



## HEALTHCARE SCIENCE

**COURSE:** 25.521 Introduction to Healthcare Science

**UNIT:** 8.1 Health Maintenance Practices



### INTRODUCTION

**Annotation:** Briefly describe the unit topics, tasks, methods, etc.

In this unit, students will identify preventive health practices and wellness promotion for their clients, as well as themselves. Students will explain the concepts of preventive medicine and wellness and describe how they can be a positive role model for their clients. During this unit, students will participate in a mini lab internet activity where they complete an online health assessment for themselves. After completing the assessment, students will receive detailed information, to gain a better sense of their overall physical, mental, and emotional health and learn how to improve their health habits.

**Grade(s):**

X	9 <sup>th</sup>
X	10 <sup>th</sup>
X	11 <sup>th</sup>
X	12 <sup>th</sup>

**Time:**

Four 50 minute class periods

**Author:**

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**Additional Author(s):**

**Students with Disabilities:**

For students with disabilities, the instructor should refer to the student's IEP to be sure that the accommodations specified are being provided. Instructors should also familiarize themselves with the provisions of Behavior Intervention Plans that may be part of a student's IEP. Frequent consultation with a student's special education instructor will be beneficial in providing appropriate differentiation.



## FOCUS STANDARDS

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### **GPS Focus Standards:**

#### **HS-IHS-10:**

**The student will practice preventive health behaviors personally and professional with clients.**

- a. Distinguish between health and wellness and behaviors that promote each.
- b. Explain the fundamentals of wellness and the prevention of disease processes.
- c. Define OSHA, CDC, Clinical Laboratory Improvements Amendments (CLIA) and explain each agency's role in healthcare practice.
- d. Compare and contrast the different types of immunity.

### **GPS Academic Standards:**

**ELA9LSV1** – The student participates in student-to-teacher, student-to-student, and group verbal interactions.

**ELA9RC2**- The student participates in discussions related to curricular learning in all subject areas

**ELA9RL5** – The student understands and acquires new vocabulary and uses it correctly in reading and writing.

### **National / Local Standards / Industry / ISTE:**



## UNDERSTANDINGS & GOALS

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### **Enduring Understandings:**

Students will know how to apply specific wellness practices and preventive health maintenance practices in their own lives as well as how to educate clients to improve their overall health status.

### **Essential Questions:**

- How do I practice preventive health and promote the health of clients?

### **Knowledge from this Unit:**

- Some activities that promote self health and wellness and can be promoted when working with clients.
- What activities could have negative affects on a person's wellness

- The benefits of preventing diseases rather than treating diseases
- How OSHA, CDC, Clinical Laboratory Improvements Amendments (CLIA) promote healthy practices.
- Ways of preventing diseases
- How the immunity affect wellness

#### Skills from this Unit:



## ASSESSMENT(S)

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#### Assessment Method Type:

- ☐ Pre-test
- ☐ Objective assessment - multiple-choice, true- false, etc.
  - ☐ Quizzes/Tests
  - ☐ Unit test
- ☐ Group project
- ☐ Individual project
- ☒ Self-assessment - May include practice quizzes, games, simulations, checklists, etc.
  - ☐ Self-check rubrics
  - ☐ Self-check during writing/planning process
  - ☐ Journal reflections on concepts, personal experiences and impact on one's life
  - ☐ Reflect on evaluations of work from teachers, business partners, and competition judges
  - ☐ Academic prompts
  - ☐ Practice quizzes/tests
- ☐ Subjective assessment/Informal observations
  - ☐ Essay tests
  - ☐ Observe students working with partners
  - ☐ Observe students role playing
- ☐ Peer-assessment
  - ☐ Peer editing & commentary of products/projects/presentations using rubrics
  - ☐ Peer editing and/or critiquing
- ☐ Dialogue and Discussion
  - ☐ Student/teacher conferences
  - ☐ Partner and small group discussions
  - ☐ Whole group discussions
  - ☐ Interaction with/feedback from community members/speakers and business partners
- ☐ Constructed Responses
  - ☐ Chart good reading/writing/listening/speaking habits
  - ☐ Application of skills to real-life situations/scenarios
- ☐ Post-test

#### Assessment(s) Title:

KWL Chart: Students will complete a chart about what they know, want to know and what they learned about Health Maintenance.

Working on Wellness Web quest:

If computers are not available use the attached Wellness Survey instead of the web quest.

**Assessment(s) Description/Directions:**

Students will complete a KWL chart. Under “K” (know), have students list what they already know about wellness, Under “W” (want to know), and under “L” (what they actually learned after lesson)  
Students will share their KWL chart with peers and teacher

**Attachments for Assessment(s):**

KWL Chart  
Wellness Survey



## LEARNING EXPERIENCES

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**Sequence of Instruction**

**1. Identify the Standards. Standards should be posted in the classroom for each lesson.**

HS-IHS-10: The student will practice preventive health behaviors personally and professional with clients.  
ELA9LSV1 – The student participates in student-to-teacher, student-to-student, and group verbal interactions.  
ELA9RC2- The student participates in discussions related to curricular learning in all subject areas  
ELA9RL5 – The student understands and acquires new vocabulary and uses it correctly in reading and writing.

