually known by the first letter of its name;

- Adenine - A
- Cytosine - C
- Guanine - G
- Thymine - T



DNA Double Helix

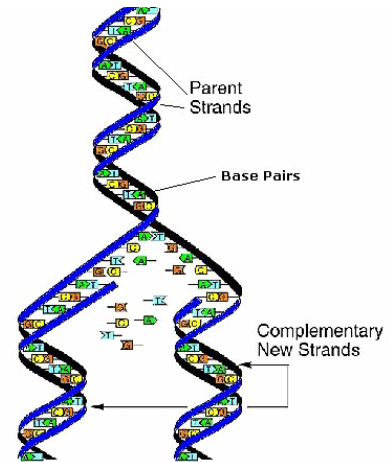
A single strand of DNA is a long chain of nucleotides, each with one of these four different bases. This strand is represented by a sequence of these individual letters e.g. AGTCTTCAGGT. Usually two strands of nucleotides wrap around each other, giving DNA the appearance of a twisted ladder, called a double helix. In a complete helix the Adenine (A) always lines up with Thymine (T) and the Guanine (G) with Cytosine (C).



Chromosome Replication

DNA replication is when chromosomes duplicate themselves. The first step is to unwind their double helices into separate strands. As the double helix of DNA unwinds into two *parent strands*, the ends of the different bases are exposed.

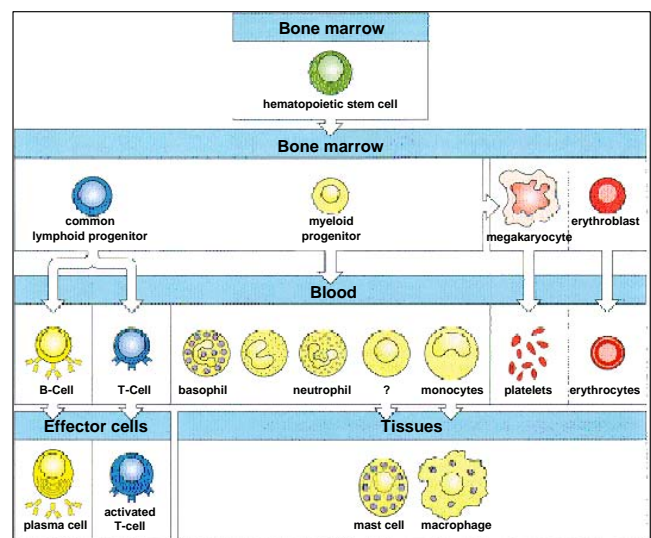
Due to the obligatory pairing of A-T and G-C, each parent strand becomes a template for copying a whole new DNA helix. Since the DNA structure can be rebuilt on both parent strands, two identical DNA helices are produced, each containing one original parent strand and one newly synthesized strand, called a *complementary strand*.



Normal Cell Development

The following figure shows normal blood cell formation from embryonic hematopoietic stem cells. Notice that as an embryonic, immature, *undifferentiated* cell matures, it becomes *differentiated*, that means specialized. Mature cells have highly specialized functions but lose the ability to reproduce themselves. New cells can originate only from the embryonic stem cells.

Notice also that an undifferentiated stem cell has the ability to develop into different lines. But once a cell matures in a line it can not change into another line.



What is Cancer?

A cell needs to divide in order to preserve the organism that it supports. In normal cells, the rate of new cell growth is kept in balance with the rate at which old cells die. In cancer cells this balance is disrupted either by the loss of normal growth control or the loss of a cell's ability to undergo programmed cell death, known as *apoptosis*.

Cancer cells originate when a cell does not replicate itself perfectly, this increases its chance of genetic mutation. These cancer cells and their offspring then multiply uncontrollably and can invade and damage nearby tissue.

Cancer cells are completely "egoistic" in their behavior. They don't obey the laws and don't respect their neighbor cells. They only want to eat and grow without being useful. They don't produce any normal secretion nor do they produce muscular work.

Cell Division in Normal and Cancer Cells

- Reproduce themselves exactly
- Stop reproducing at the right time
- Stick together in the right place
- Self destruct if they are damaged
- Become specialized or 'mature'

Normal Cell Division

Cancer Cell Division

- They have defects called „mutations“
- They carry on reproducing
- They don't stick together
- They don't obey signals from other neighbouring cells
- They don't become specialized, but stay immature

Protection of the Chromosome Ends

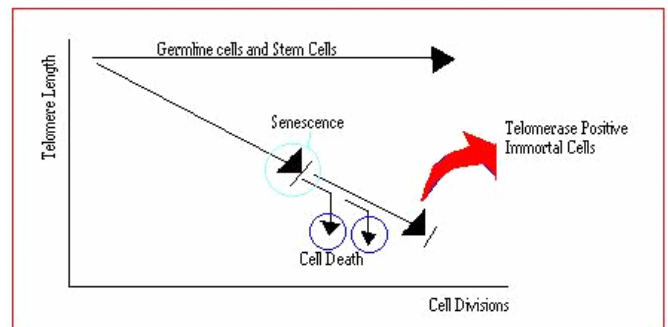
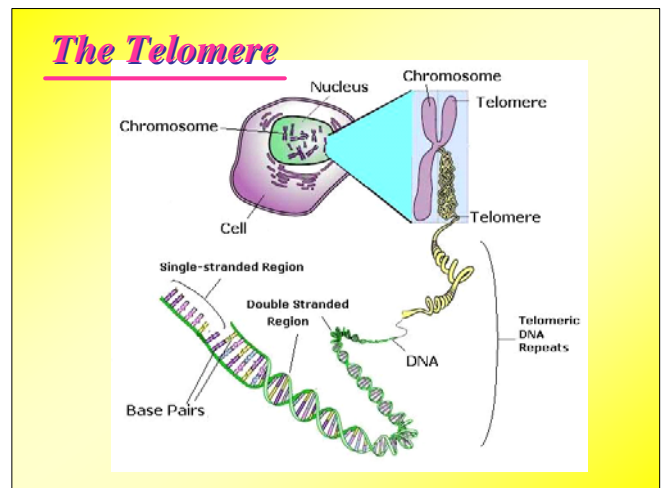
To prevent the loss or mutation of essential genes, the end of each chromosome is tied up by a special strand of DNA called a telomere.

Telomeres cap our chromosomes preventing them from a wide range of otherwise catastrophic events and enable the DNA molecule to replicate. Telomeres therefore play an important role in maintaining the integrity of the DNA in our cells. In normal cells with each successive round of cell division, telomeres progressively decrease in length. The more times a cell divides, the shorter the telomere becomes and ultimately after a limited number of cell divisions, the length of the telomere becomes so short that the cell ceases to divide.

The telomeres of certain cells do not shorten with progressive divisions; these cells are **stem cells**, **germline cells** and **cancer cells**.

Almost all tumor cells have markedly shortened telomeres in comparison to their counterparts in normal cells. This indicates that the initial formative stages of cancer development must involve the erosion of telomeres.

Another important characteristic to note is that telomeres in tumor cells are maintained at a constant length.



What is Cancer?

