

Health (505)

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NES Profile: Health (505)

Overview

This *NES Profile* provides information about the test, including the approximate percentage of the total test score derived from each content domain. The complete set of the content domains, the test framework, is provided here and contains all of the competencies and descriptive statements that define the content of the test.

This NES Profile includes the following materials:

- » the test competencies associated with each content domain
- » a set of descriptive statements that further explain each competency
- » sample test questions aligned to the competencies
- » any applicable reference materials, as noted below

Test Field	Health (505)
Test Format	Multiple-choice questions
Number of Questions	Approximately 150
Test Duration	Up to 3 hours
Reference Materials	None required



Кеу	Approximate Percentage of Test	Content Domain	Range of Competencies
	30%	I. Health Throughout the Life Span	0001–0003
	40%	II. Health Promotion and Risk Reduction	0004–0007
	30%	III. Health Advocacy and Literacy	0008–0010

Content Domain I: Health Throughout the Life Span

Competencies:

0001 Understand principles of human anatomy and physiology and stages of growth and development.

Descriptive Statements:

- » Identify basic structures and functions of major body systems.
- Apply knowledge of anatomy and physiology in relation to health, fitness, growth, and development (e.g., anatomical changes that occur during various stages of growth, how the functioning of the immune system affects health).
- » Demonstrate knowledge of sequences, stages, and characteristics of cognitive, social, ethical, spiritual, and emotional growth and development across the life span.
- Analyze the effect of interpersonal relationships (e.g., peers, family, school) on the development of personal values and beliefs.
- Demonstrate knowledge of the effect of lifestyle behaviors, environment, and heredity on growth, development, and overall health.
- Identify strategies for encouraging physical, cognitive, social, ethical, spiritual, and emotional growth throughout the life span.

Sample Item:

Which of the following body systems relays sensory and motor impulses from the brain and spinal cord to internal organs, skeletal muscles, glands, and body surfaces?

- A. the endocrine system
- B. the musculoskeletal system
- C. the cardiovascular system
- D. the peripheral nervous system

Correct Response and Explanation

D. This question requires the examinee to identify basic structures and functions of major body systems. In the peripheral nervous system, cranial nerves connect the brain with sensory organs, the heart, and other internal organs. Spinal nerves carry impulses between the spinal cord and skeletal muscles.

0002 Understand the importance of proper nutrition for maintaining lifelong health.

- Identify the sources, functions, and effects of nutrients, including the lack or excess of particular nutrients, on body systems, energy processes, physical performance, and body composition.
- Demonstrate knowledge of how to find and use nutritional planning tools and guidelines in order to establish, monitor, and achieve personal nutrition goals.

- Evaluate nutritional needs, concerns, and requirements for various ages, fitness levels, health conditions, and purposes.
- » Apply knowledge of how to interpret nutritional facts (e.g., food safety, fast food) and labels and how to use this information to make informed health-enhancing decisions.
- Demonstrate knowledge of factors related to designing, selecting, monitoring, and adjusting a personal nutrition plan.
- » Analyze various influences on eating behaviors and how they affect the functioning of the human body and overall health.
- » Identify behaviors and effects associated with disordered eating patterns and eating disorders.
- Identify strategies and resources for helping individuals with disordered eating patterns and eating disorders.

An adequate intake of carbohydrates is essential for nutritional health because the human body:

- A. uses carbohydrates as the raw material for making antibodies, enzymes, and hormones.
- B. converts carbohydrates to glucose, which is the fuel that supplies the energy needed for daily activities.
- C. uses carbohydrates to transport fat-soluble vitamins and convert cholesterol to vitamin D.
- D. relies on carbohydrates to supply the essential amino acids needed for muscle and connective tissue growth.

Correct Response and Explanation

B. This question requires the examinee to identify functions and effects of nutrients on body systems and energy processes. Carbohydrates are the macronutrients that supply the human body with the energy needed to sustain normal activity. The body metabolizes simple sugars and complex carbohydrates quickly and efficiently, converting them into glucose, the fuel for the body's cells.

0003 Understand principles, components, and benefits of health-related physical fitness.

- Demonstrate knowledge of the components of health-related physical fitness and appropriate activities for addressing these components.
- » Describe concepts, approaches, and techniques for assessing personal fitness levels.
- » Identify fitness strategies and goals that protect and promote health.
- Analyze ways in which personal health and fitness goals may vary with changing abilities, priorities, and responsibilities.
- Identify principles and methods for designing, accessing, implementing, and monitoring personal fitness plans.
- » Demonstrate knowledge of training principles that enhance health-related fitness.
- » Demonstrate knowledge of how body and energy systems adapt to short- and long-term physical activity.

- Identify factors that affect physical fitness and health risks associated with inactivity and poor fitness levels.
- » Analyze the interrelationships among the dimensions of wellness.

