



LIFE·PAC®

Health



Alpha Omega Publications®

HIGH SCHOOL HEALTH 5

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Author:

Krista White, B.S.

Editor:

Al Christopherson, M.S.

Illustrations:

Laura Miller/Alpha Omega Staff



Alpha Omega Publications®

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OVERVIEW

The Garden of Eden was the picture of perfect health. There was no pain, death, or suffering of any kind. That changed, however, when Adam disobeyed God. As our divinely appointed representative, Adam's fall brought the curse of death upon mankind. In I Corinthians 15:22, Paul states, "in Adam all die." Sickness and disease are a direct result of the fall. They are reminders of God's condemning pronouncement, "for dust thou art, and unto dust shalt thou return" (Genesis 3:19).

Adam's sin corrupted not only mankind, it also corrupted the earth. "Cursed is the ground for your sake," God announced, indicating the "futility" that all physical matter would be subjected to until the whole creation was delivered from a state of imperfection and decay.

In this LIFE PAC[®] you will discover the relationship between the health of your body and your environment. You will study common diseases, attaining a general knowledge of their causes and their prevention. You will also study various types of drugs, gaining an understanding of their functions and factors that lead to their abuse. Finally, you will learn about the state of the environment, and its importance to your health.

OBJECTIVES



When you have completed this LIFE PAC, you should be able to:

- Understand the origin of disease.
- Understand the role and the power of medicine in the fight against disease.
- Differentiate between drug use and drug abuse.
- Explain the biblical view of alcohol and tobacco use.
- Discern the role mankind has to play in regards to preserving the environment.
- Understand the relationship between the state of the environment and your health.

VOCABULARY



Acute – brief and intense

Antediluvian – of the period before the Flood

Biodegradable – susceptible to decomposition by living organisms.

Chronic – continuing for a long time

Congenital – existing from birth

Corrosive – capable of destroying by a chemical action

Euphoria – feeling of well-being not necessarily based in reality

Malady – disease

Non-infectious – non-communicable; cannot be spread through casual contact or any mechanism of transmission such as air, water, or blood

Organic – derived from plants or animals

Particulate – tiny particle that can be dispersed in a gas

Pathogen – disease-causing agent

Phagocytes – white blood cells that eliminate the chances of infection by attacking foreign substances in the body

Putrefaction – the decay of organic matter caused by microorganisms

Refuse – waste

Subservient – in a subordinate position

Vector – an animal or insect that is known to transmit a specific disease

Viable – capable of life

I. DISEASE AND PREVENTION

In the Garden of Eden, Adam and Eve enjoyed perfect health under God's provisions in the covenant of works, the moral agreement established by God in which total obedience would result in life and disobedience would result in death. Adam and Eve lived in joyous harmony with God, each other, and the rest of Creation.

When Adam and Eve ate of the tree of the knowledge of good and evil, they violated the covenant of works, bringing the curse of death upon themselves. Before God drove Adam and Eve out of the Garden of Eden, He pronounced, "In the sweat of thy face shalt thou eat bread, till thou return unto the ground; for out of it wast thou taken; for dust thou art, and unto dust shalt thou return" (Genesis 3:19).

As our divinely appointed representative, Adam's fall was our fall. "Therefore, as by the offence of one judgment came upon all men to condemnation...For as by one man's disobedience many were made sinners..." (Romans 5:18a, 19a). Adam's disobedience made us all sinners. Conceived and born in sin (Psalm 51:5), we are all under the curse of death.

Because humans consist of both soul and body, the curse of death has both moral and physical ramifications. "Wherefore, as by one man sin entered into the world, and death by sin; and so death passed upon all men, for that all have sinned" (Romans 5:12). Paul describes the moral ramifications of the fall by stating that we are dead in our trespasses and sins—that we are prone to speak, do, and pursue all kinds of evil (Romans 3:10–18).

The physical ramifications of the fall are the pain of childbirth, the strain of work, and bodily deterioration. Disease and sickness are a direct result of the Fall. The physical pain and discomfort that illness inflicts are reminders that one day, "to dust [we] shall return."

However, as one commentator has noted, death is not only a judgment but a blessing. For the Christian, death brings about "eternal salvation that outlasts the grave." When Christ returns, He will remove the curse of sin from our bodies, transforming us into His likeness. Like the Garden of Eden, Heaven will be a place where disease and pain does not exist (Revelation 21:4). Believers will once again live in perfect communion with God, other people, and nature. In Heaven, we will enjoy the eternal blessings of Christ's total obedience.

Types of Infections

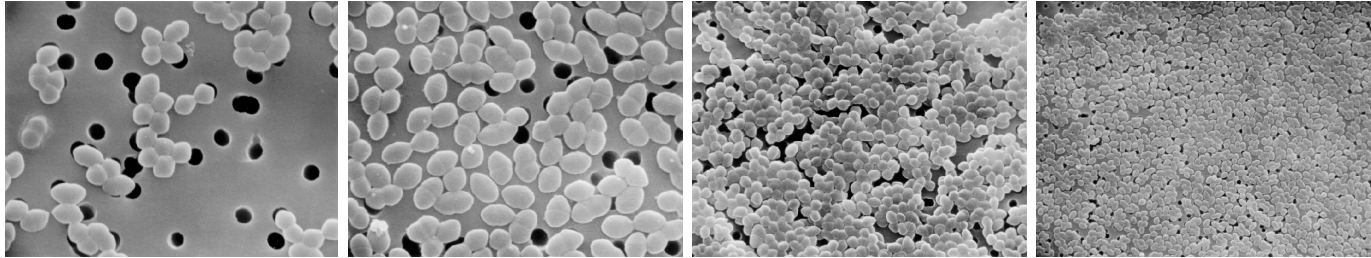
The dictionary defines disease as "the improper functioning of the body brought about by heredity, infection, diet, or the environment." Diseases that are caused by heredity, diet, or the environment are termed **non-infectious**. Non-infectious diseases are non-communicable; that is, they cannot be spread through casual contact or any mechanism of transmission such as air, water, or blood. An example of a non-infectious disease is cancer. Factors believed to contribute to the development of cancer include heredity, diet, and environment. You cannot get cancer by touching a person that is suffering from cancer.