- A cancer is an uncontrolled proliferation of cells.
- Cancers are clones. No matter how many trillions of cells are present in the cancer, they are all descended from a single ancestral cell.
- Cancer cells are usually less differentiated than the normal cells of the tissue where they arose.
- Evidence is accumulating that cancers arise in precursor cells – stem cells – of the tissue: cells that are dividing by mitosis producing daughter cells that are not yet fully differentiated.
- Cancer cells contain several (6-8) mutated genes.

When a few genes in one cell become damaged, this can lead to cancer. These faulty genes may tell the cell to multiply at the wrong time, or in the wrong place. This is how cancer starts. Sometimes the cell-cycle checkpoints themselves are faulty or the damaged cells are able to side-step them.

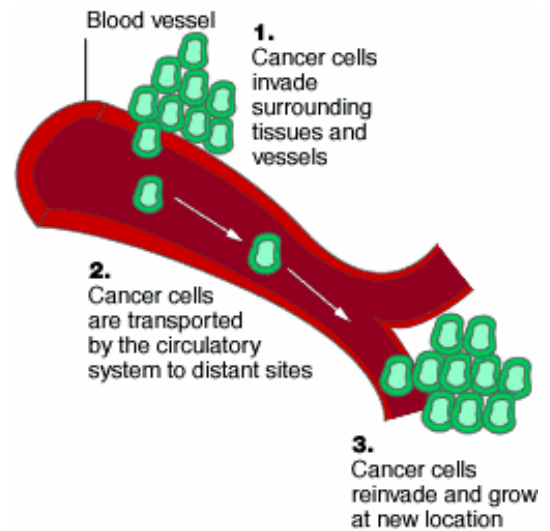
How Cancer Spreads

Metastasis is the spread of cancer from one part of the body to another. Tumors formed from cells that have spread are called *secondary tumors* and contain cells that are similar to those in the original (primary) tumor.

Tumors are called *malignant* because they have the ability to invade normal tissues (replacing healthy cells with cancer cells) and to metastasize (spread) to other parts of the body. When a certain type of cancer spreads to another part of the body, it does not change its type.

Metastases takes place in many ways: through the lymphatic system, through the bloodstream, by spreading through body spaces such as the bronchi or abdominal cavity, or through implantation. The most common way for cancer to spread is through the lymphatic system. This process is called *embolization*.

Cancers can also spread by local invasion – that is, by intruding on the healthy tissue that surrounds the tumor. An example of this kind of cancer is basal cell carcinoma of the skin. When this kind of cancer is removed by surgeon, a wide area of healthy tissue surrounding it is also removed and it is usually “cured” immediately. Unless some cells have been left behind, it is very unlikely that it will recur. (However, it is possible that a second cancer of the same kind may start to grow at a later time at a completely different site – the new growth having nothing to do with the first.)



Alcohol and Cancer

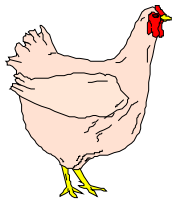
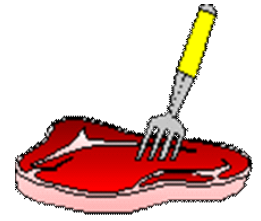
“Alcohol drinking has long been known to cause cancers of the oral cavity, pharynx, larynx, oesophagus, and liver. The addition of breast cancer and colorectal cancer, two of the most common cancers worldwide, to this list indicates that the burden of cancer attributable to alcohol consumption is higher than previously thought. The scientific evidence relating alcohol drinking to an increased risk of cancer continues to grow as does the contribution of alcohol drinking to the global cancer burden. The clear association with increased risk of breast cancer associated with even modest levels of alcohol drinking is a major concern particularly in view of the changing drinking patterns of women in many countries.” (International Agency for Research on Cancer [IARC] of the WHO, 28 March 2007. www.iarc.fr/ENG/Press_Releases/pr175a.html) See also www.genomics.unc.edu/articles/rusyn_who_assessment.htm

Cancer and Meat Eating

“Flesh was never the best food; but its use is now doubly objectionable, since disease in animals is so rapidly increasing. Those who use flesh foods little know what they are eating. Often if they could see the animals when living and know the quality of the meat they eat, they would turn from it with loathing. People are continually eating flesh that is filled with tuberculous and cancerous germs. Tuberculosis, cancer, and other fatal diseases are thus communicated.” (Ministry of Healing, p. 313)



“Cancer, tumors, and all inflammatory diseases are largely caused by meat-eating. From the light which God has given me, the prevalence of cancers, and tumors is due to gross living on dead flesh. I sincerely and prayerfully hope that as a physician you will not forever be blind upon this subject. . . Feeding on flesh the juices and fluids of what we eat passes into the circulation of our blood, and as we are composed of what we eat, we become animalized. Thus a feverish condition is created because the animals are diseased and by partaking of their flesh we plant the seeds of disease in our own tissue and blood.” (Spalding and Magan Collection, p. 47)



“The effects of a flesh diet may not be immediately realized; but this is no evidence that it is not harmful. Few can be made to believe that it is the meat they have eaten which has poisoned their blood and caused their suffering. Many die of diseases wholly due to meat eating, while the real cause is not suspected by themselves or by others.” (Ministry of Healing, 315)

“The common use of the flesh of dead animals has had a deteriorating influence upon the morals as well as the physical constitution. Ill health in a variety of forms, if effect could be traced to the cause, would reveal the sure result of flesh eating.” (Medical Ministry, 222)

Protein and Cancer

Dr. Colin Campbell, Professor Emeritus at Cornell University, observed in animal experiments that protein can foster the development of cancers, especially casein, the main protein in cow’s milk.

He could trigger cancer growth on by giving more than 10% protein in the meal. It could be brought to stop by low levels of only 5%. Plant protein did not promote cancer growth even at high levels of intake. (The China Study, 2003, p. 43-67)



Vegetables and Fruits Protect From Cancer

“Vegetables and fruits are a rich source of a number of nutrients.... There is consistency in the evidence that vegetables and fruits play some protective role in preventing the development of cancers.”



“A substantial amount of epidemiological and clinical data indicates that a high intake of plant foods and complex carbohydrates is associated with a reduced risk of several chronic diseases, especially coronary heart disease, certain cancers, hypertension, and diabetes.” (Diet, Nutrition, and the Prevention of Chronic Diseases, WHO, 1990, p. 98-99)



The director of the National Cancer Institute’s division of Cancer Prevention and Control of the USA concluded: “A greater number of studies have shown that a diet rich in fruits and vegetables has a protective effect against cancer. Persons with high fruit and vegetable intakes have about half the risk of people with low intakes.” (Better Nutrition, May 1994, p. 20)



Phytochemicals are found especially in the dark colors of the plants like blueberries, cranberries, tomatoes, red bell peppers, etc.