A female high school student includes both cycling and swimming in her summer fitness program. As she participates in these activities, she tries to maintain a target heart rate of 60 percent to 80 percent of her maximum heart rate. This fitness goal is based on which of the following training principles?

- A. specificity of training
- B. intensity of training
- C. frequency of training
- D. progression of training

Correct Response and Explanation

B. This question requires the examinee to demonstrate knowledge of training principles that enhance health-related fitness. In this scenario, the student applies the principle of intensity of training in two types of aerobic exercise. Monitoring and maintaining a heart rate of 60 to 80 percent of one's maximum heart rate during sustained aerobic exercise provides health-related benefits such as strengthening the cardiovascular system, improving oxygen utilization and lung capacity, and increasing endurance and stamina.

Content Domain II: Health Promotion and Risk Reduction

Competencies:

0004 Understand the nature, control, and prevention of illness and disease.

Descriptive Statements:

- » Demonstrate knowledge of types and characteristics of chronic and communicable diseases.
- Identify causative factors, modes of transmission, and signs and symptoms of common illnesses, diseases, and disabling conditions.
- » Apply the three levels of disease prevention to reducing the risks of chronic and communicable infections.
- » Analyze personal, social, cultural, economic, and environmental risk factors that increase susceptibility to illness and disease.
- Demonstrate knowledge of types, characteristics, stages, modes of transmission, and prevention of sexually transmitted infections (STIs).
- Describe methods of health screening and early detection used by individuals, public schools, and medical professionals.
- » Evaluate the effects of public policies, healthcare resources, medical research, and technology on the prevention and control of diseases.

Sample Item:

Autoimmune disorders can best be described as diseases in which:

- A. the antigen-antibody response attacks healthy cells in the body or fails to function altogether.
- B. weakened pathogens enter the blood before they are destroyed in the environment.
- C. acquired active immunity provided by vaccines fails to destroy disease-causing microorganisms.
- D. the body's early defense system fails to detect disease-causing pathogens.

Correct Response and Explanation

A. This question requires the examinee to demonstrate knowledge of characteristics of diseases. Autoimmune disorders, such as rheumatoid arthritis and lupus, cause the body's immune system, which is designed to attack foreign substances in the body, to attack healthy cells and tissues instead. Since the immune system is unable to differentiate between antigens and normal tissues and cells at body sites, it sends antibodies to form immune complexes, which can circulate and cause tissue inflammation.

0005 Understand principles and strategies for reducing risks to personal health.

- » Describe the relationship between healthy behaviors and the dimensions of wellness.
- » Identify types, sources, and effects of stress and coping mechanisms related to stress.
- Identify warning signs and symptoms of mental disorders and resources and methods for obtaining assistance.

- » Analyze the likelihood or potential severity of illness or injury that may result from engaging in unhealthy behaviors.
- Demonstrate knowledge of techniques, strategies, and activities designed to encourage children and adolescents to avoid high-risk behaviors.
- » Demonstrate knowledge of factors that influence goal-setting and of decision-making skills used to reduce and prevent sexual health risks (e.g., dating violence, STIs).
- » Differentiate between healthy and unhealthy dating relationships, and identify strategies and skills that maintain healthy relationships.
- Analyze the effects of addictive behaviors and substances on body systems and on personal growth and development.
- » Demonstrate an understanding of influential risk factors for addictive behaviors.
- » Identify issues, laws, and programs related to the use and abuse of addictive substances and behaviors.

Which of the following processes is likely to be most effective for managing stress and worry that arise from pressures related to family, school, or work situations?

- A. Define the stress reaction as a problem, think of several concrete strategies to cope with the problem, and try out a few.
- B. Visualize the events that led to stress, then visualize an alternative positive version of events.
- C. Identify types or sources of stress that are even more challenging than those that tend to affect one personally.
- D. Use self-talk to acknowledge that everyone has innate weaknesses that allow stress to affect them.

Correct Response and Explanation

A. This question requires the examinee to demonstrate knowledge of strategies for reducing risks to personal health by identifying coping mechanisms for managing stress. Using a systematic problem-solving process to manage stress prompts an individual to identify the source of stress and anxiety, define it as a problem, develop realistic ways of coping with anxious feelings or stressful situations (e.g., exercising, communicating assertively with a person who causes tension), and implement thoughtful and purposeful coping strategies.

0006 Understand factors that influence interpersonal and family relationships and strategies for promoting healthy relationships.

- » Identify the importance of interpersonal skills for supporting individual well-being and positive relationships with others.
- Demonstrate knowledge of how to use interpersonal communication skills to develop and maintain healthy relationships.
- Identify factors that contribute to developing, strengthening, and maintaining friendships and social support systems.