Viral Infections. Infectious diseases are caused by the spread of harmful microorganisms, which can be categorized into six groups: viruses, bacteria, fungi, chlamydiae, rickettsiae, and protozoa. Viral infections are caused by the multiplication of a small infectious agent within the body known as a virus. Viruses cause disease by invading a host cell and then destroying it through replication. Depending upon the virus, an infection can be contracted through



airborne transmission, waterborne transmission, blood-borne transmission, sexual transmission, or even direct contact. Examples of viral infections include chickenpox, influenza, AIDS, rabies, and viral meningitis.

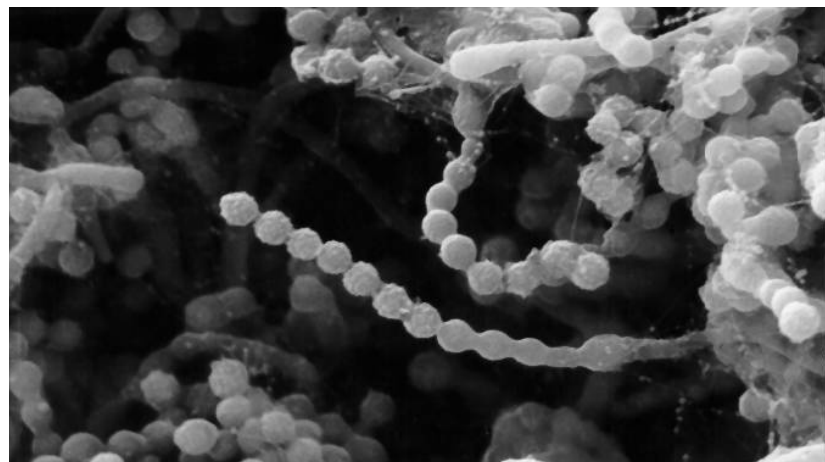
Bacterial Infections. Similar to viral infections, bacterial infections are caused by the reproduction of a small infectious agent within the body. Bacterial infections can be contracted by breathing in infectious droplets, eating contaminated food, or exposing open wounds or mucus membranes to surfaces covered with pathogenic bacteria. Once in the body, pathogenic bacteria cause disease by producing poisons that destroy cells. Examples of bacterial infections include pneumonia, food poisoning, typhoid fever, and tonsillitis.



Reproduction of Bacteria

Images courtesy of CDC

Fungal Infections. Fungal infections are caused by the multiplication of fungal organisms on or in the body. Fungal infections usually occur when the body's immune system is impaired and is unable to keep the amount of fungi on or in the body at a healthy level. Fungi can cause disease by destroying or invading body tissues. Examples of fungal infections include athlete's foot, hay fever, mushroom poisoning, and candidiasis.

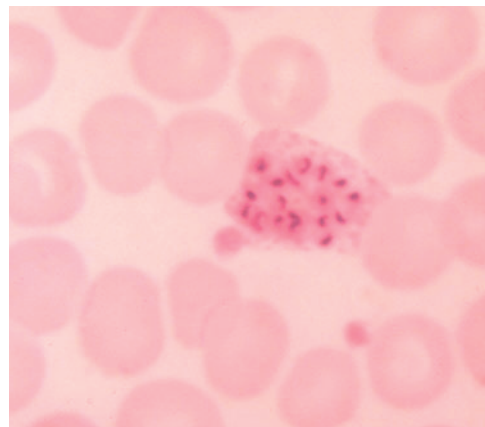


Paecilomyces Fungi (causes pulmonary infections)

Image courtesy of CDC

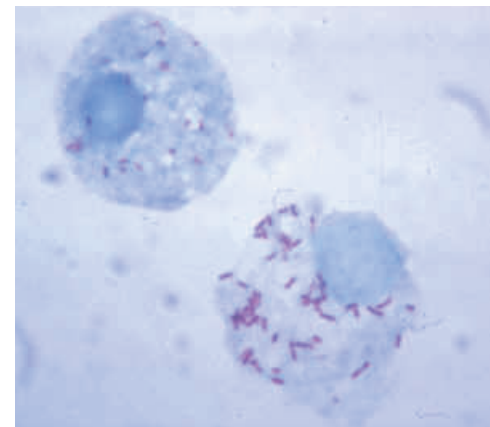
Rickettsial Infections. Unlike chlamydial infections, which are caused by the invasion of a microorganism, rickettsial and protozoan infections are caused by microscopic parasites. Rickettsial and protozoan infections can be contracted through an insect bite or by eating contaminated food. Examples of rickettsial and protozoan infections include malaria and Rocky Mountain spotted fever.

The illustration on the following page shows the infection cycle of Rocky Mountain Spotted Fever.



Red Blood Cells Infected with Malaria

Image courtesy of CDC



Cells infected with Rocky Mountain Spotted Fever

Image courtesy of CDC