A Call for Reformation

“Greater reforms should be seen among the people who claim to be looking for the soon appearing of Christ. Health reform is to do among our people a work which it has not yet done. There are those who ought to be awake to the danger of meat eating, who are still eating the flesh of animals, thus endangering the physical, mental, and spiritual health. Many who are now only half converted on the question of meat eating will go from God’s people to walk no more with them.” (Counsels on Diet and Foods, p. 382)



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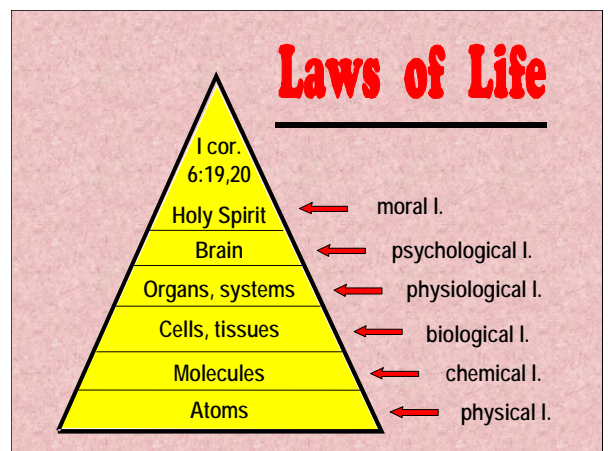
CHAPTER 10

THE HEALING OF THE CHARACTER

True healing is more than merely treating diseases. It is the complete restoration of health and involves body, mind and spirit. We often use 1 Thessalonians 5:23 to demonstrate the biblical position that body, mind and spirit are a unity. “May God himself, the God of peace, sanctify you through and through. May your whole spirit, soul and body be kept blameless at the coming of our Lord Jesus Christ.” However, even Christians often forget that the development of a holy character and sanctification are closely related to our diet and other lifestyle habits.

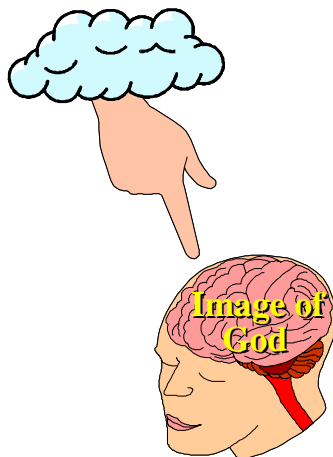
The Laws of Life

Let’s review briefly how man was created. In Genesis 2:7 we read that God used the elements of the earth (carbon, oxygen, hydrogen, iron, calcium, etc.) as the constituents of man. Obviously these elements are subjected to physical laws. The atoms combine to form substances like sugars, fats, proteins, enzymes, and many more, all regulated by chemical laws. These substances form cells and tissues like the muscles, bones, skin, etc., that in turn obey biological laws. Then come the organs and systems, the kidneys, the respiratory system and others, all functioning according to physiological laws. The mind follows psychological laws. Finally, the human being became the “temple of the Holy Spirit” (1 Corinthians 6:19-20) who himself obeys the moral laws of God. Man was created perfectly happy, healthy and holy. This state should continue throughout eternity.



All these laws are necessary to secure the perfect functioning of the human machinery. “The laws of nature, being the laws of God, are designed for our good; obedience to them promotes happiness in this life, and aids in the preparation for the life to come.” (Ministry of Healing, p. 146)

Created in the Image of God

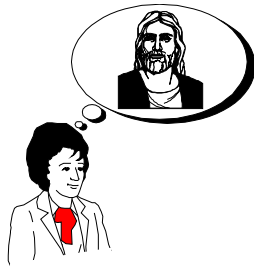


The most wonderful and astounding fact is that “God created man in his own image”. (Genesis 1:27) This is far above our understanding and should fill us with admiration and awe.

“It was a wonderful thing for God to create man, to make mind. He created him that every faculty might be the faculty of the divine mind. The glory of God is to be revealed in the creating of man in God's image, and in his redemption.” (Healthful Living, p. 12)

The highest faculties of the mind, the moral understanding, discrimination, judgement, self-control, willpower and decision making have their seat in the frontal lobe of the brain. Unfortunately, sin marred the image of God, the holy character of God in our mind. God’s plan of salvation has the purpose to restore His image in us.

Restoring God's Image

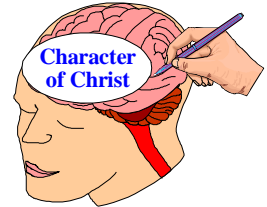


The apostle Paul urges us to think and feel like our model Jesus. “Let this mind be in you which was also in Christ Jesus.” (Philippians 2:5)

Jesus himself emphasized the need for remaining in intimate contact with Him by saying, “I am the vine, you are the branches. He who abides in Me, and I in him, bears much fruit.” (John 15:5)

Ellen G. White explains what it means to bear fruit.

“The object of the Christian life is fruit bearing – the reproduction of Christ's character in the believer.” (Christ's Object Lessons, p. 67)



This is the work of the Holy Spirit in our mind: “But the fruit of the Spirit is love, joy, peace, patience, kindness, goodness, faithfulness, gentleness and self-control.” (Galatians 5:22) And “When the character of Christ shall be perfectly reproduced in His people, then He will come to claim them as His own.” (Christ's Object Lessons, p. 69)

The apostle John had a vision seeing the redeemed on the new earth. He describes those with a restored holy character, using the following self-explaining picture: “Then I looked, and there before me was the Lamb, standing on Mount Zion, and with him 144,000 who had his name and his Father's name written on their foreheads.” (Revelation 14:1)

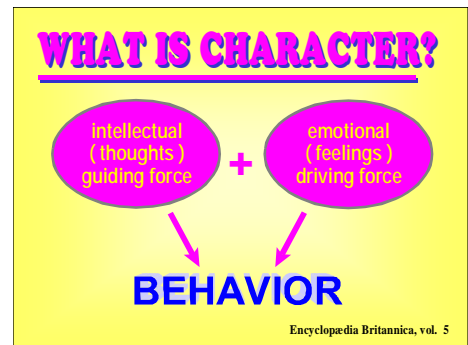
What is Character?

One dictionary defines character as “The totality of the fundamental psychic and moral characteristics of a person, that manifest in the way he behaves, in his ideas and actions.” (Romanian Dictionary, 1975)

Observe that the character is expressed by thoughts, actions and behavior. Jesus said, “You will know them by their fruits.” (Matthew 7:16)

The Encyclopedia Britannica gives more details, explaining that the character has two main components.

The *intellectual* part, represented by the thoughts, is the guiding force, and the *emotional* component, represented by the feelings, is the driving force. Both together determine the behavior. Interestingly, Ellen G. White said the same thing: “The thoughts and feelings combined make up the moral character.” (Testimonies, vol. 5, p. 310)



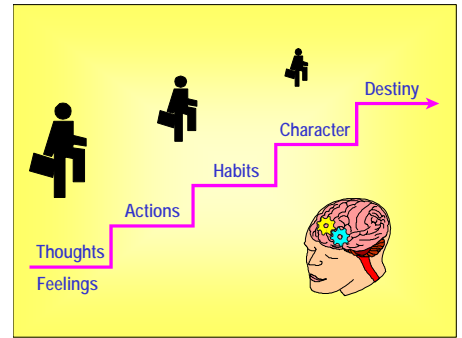
Now we can understand the connection between loving God and keeping His commandments. Jesus said, “If you love Me, keep My commandments.” (John 14:15) The commandments do not save anybody. They show the way to go and must be understood with the intellect. Then the love is needed as the driving force, “For the love of Christ compels us.” (2 Corinthians 5:14)

How is the Character Formed?