- Identify diverse structures of families, types of family roles and responsibilities, characteristics of healthy family relationships, and strategies for coping with dysfunctional families.
- Identify ways in which emotions affect interpersonal and family communication and techniques for expressing needs, desires, and feelings appropriately.
- » Analyze causes and effects of positive and negative peer pressure, as well as techniques for resisting and responding to negative peer pressure.
- Identify appropriate strategies, responses, policies, and resources that children and adolescents can use to deal with harassment, bullying, and intimidation.
- » Evaluate the consequences of stereotyping, prejudice, and discrimination; and identify strategies for promoting tolerance, respect, and understanding between and among individuals and groups.
- » Identify concepts of family planning.

Which of the following types of personal attributes is most likely to make a positive contribution to the development of healthy interpersonal communications?

- A. being able to rationalize and defend one's behavior and personal beliefs in difficult situations
- B. having an aptitude for making people feel that they are important and beyond reproach
- C. being able to express and reveal one's deepest emotions openly and without fear of judgment
- D. having the ability to listen to and demonstrate respect for the viewpoints of others

Correct Response and Explanation

D. This question requires the examinee to identify important factors that contribute to the development of healthy interpersonal relationships. Active listening is a key aspect of healthy interpersonal communication. Effective listeners try to understand the perspectives, thoughts, and feelings of others from what others communicate verbally and nonverbally. Attributes such as demonstrating respect for others' viewpoints and remaining open and willing to listen to and exchange ideas with others are essential for establishing and maintaining positive interpersonal communication and relationships.

0007 Understand principles, methods, and techniques for enhancing safety, preventing and treating injuries, avoiding danger, and responding to emergencies.

- Identify unsafe situations in the home, school, and community and strategies for promoting safety awareness.
- » Apply knowledge of principles, rules, and precautions related to traffic and pedestrian safety, fire prevention, water safety, and injury prevention.
- Identify perceptions and behaviors that lead to intentional and unintentional injuries among adolescents and strategies for reducing and preventing risk-taking behaviors.
- » Demonstrate knowledge of strategies that children and adolescents can use to recognize and avoid potential risks and dangers at home, school, and in the community.
- » Identify procedures for life-threatening respiratory and cardiac emergencies.

- » Apply knowledge of principles and procedures for first aid and emergency medical care.
- » Recognize sources of help and procedures for obtaining assistance in an emergency or crisis (e.g., severe weather, school violence, accidents).

Which of the following procedures is the first step for dealing with a conscious individual who has swallowed a poison such as a pesticide or a detergent?

- A. Take the person to the emergency room.
- B. Call Poison Control.
- C. Give cold milk to neutralize the poison.
- D. Administer syrup of ipecac to induce vomiting.

Correct Response and Explanation

B. This question requires the examinee to demonstrate knowledge of emergency first-aid procedures. When an individual ingests a poison, the first step to take is to contact a Poison Control Center to describe who has swallowed the poison, what and how much was ingested, when the substance was ingested, and any symptoms that are occurring or have occurred (e.g., vomiting). Based on this information, Poison Control Center staff will recommend what to do next and how best to neutralize the poison. For example, an activated charcoal product might be recommended to treat the ingestion of a pesticide or detergent because activated charcoal binds to poisons and prevents their absorption into the bloodstream.

Content Domain III: Health Advocacy and Literacy

Competencies:

0008 Understand how to use risk-assessment, conflict-resolution, goal-setting, decision-making, and advocacy skills to enhance health.

Descriptive Statements:

- » Analyze influences on health behaviors and strategies for making informed choices about personal, family, and community health.
- Identify methods of assessing personal health risks and the short- and long-term effects of safe, risky, and harmful behaviors.
- » Identify strategies and steps for implementing healthy decisions to reduce and avoid health risks.
- » Identify strategies for implementing and monitoring attainment of personal health goals.
- » Analyze the causes and consequences of conflict in families, schools, and communities.
- Identify steps, techniques, and processes that children and adolescents can use to manage and resolve conflicts.
- Apply knowledge of strategies for improving and maintaining personal and family resources in relation to health, fitness, and physical activity (e.g., making time for family activities, assessing the costs and benefits of fitness equipment).
- Describe strategies and skills that children and adolescents can use to encourage and support peers and others in making positive health choices.
- Identify methods and resources for advocating for personal, family, and community health and ways in which individuals can contribute to the health of the community.
- » Identify the principles and practices of cultural competency as it relates to student diversity.

Sample Item:

Which of the following introductory messages is likely to be most appropriate for a discussion about violence prevention with elementary students?