A baby is not born with a finished character. It is born with inherited tendencies and inclinations that must be developed or corrected throughout life. “Character does not come by chance. It is not determined by one outburst of temper, one step in the wrong direction. It is the repetition of the act that causes it to become habit, and molds the character either for good or for

evil. Right characters can be formed only by persevering, untiring effort, by improving every intrusted talent and capability to the glory of God.” (Messages to Young People, p. 163)

Notice the progressive steps: At the beginning are the thoughts and feelings. These are then analyzed and synthesized into ideas. A decision is taken and using the will it comes to an action. Repeated actions produce habits and the sum of the habits constitutes the character.



God’s plan of salvation includes the restoration of a holy character – the image of God in man. “The forgiveness of sins is not the sole result of the death of Jesus. He made the infinite sacrifice, not only that sin might be removed, but that human nature might be restored, rebeautified, reconstructed from its ruins, and made fit for the presence of God.” (Testimonies vol. 5, p. 537)

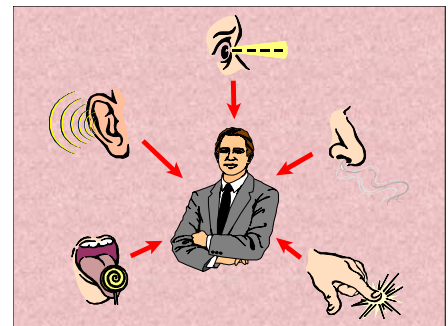
“Therefore if any man be in Christ, he is a new creature: old things are passed away; behold, all things are become new.” (2 Corinthians 5:17)

“A character formed according to the divine likeness is the only treasure that we can take from this world to the next.” (Christ’s Object Lessons, p. 332)

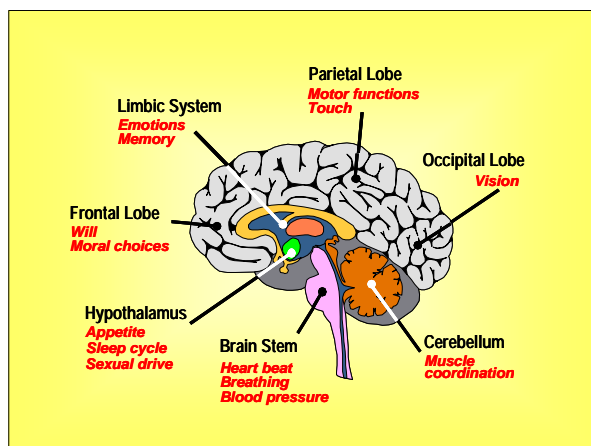
The Anatomy of the Character

God created us with (at least) five senses for contact with our environment. They are sometimes called the “avenues of the soul” because the impressions received by the senses generate the thoughts and feelings that form the basis for our ideas, actions and behavior.

“Those who would not fall a prey to Satan's devices must guard well the avenues of the soul; they must avoid reading, seeing, or hearing that which will suggest impure thoughts. The mind must not be left to dwell at random upon every subject that the enemy of souls may suggest. ... You will have to become a faithful sentinel over your eyes, ears, and all your senses if you would control your mind and prevent vain and corrupt thoughts from staining your soul.” (Mind, Character and Personality, vol. 1, p. 228)



Good impressions will produce good ideas and bad impressions will lead to bad ideas.



It is at this place where preventive medicine should begin. Watch over the impressions received by your eyes, the books you read and the scenes you behold; the kind of music received by your ears; the kind of friends you chose; etc. Here is a timely recommendation of the apostle Paul: “Finally, brothers, whatever is true, whatever is noble, whatever is right, whatever is pure, whatever is lovely, whatever is admirable – if anything is excellent or praiseworthy – think about such things.” (Philippians 4:8)

The sensorial organs are made up by special histological structures capable to transform different stimuli into small electrical currents. These currents are conducted by the sensorial nerves to their corresponding area of the brain where they are interpreted and elaborated. For example, the light coming into our eyes through the cornea and lens is projected unto the retina where the sensorial nerves produce electrical currents. These are conducted via several “stations” to their final destination, the visual area of the posterior lobe of the brain, where they produce a colorful, three-dimensional virtual “image”. By way of different nervous connections these images are interpreted in the frontal lobe. Necessary adjustments in respiration, cardiac rhythm or muscular actions are carried out in other centers.

The Health of the Brain

The main functions of the frontal lobe are:

- Discrimination
- Judgement
- Self-control
- Willpower



Our behavior and character building depends on these four functions or faculties. In other words, our behavior at home, in the school, at the work place, or in any other situation, our ability of stress management, etc., all depend on a healthy brain, especially the frontal lobe. In order to be complete we should include here the immune system and all other vital functions because all of them depend on the healthy function of the brain and related centers.

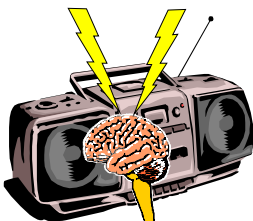
Dr. Mervyn Hardinge, founder and director emeritus of the School of Public Health at the Loma Linda University, describes the factors that are detrimental to the function of the brain:



- Decreased oxygen supply
- Fatigue
- Over-eating or undernutrition
- Alcohol
- Mind-altering drugs
- Certain lectures, TV, and music

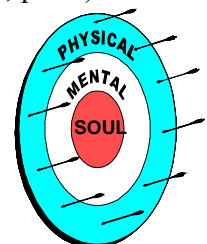
(Dr. Mervyn Hardinge, A Philosophy of Health, p. 138-148)

It can easily be seen that the entire lifestyle, fresh air, regular rest, nutrition, abstention from poisons, and the input through our senses, all affect the healthy functions of our brain and must be carefully taken into consideration. Our spiritual growth is carried out using the same anatomical structures and physiological mechanisms under the guidance of the Holy Spirit.



“The brain nerves which communicate with the entire system are the only medium through which Heaven can communicate to man and affect his inmost life. Whatever disturbs the circulation of the electric currents in the nervous system lessens the strength of the vital powers, and the result is a deadening of the sensibilities of the mind.” (Temperance, p. 13)

“The body is the only medium through which the mind and the soul are developed for the upbuilding of character. Hence it is that the adversary of souls directs his temptations to the enfeebling and degrading of the physical powers. His success here means the surrender to evil of the whole being. The tendencies of our physical nature, unless under the dominion of a higher power, will surely work ruin and death.” (Ministry of Healing, p. 130)



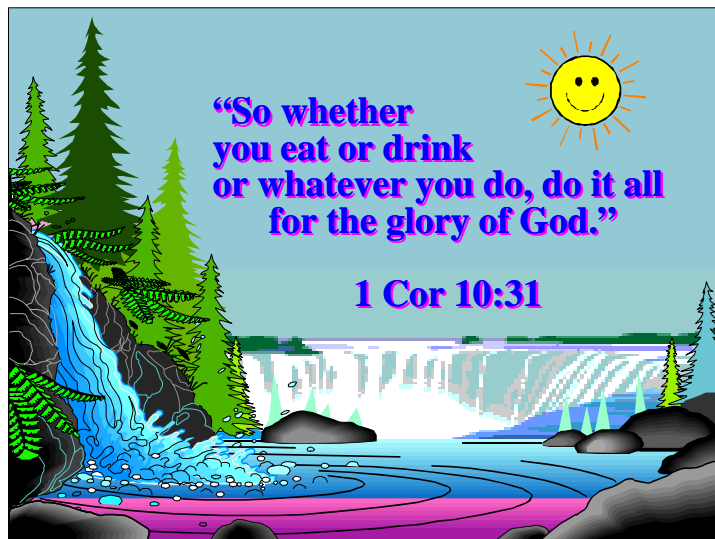
“The brain is the organ and instrument of the mind, and controls the whole body. In order for the other parts of the system to be healthy, the brain must be healthy. And in order for the brain to be healthy, the blood must be pure. If by correct habits of eating and drinking the blood is kept pure, the brain will be properly nourished.” (Medical Ministry, p. 291)

“The health of the body is to be regarded as essential for growth in grace and the acquirement of an even temper. If the stomach is not properly cared for, the formation of an upright, moral character will be hindered. The brain and nerves are in sympathy with the stomach. Erroneous eating and drinking result in erroneous thinking and acting.” (Testimonies, vol. 9, p. 159)

“There is an intimate relation between the mind and the body; they react upon each other. In order, then, to reach a high standard of moral and intellectual attainment, and to secure a strong, well-balanced character, the laws that control our physical being must be heeded; both the mental and the physical powers must be developed. Such a training will produce men of strength and solidity of character, of keen perception and sound judgment, – men who will be an honor to God and a blessing to the world.” (Ellen G. White, Pacific Health Journal, February 1, 1902)

“Every man has the opportunity, to a great extent, of making himself whatever he chooses to be. The blessings of this life, and also of the immortal state, are within his reach. He may build up a character of solid worth, gaining new strength at every step. His faculties will improve by use; the more wisdom he gains, the greater will be his capacity for acquiring.

“On the other hand, he may allow his powers to rust out for want of use, or to be perverted through evil habits, lack of self-control, or moral and religious stamina. His course then tends downward; he is disobedient to the law of God and to the laws of health. ... Dissipation, disease, and death follow. This is the history of many lives that might have been useful in the cause of God and humanity.” (Counsels on Diet and Foods, p. 15)



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APPENDIX: MYSTICAL MEDICINE

„Today there are coming into educational institutions and into the churches everywhere spiritualistic teachings that undermine faith in God and in His word. The theory that God is an essence pervading all nature is received by many who profess to believe the Scriptures; but, however beautifully clothed, this theory is a most dangerous deception....

“If God is an essence pervading all nature, then He dwells in all men; and in order to attain holiness, man has only to develop the power within him.

“These theories, followed to their logical conclusion, sweep away the whole Christian economy. They do away with the necessity for the atonement and make man his own savior.” (Ministry of Healing, p. 428, 429)

Truth and Error

We have seen in the lessons before that disease and death are the ultimate result of sin and that the plan of salvation is to restore health and life through Jesus Christ. There is no other gospel. That is why healing and preaching and teaching must be together.

There is only one truth but countless errors. Any deviation from truth becomes an error and new ones appear continually. We must study the true methods of healing as presented in the Bible and Spirit of Prophecy (Ministry of Healing, Counsels on Health, Counsels on Diet and Food, Temperance, Medical Ministry). Everything else that does not harmonize with truth is a falsification. “In true science there can be nothing contrary to the teaching of the word of God, for both have the same Author. A correct understanding of both will always prove them to be in harmony. Truth, whether in nature or in revelation, is harmonious with itself in all its manifestations.” (Testimonies for the Church, vol. 8, p. 258)

Once we understand the true methods of healing, based on physiological laws, it will be easier to recognize deceiving theories. It is not necessary to study all false methods of healing. This would only confuse our minds and be a waste of time. Here is a pertinent counsel of Ellen G. White:

“I am instructed to say to you that it is not best to dwell upon the spiritualistic sentiments, the strange, misleading theories, which have for years been coming in among us.

“It is not best to preach on the subject of Pantheism or to read quotations from authors who write on this subject, and the specious, deceptive errors that lead to it. The statements made in Testimonies, volume 8, are sufficient to warn our people to avoid these errors. These statements will do more to enlighten minds than all the explanations or theories that our ministers and teachers may put forth concerning these matters.

“If you try to handle these subjects, you will be led to repeat the sophistries of Satan, and thus you will help Satan to present his false theories to the people. Resolve never, never to repeat error, but always to teach the truth. Fill hearts and minds with the solemn, sacred truth for this time.” (Evangelism: Meet Sophistries With Truth, p. 623)

God and Nature

Basically it can be said that true healing comes from God and correct methods are based on the laws of nature (scientific laws). Of course, God sometimes performs miracles.

False methods of healing deny God as the supreme Creator and put the powers of nature in His place. God becomes an impersonal omnipresent energy and nature is often attributed “superior knowledge”. This is the essence of pantheism. Both look quite similar and require clear discernment to distinguish truth from error. Ellen G. White warns about confusing God with nature:

“In dwelling upon the laws of matter and the laws of nature, many lose sight of, if they do not deny, the continual and direct agency of God. They convey the idea that nature acts independently of God, having in and of itself its own limits and its own powers wherewith to work. In their minds there is a marked distinction between the natural and the supernatural. The natural is ascribed to ordinary causes, unconnected with the power of God. Vital power is attributed to matter, and nature is made a deity. It is supposed that matter is placed in certain relations and left to act from fixed laws with which God Himself cannot interfere; that nature is endowed with certain properties and placed subject to laws, and is then left to itself to obey these laws and perform the work originally commanded.

“This is false science; there is nothing in the word of God to sustain it. God does not annul His laws, but He is continually working through them, using them as His instruments. They are not self-working. God is perpetually at work in nature. She is His servant, directed as He pleases. Nature in her work testifies of the intelligent presence and active agency of a being who moves in all His works according to His will. It is not by an original power inherent in nature that year by year the earth yields its bounties and continues its march around the sun. The hand of infinite power is perpetually at work guiding this planet. It is God’s power momentarily exercised that keeps it in position in its rotation.

“The God of heaven is constantly at work. It is by His power that vegetation is caused to flourish, that every leaf appears and every flower blooms. Every drop of rain or flake of snow, every spire of grass, every leaf and flower and shrub, testifies of God. These little things so common around us teach the lesson that nothing is beneath the notice of the infinite God, nothing is too small for His attention.

“The mechanism of the human body cannot be fully understood; it presents mysteries that baffle the most intelligent. It is not as the result of a mechanism, which, once set in motion, continues its work, that the pulse beats and breath follows breath. In God we live and move and have our being. Every breath, every throb of the heart, is a continual evidence of the power of an ever-present God.