- A. "Sometimes it's hard to differentiate good-natured teasing from hurtful teasing or bullying, and this may lead to conflict."
- B. "Imagine that some day you will have a child. What kind of advice about avoiding violence would you give to your child?"
- C. "Conflicts happen, even between friends. It's important to stop little conflicts from turning into big fights, and there are some good rules for doing this."
- D. "People say that there is too much violence on television. They say it makes us less sensitive to reallife violence and encourages us to do violent things."

Correct Response and Explanation

C. This question requires the examinee to demonstrate knowledge of how to promote students' use of conflict-resolution and violence-prevention strategies and skills. The introductory message that emphasizes the importance of stopping little conflicts from turning into big fights is developmentally appropriate for elementary students and relevant in students' everyday lives. The message states that conflicts happen even between friends, reinforcing the idea of conflict as a normal part of life, but emphasizing that conflicts need to be managed proactively to prevent them from escalating into violence. The message also notes that there are some good rules for managing conflicts, providing an appropriate transition into class activities designed to promote students' knowledge of conflict-resolution and violence-prevention techniques.

0009 Understand principles and techniques for locating, evaluating, selecting, and accessing information, products, and services to enhance health.

Descriptive Statements:

- Apply knowledge of skills for researching, locating, and accessing valid health-related information, including Web-based information.
- » Demonstrate the ability to analyze the accuracy, validity, reliability, and usefulness of health-related information.
- Identify criteria and procedures for evaluating and selecting health-related technology, equipment, products, and services.
- » Apply knowledge of the roles of government (e.g., Healthy People, CDC, MyPyramid) and private agencies in providing health promotion and disease prevention services and information.
- Identify characteristics and roles of healthcare providers, agencies, and delivery systems and criteria for evaluating and selecting healthcare providers and insurance plans.
- » Recognize laws, regulations, policies, and agencies that protect consumers of health-related products, programs, and services.
- Identify characteristics of community health resources and ways of accessing and using community resources to enhance health.

Sample Item:

An individual recently diagnosed with hypertension wants to learn more about exercise and diet strategies for managing the condition. Which of the following resources is likely to provide the most helpful and accurate information in this situation?

- A. local pharmacists
- B. Web sites sponsored by manufacturers of blood pressure medications
- C. neighbors and friends
- D. government-sponsored Web sites geared toward health consumers

Correct Response and Explanation

D. This question requires the examinee to demonstrate knowledge of principles and techniques for evaluating and selecting valid health-related information. Many government and educational Web sites for health consumers (e.g., Healthy People 2010, WebMD) provide comprehensive, objective, and accurate health-related information, as well as links to other reliable resources. The Centers for Disease Control and Prevention, the Office of the Surgeon General, and the National Institutes for Health are just a few examples of government organizations whose Web sites address appropriate exercise and nutritional strategies for managing hypertension.

0010 Understand the influence of society, culture, media, technology, and the environment on personal, family, and community health.

Descriptive Statements:

- Analyze how attitudes, perceptions, and behaviors related to health are influenced by family, peers, and society.
- » Describe how the school and community can support personal and family health practices and behaviors.
- » Analyze the influence of sociocultural factors (e.g., ethnicity, religion, sexual orientation) on health beliefs and practices and how cultural diversity enriches and challenges health behaviors.
- » Analyze ways in which various forms of media send mixed messages (e.g., about attractiveness, sexual activity, the use of addictive substances).
- » Identify persuasive methods and techniques used in advertising and how to resist unhealthy messages.
- » Analyze the effect of technology on personal, family, and community health.
- » Demonstrate knowledge of the effects of environmental problems (e.g., community blight, pollution, global warming) on the health and safety of individuals and communities.
- Identify conservation principles and strategies for protecting the environment (e.g., conserving resources, reducing waste, recycling).

Sample Item:

Which of the following statements best describes how advertisers target adolescents and attract them to products that pose potential health risks?

- A. Television shows, movies, and magazines feature individuals who embody unrealistic standards of physical beauty.
- B. Advertisers pay television and film companies to place brand-name cosmetics prominently in scenes in shows and movies.
- C. Fast-food companies arrange promotions and toy tie-ins to coincide with the release of major motion pictures.
- D. Alcohol manufacturers place advertising in televised and live sporting events and in magazines with young readership.

Correct Response and Explanation

D. This question requires the examinee to demonstrate knowledge of media influences on personal health in this case, the way in which advertisers try to attract adolescents to products that pose health risks. Even though adolescents cannot legally drink alcohol, manufacturers of alcoholic beverages target young people with much of their marketing, especially at sporting events that young people attend or watch on television and in music, entertainment, and sports magazines popular with young people. Alcohol advertising and marketing has a significant effect on youth attitudes and helps create an environment that promotes underage drinking. National studies have confirmed that adolescents who are exposed to alcohol advertisements and view them favorably are likely to have positive expectations about alcohol use.