“It is God that causes the sun to rise in the heavens. He opens the windows of heaven and gives rain. He causes the grass to grow upon the mountains. ‘He giveth snow like wool: He scattereth the hoarfrost like ashes.’ ‘When He uttereth His voice, there is a multitude of waters in the heavens; ... He maketh lightnings with rain, and bringeth forth the wind out of His treasures.’ Psalm 147:16; Jeremiah 10:13.

“The Lord is constantly employed in upholding and using as His servants the things that He has made. Said Christ: ‘My Father worketh hitherto, and I work.’ John 5:17.

“Men of the greatest intellect cannot understand the mysteries of Jehovah as revealed in nature. Divine inspiration asks many questions which the most profound scholar cannot answer. These questions were not asked that we might answer them, but to call our attention to the deep mysteries of God and to teach us that our wisdom is limited; that in the surroundings of our daily

life there are many things beyond the comprehension of finite minds; that the judgment and purposes of God are past finding out. His wisdom is unsearchable.

“Skeptics refuse to believe in God because with their finite minds they cannot comprehend the infinite power by which He reveals Himself to men. But God is to be acknowledged more from what He does not reveal of Himself than from that which is open to our limited comprehension. Both in divine revelation and in nature, God has given to men mysteries to command their faith. This must be so. We may be ever searching, ever inquiring, ever learning, and yet there is an infinity beyond.

“The mighty power that works through all nature and sustains all things is not, as some men of science represent, merely an all-pervading principle, an actuating energy. God is a spirit; yet He is a personal being, for man was made in His image.” (Testimonies for the Church, vol. 8, p. 259-261)

Some Terminology

First we need to clarify some concepts. Two centuries ago medicine was mainly empirical and not yet based on science as it is today. The unpleasant symptoms of diseases were combated with medications that produced contrary effects. Diarrhea was treated with anti-diarrheals, high temperature with hypothermics, excitement with sedatives, etc. This was called **allopathy**. Many of such medications or drugs had toxic side effects. Samuel Hahnemann, a German physician developed a different theory treating the symptoms with small doses of substances that produced similar symptoms when administered to healthy individuals. This was called the principle of similarity (*similia similibus curentur*) and is the philosophical basis of **homeopathy**. Those two lines of thinking were not compatible with each other. It was a matter of either/or and became an **alternative** to the common medical practice. During many years these two lines combated each other.

Specialization and time restraints brought as a result that physicians often restricted their care to the diseased organ or part of the body, forgetting the patient as a whole individual. Patients reacted against this situation by seeking alternative healers who may treat them in a more **holistic** way. Besides of that, alternative healers claimed to possess some additional resources, especially of spiritual nature, that common medicine did not have, therefore offering some extra hope for allegedly incurable cases.

Today medical methods of treatment are much broader including hydrotherapy, diet, psychiatry, and other branches. Science is coming to realize the importance of mental and spiritual factors in the processes involved in health and disease. On the other side, alternative medicine incorporated many other methods – natural and mystical – especially originating from Eastern pantheistic philosophies. As a result, both parties are coming together and instead of being *exclusive* they are becoming *inclusive*. Alternative methods are now called **complementary** because they aim to assist or complement the other, let's say the standard treatments. At present many physicians practice both kinds of medicine, traditional and complementary. By doing so they can please the desires of many patients who believe in esoteric methods, without running the risk of losing them. It is sometimes a matter of convenience and financial interest.



Natural Healing Methods

What are “natural” methods actually? The answer should be easy but the problem lies in the different meanings given to the word “natural” and how it is used, or misused.

Some believe that “natural” is synonymous to good, correct, harmless, not using “chemicals” or drugs. By contrast, they consider that conventional medicine, because it uses “chemical” medications, must be harmful, incorrect, unnatural and bad. Both beliefs are too generalized and may be true, or partially true in some instances, but also false in others. Another and much bigger problem is the mixture of truth and error within some healing methods.

We, as Adventists have the tendency to believe blindly in any treatment that calls itself natural because Ellen G. White emphasizes the use of natural remedies. “Pure air, sunlight, abstemiousness, rest, exercise, proper diet, the use of water, trust in divine power – these are the true remedies. Every person should have a knowledge of nature’s remedial agencies and how to apply them. It is essential both to understand the principles involved in the treatment of the sick and to have a practical training that will enable one rightly to use this knowledge.” (Ministry of Healing, p. 127)

Notice two things that EGW mentions in that paragraph. First, she calls the “true” remedies by name. Not everything offered as “natural” on the healing market is recommended here. Secondly, she emphasizes that “It is essential to understand the principles involved in the treatment”. True remedies work according to understandable physiological mechanisms as explained in chapter 3, on the immune system. This is the reason why we should thoroughly study her counsels on health and also be informed about the basic functions of our body.

“It is our duty to study the laws that govern our being, and conform to them. Ignorance in these things is sin. ... To become acquainted with the wonderful human organism, – the bones, muscles, stomach, liver, bowels, heart, and pores of the skin, – and to understand the dependence of one organ upon another for the healthful action of all, is a study in which most mothers take no interest.” (Healthful Living, p. 13)

Now you will be surprised to read the following list of healing methods propagated as “natural” by the Swiss Union of Natural Healing (Postfach, 3004 Bern, Switzerland):

Acupuncture	Crystal therapy	Kneipp therapy	Psychozon
Alexander technique	Face interpretation	Leech	massage
Aromatherapy	Faith healing	Life counseling	Pulse diagnosis
Astrology	Fasting	Lymphatic drainage	Radiesthesia
Autogenic training	Feldenkrais	Magnetopathy	Rebirthing
Autosuggestion	Fomentations	Magnetotherapy	Reiki
Bach flowers	Foot reflexology	Massage (classic)	Reincarnation therapy
Baunscheidt	Gerda Boyesen method	Massage (intuitive)	Rolfing
Biorhythm	Herbs	Meditation	Shiatsu
Bleeding	Homeopathy	Metamorphosis	Tai Chi
Breathing techniques	Hydrotherapy	Mora therapy	Tarot
Chirolgy	Hypnosis	Moxa	Touch for health
Clairvoyance	Iridology	Music therapy	Vitalogy
Colonics	Kinesiology	Numerology	Yoga
Colortherapy	Kirlian photography	Nutrition counseling	and many more
		Polarity	

Looking through this list you may find some acceptable methods like breathing techniques, fasting, use of herbs, hydrotherapy, Kneipp therapy, classic massage and nutrition counseling, but most of the rest are undoubtedly mystical and in disagreement with the biblical ideology.

Some methods may not be clearly mystical or pantheistic, nor have a physiologically valid explanation. They may not harm

nor cure. What shall be done? We need to use sound judgement in the selection of healing methods.

Criteria for Identification

There are hundreds of alternative methods on the market, continuously appearing new ones or modifications of the existing. Each world region and culture has its own preferences. It is therefore impossible to make a complete and infallible list of non-acceptable methods. One way would be to analyze the origin of the method. However, some Christian practitioners say that they only use the method separated from its philosophy. This may not really be possible because usually the philosophy explains the supposed mechanism of action. For example, if you believe that a certain disease is caused by bacteria, you may want to combat these bacteria using antiseptics or antibiotics. If you believe that some disease is caused by the bad will of spirits, you may wish to calm the anger of the spirits with some pertinent method. If you believe that a certain disease is caused by cosmic energies not flowing correctly through the body, you may wish to correct this situation using methods that supposedly can restore the pathways of energy flow. But, if you believe that disease is caused by a wrong lifestyle, you will try to correct the wrong habits and implement a healthy lifestyle.

Here are some questions that can be of help:

1. Does the effect base on known laws of physiology?
2. Does the philosophy behind agree with the Biblical world view?
3. Does this method lead to Jesus or to the harmony with the universe?

There are many different methods but most of them claim to manipulate some kind of unknown energy. With some experience you will recognize the pantheistic background. It could be the supposed energy flow between yin and yang, or energies flowing through imaginary meridians, or crystals that impart energy to sick organs, injections into old scars to unblock the energy flow, or any other means to foster the energy flow from the universe (macro cosmos) to the body (micro cosmos). The fantasy knows no limits!

“The apostles of nearly all forms of spiritism claim to have the power to cure the diseased. They attribute their power to electricity, magnetism, the so-called ‘sympathetic remedies’, or to latent forces within the mind of man. And there are not a few, even in this Christian age, who go to these healers, instead of trusting in the power of the living God and the skill of well-qualified Christian physicians.” (Evangelism, p. 606)

“These Satanic agents claim to cure disease. They attribute their power to electricity, magnetism, or the so-called ‘sympathetic remedies’, while in truth they are but channels for Satan's electric currents.” (Evangelism, p. 609)

It must be mentioned that technology also entered into the mystical healing world. There are all sorts of computerized devices that claim to detect, interpret, and repair wrong currents or cellular oscillations. Some methods even claim to be able to predict the risk for developing diseases or cancer in the future. Who is *not* at risk with this modern lifestyle?

Some methods are visibly mystical. Others look like being scientific and use some pseudo-scientific vocabulary. Words like “vital”, “energetic”, “dynamic”, “bio”, “regulation”, and similar are usual. Since the importance of the immune system became part of common knowledge, it is frequent to read that a method or a medication aids or strengthens the immune system. Who can disprove it? We should also be cautious with the following situations:

1. Therapies which claim to manipulate “unknown energy”.
2. Alternative therapists, who seem to utilize psychic knowledge and/or power.



3. Practitioner who has a therapy with which no one else is familiar.
4. Omnipotent cures.
5. Explanations that don't make sense.
6. All success-testimonials-casuistics.
7. Therapies which rely heavily on altered states of consciousness.
8. Therapists who claim to be on pure Christian ground but use strange "ceremonies".

The Christian physician considers disease as the ultimate result of sin (Romans 5:12 and 6:23), not as an imbalance of cosmic energy, and directs his patients to Christ as the only true savior and healer. Then he asks for obedience to God's laws: physical laws (healthy lifestyle), and moral laws (10 commandments). The Christian physician also believes in the existence of supernatural powers – Christ versus Satan – and prays for divine help in this invisible battle between good and evil. It is a Christ-centered philosophy.

"Holistic medicine", for the secular physician, means to accept scientific and non-scientific methods of diagnosis and healing, which includes all kinds of oriental pantheistic philosophies.

"Wholistic medicine"¹, for the Christian physician, means that body, mind and spirit, have to be considered always as a unity. Sin and disease, salvation and healing, preaching the gospel and caring for the sick, go together. This is the Biblical approach to the problems of humanity.

It must be acknowledged that for a non-medical person it is not always easy to distinguish truth from error, especially when the methods are practiced by physicians with valid diplomas. And the number of such is increasing! Even more bewildering is the fact that some health insurance companies recognize mystical treatments as part of their repertoire. Although not all information in the Internet is reliable, there are some recommendable sites that may be of help: Physicians Committee for Responsible Medicine www.pcrm.org ; www.quackwatch.com and also www.wikipedia.org .

How Can Mystical Cures Be Explained?

Many people think that the success, real or apparent, is a proof of the validity of a treatment or method of healing, and consider that the person who practices it is "right", or has the "truth". This is a dangerous reasoning. And even beyond, some conclude that all other methods of healing must be, by exclusion, wrong. This reasoning is also dangerous.

Here are some explanations for the success of any treatment, be it scientific or not:

1. It is generally accepted that 80% or more of all consultations are related to problems which are originated in wrong habits of life and thinking. At this initial stage, their problems are so-called "functional". The organic examination and the lab tests can't find anything wrong. This does not mean that the patient is *inventing* symptoms or a disease. No, his problems are real.

Such kinds of troubles usually get better with any treatment, be it rest, fasting, garlic capsules, hydrotherapy, medicinal teas, vitamins, massages, etc., or even without treatment, just by giving it time.

2. Alternative treatments are often combined with fasting, rest, healthy diet, hydrotherapy and positive thinking, which by themselves strengthen the immune system and therefore promote healing of any disease, even of malignant tumors.

¹ The commonly used term is "holistic" but in the Christian setting we use "wholistic" that gives the meaning of wholeness.

3. The “placebo effect” is a powerful factor which acts through the thoughts, and could by itself, be responsible or at least be associated with many cases of healing.
4. Wrong or false diagnosis. Specially quacks (because of ignorance), or unscrupulous professionals (for justifying a long treatment, or high fees, or to boost themselves), have a tendency to exaggerate the severity of an illness or to diagnose an illness falsely as being “cancer”. After their treatment the patient is obviously “healed”.
5. False success. Mass media often report healings produced by faith healers which cannot stand the criteria for objective healing. The patient frequently experiences a subjective feeling of improvement which does not last long.
6. Besides of divine miracles there are also not deniable supernatural healings produced by practitioners of mystical methods. These healings do not justify the method because God gave clear instructions not to use them (Deuteronomy 18:9-12; 1. Samuel 28:6,7).

Is Alternative Medicine Harmful?

Many alternative treatments are not harmful by themselves and if the disease is not dangerous, than no harmful outcome should be expected. The situation is different when a serious disease is not diagnosed correctly in time or when a life-saving treatment is neglected because of a long alternative treatment. Some alternative healers prevent the patient from seeking medical advice.

There are, however, many methods based on clear pantheistic and spiritualistic philosophies that were clearly prohibited by God. By using such methods deliberately the patient puts himself in a dangerous field. Ellen G. White describes this situation vividly in the following words:

“The mother, watching by the sickbed of her child, exclaims, ‘I can do no more! Is there no physician who has power to restore my child!’ She is told of the wonderful cures performed by some clairvoyant or magnetic healer, and she trusts her dear one to his charge, placing it as verily in the hand of Satan as if he were standing by her side. In many instances the future life of the child is controlled by a satanic power, which it seems impossible to break.

“Those who give themselves up to the sorcery of Satan, may boast of great benefit received, but does this prove their course to be wise or safe? What if life should be prolonged? What if temporal gain should be secured? Will it pay in the end to have disregarded the will of God? All such apparent gain will prove at last an irrecoverable loss.” (Evangelism, p. 606-607)

What shall be done?

Mystical methods of healing presuppose mystical origin of the diseases. There are enough theories blaming the unlucky position of stars, bad spells, disturbances in the energy flow through meridians or chakras, or the wrath of gods as causes of disease. The mechanism for origin and for treatment must fit into the same philosophical system. Mystical treatments correspond with mystical causes.

The biblical understanding of the origin of disease is different. “Disease is an effort of nature to free the system from conditions that result from a violation of the laws of health.” And the text continues showing the logical approach to treatment. “In case of sickness, the cause should be ascertained. Unhealthful conditions should be changed, wrong habits corrected. Then nature is to be assisted in her effort to expel impurities and to re-establish right conditions in the system.” (Ministry of Healing, p. 127) Such approach is in perfect harmony with the entire plan of salvation that we have been studying.

God has given abundant and clear instructions on prevention and treatment of diseases in the Bible and through Ellen G. White. He advised in the establishment of sanitariums and schools of medicine. The principles on which such institutions are based include the following:

- Christ is the true physician. (Ministry of Healing, p. 111)
- Prayer for the sick. (Id., p. 225-233)
- Use of rational methods of diagnosis and treatment. (Id., p. 232)
- Abandon sin and wrong habits of life. (Id., p. 128-131, 227-229)
- Teach a healthy lifestyle. (Id., p. 125, 126)
- Physicians well prepared scientifically. (Medical Ministry, p. 57, 69, 75)
- Medications – minimum possible. (Selected Messages, vol. 2, p. 281-284, 286-291)
- X-Rays are acceptable. (Id., p. 303)
- Blood transfusion is acceptable. (Id., p. 303)
- Surgeons are guided by God. (Medical Ministry, p. 34, 35; Selected Messages, vol. 2, p. 284, 285)

Conclusion

In God's plan of salvation, religion and medicine are intimately linked together. There is no separation. In fact, most if not all religions include components of healing. The majority of people are indifferent to these matters; some others are extreme and fanatic. God calls for reformation:

“The Lord gave me special light in regard to the establishment of a health reform institution, where treatment of the sick could be carried on altogether different lines from those existing in any institution in our world. It must be founded and conducted on Bible principles, and be the Lord's instrumentality, not to cure with drugs, but to use Nature's remedies. Those who have any connection with this institution must be educated in health restoring principles.” (Letter 205, 1899, p. 1. To Dr. J. H. Kellogg, December 19, 1899.)

Our methods of healing shall not follow any of the existing models in the world. We don't call ourselves allopaths, homeopaths, or naturopaths. The expression “nature's remedies” refers to the true natural agents – nutrition, exercise, water, sunshine, temperance, air, rest, and trust in God – with the exclusion of all mystical agents even if they falsely use the label of being “natural”. Satan is a deceiver and uses medicine to bring his sophistries into religion. May God help us to follow His way!

“Then I saw another angel flying in mid-air, and he had the eternal gospel to proclaim to those who live on the earth – to every nation, tribe, language and people. He said in a loud voice, ‘Fear God and give Him glory, because the hour of His judgment has come. Worship Him who made the heavens, the earth, the sea and the springs of water.’” (Revelation 14:6-7)

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**POSITION STATEMENT OF THE GENERAL CONFERENCE HEALTH
DEPARTMENT IN REGARD TO QUESTIONABLE ALTERNATIVE HEALTH
PRACTICES**

(Voted at Silver Spring, April 4, 1996)

Scientific progress offers good perspectives in health care. At the same time there is a growing number of approaches using evolutionary, and spiritualistic philosophies.

For this reason and with the desire to assist and orient the church, the Seventh-day Adventist General Conference Health and Temperance Department World Advisory agrees with the following convictions:

1. Human beings were created in the image of God. Man is a whole, indivisible unit, so the suffering of every part will affect all the other areas.
2. The basis of diagnostic and therapeutic systems used in the prevention and treatment of diseases is established on human physiology, Bible, and inspiration.

Adventists promote the teachings of living in holiness, including the use of natural resources that Ellen White calls "true remedies" in maintaining and recovering health.

3. We believe that the Lord has given to man the resources and mental power to increase knowledge in the area of biology, physiology, and the mechanisms of disease causation. For this reason we believe that the development of scientific medicine be incorporated in the medical missionary work as far as it does not contradict the principles of revelation.
4. In reference to healing procedures of uncertain ideologies and multiple origins, known as alternative health practices, we should be very cautious.

In view of the great number and variety of existing alternative health practices, and considering that there are constantly appearing new methods on that market, we

RECOMMEND, that the Adventists neither practice, nor use, nor promote any kind of procedures

- the philosophic and ideological bases of which are in opposition to the principles of Christian revelation, and
- which are not consistent with known scientific laws.

We also

RECOMMEND, that continuing study be given to these matters and the church be informed about new criteria and recommendations. ■

ABOUT THE AUTHOR



Dr. Jochen Hawlitschek was born in 1941 in Germany. When he was ten years old, his parents migrated to Brazil where he attended the present Instituto Adventista de Ensino close to São Paulo. Wishing to become a missionary, he studied medicine at the Royal and Pontifical University of San Francisco Xavier in Bolivia. As a fourth year medical student, he won a contest to be chief of the Histology Laboratory, a position that he held through the conclusion of his studies. He graduated in 1968 as “Doctor in Medicine and Surgery,” receiving a gold medal for obtaining the highest academic achievement in the medical school.

After working for several years as a mission doctor at the Adventist Hospital of Chulumani, Dr. Hawlitschek received a scholarship from the German government to specialize in Surgery at the Justus Liebig University in Giessen, Germany. After seven years of specialized training, he was called to assist in the development of the Medical School of Montemorelos University in Mexico. There he taught Histology, Anatomy, Surgery, Traumatology, and Urology. Besides surgery, his great passion was to teach and to learn together with the students. One of the features that evidenced his creativity was the fact that he wrote a laboratory handbook for Histology in two versions, for right-handed and for left-handed students. He advanced in academic rank until becoming a full Professor and Dean of the Medical School. The systematic reading of nearly all the written works of Ellen G. White, since he was in secondary school, profoundly influenced his approach to medical practice and teaching.

During the 13 years at Montemorelos, he undertook a Master in Public Health from the Loma Linda University, California, graduating with the President’s Award for highest academic achievement. He also became lifetime member of the Kappa Delta Omega Honor Society of Public Health in the USA, for outstanding achievements in study and practice.

In 1990, the Euro-Africa Division of the Seventh-day Adventist church called him to serve as the Health Ministries director of the Division, located in Berne, Switzerland, a position he held for 16 years until his retirement. Besides all responsibilities as Director of the Health Department, he was also the regional director for Europe of the International Commission for the Prevention of Alcoholism and Drug Dependency (ICPA) and representative of this organization to the United Nations. During the last five years, he was also the coordinator of the Global Mission program of the Division. In this capacity, he experienced once again that the best approach to human needs is to follow Christ’s method to combine physical and spiritual healing. Now, after retirement, Dr. Hawlitschek continues to teach at the Montemorelos University’s extension programs and also assists training young people in the art of integrating health promotion with gospel outreach.

Dr. Hawlitschek is married and has 3 adult children. He may be contacted by e-mail at jhawlitschek@bluewin.ch, or reached by phone at +41 797 055 873.

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