**2. Review Essential Questions.**

- How do I practice preventive health and promote the health of clients?

**3. Identify and review the unit vocabulary.**

**4. Assessment Activity.**

Explain the concepts of preventive medicine and wellness. Have each student make two columns on a sheet of paper. In one column students should write activities they do to maintain their health. In the second column they should write activities they do that are detrimental to their health (smoking, over eating) or any activity they do not do that is detrimental to their health (no seat belts). Which column is longer? Ask students to share both good

and bad behaviors. Provide ideas for wellness behaviors that may not have been mentioned, such as blood pressure checks, cholesterol checks, and cancer screening.

Discussion:

Ask: “Why are hospital wellness centers a good idea?” Point out the benefits of preventing disease over treating disease. Explain how rehabilitation is a large part of recovery. Wellness centers that provide screening and rehabilitation are a one-stop type health care center—the “Wal-Mart of health care.”

Activity: (Students with Internet Access in class) Complete Wellness Survey (<http://www.healthstatus.com/>) or you may use another website with a wellness survey. Students complete an online assessment of their health status. This particular site listed will give your student an assessment of their health after they complete the survey.

**The site also has the following calculators students can use:**

[Blood Alcohol Estimator](#) [\[metric\]](#)

DON'T DRINK AND DRIVE! See how little alcohol is required to change the alcohol content of your blood stream.

[Body Fat Estimator](#) [\[metric\]](#)

How much fat are you carrying? Find out if you are in the healthy range.

[Body Mass Index](#) ( BMI ) [\[metric\]](#)

Do you have more mass than your heart can handle?

[Calories Burned](#) [\[metric\]](#)

Find out how many calories you burn doing your favorite activities.

[Daily Energy Expenditure](#) [\[metric\]](#)

Calculate how many calories your body needs to burn to function properly. Also known as the basal metabolic rate ( BMR ) calculator.

[Frame Size](#) [\[metric\]](#)

This calculator uses standard tables to calculate your frame size

[Ideal Weight](#) [\[metric\]](#)

Use this tool to determine your healthiest weight.

[Lean Body Mass](#) [\[metric\]](#)

Increasing your lean mass while reducing your fats is key to looking great.

[Lose One Pound](#) [\[metric\]](#)

How long does it take to lose a pound doing your favorite activity?

[Smoking Costs](#) [\[metric\]](#)

Just how much is this habit costing you in hard dollars?

### Target Heart Rate [metric]

Achieving your target heart rate is key to maximizing the effectiveness of your aerobic workout.

### Waist to Hip Ratio ( WHR ) [metric]

Do you have a higher risk of heart disease because of your shape?

- Teachers can divide students into groups and have them choose a calculator to use and report findings. Students can make up information if they don't want to use actual information (ex. Smoking cost, waist to hip ratio, pregnancy due date)

**Activity:** Have students complete web quest on the following site (or you can look up another on your own).

<http://academics.uww.edu/cni/webquest/Fall03/wellness/index.html>

**Review:** Students should answer the questions below during the Webquest which will be a study guide for the unit to review prior to a unit test.(a student sheet is attached)

Give students the Health Maintenance worksheet and have students answer the following questions by completing the Webquest Notes for teacher available at this website

<http://academics.uww.edu/cni/webquest/Fall03/wellness/index.html>

**What is Emotional Wellness?** Emotional wellness focuses on how you feel and how in tune you are with your own emotions. When you are in emotional balance, you feel at peace with yourself. You know your own capabilities and limitations, and you can cope with a healthy amount of stress in your life. You have a good relationship with yourself and with others around you. Relationships with others will have a strong foundation based on mutual trust and respect. The emotionally healthy individual has a strong sense of self, and remains true to him or herself while still being open to the ideas and opinions of others. Emotional health is about knowing yourself and your feelings. It is important to be emotionally healthy because it will promote happiness, positive feelings about yourself and your surroundings, and an overall sense of optimism. Emotional health is not one specific definition, but a continuum of qualities and behaviors. Emotional health is only one part of being a balanced and healthy individual. Physical, social, and spiritual health are just a few of the other parts of the puzzle that makes a person whole. Emotional Wellness is the ability to control stress and to express emotions appropriately and comfortably."

**What is Social Wellness?** The social health of individuals refers to "that dimension of an individual's well-being that concerns how he gets along with other people, how other people react to him, and how he interacts with social institutions and societal mores" (Russell 1973, p. 75). This definition is broad—it incorporates elements of personality and social skills, reflects social norms, and bears a close relationship to concepts such as "well-being," "adjustment," and "social functioning."

The social component of wellness means having the ability to interact successfully with people and one's personal environment."

**Physical Wellness:** The physical component of wellness involves the ability to carry out daily tasks, develop cardiorespiratory and muscular fitness, maintain adequate nutrition and a healthy body fat level, and avoid abusing alcohol and other drugs or using tobacco products."

**Spiritual Wellness:** Spirituality is the way you find meaning, hope, comfort and inner peace in your life. Many people find spirituality through religion. Some find it through music, art or a connection with nature. Others find it in their values and principles.

The spiritual component of wellness provides meaning and direction in life and enables you to grow, learn, and meet in new challenges."

### **How is spirituality related to health?**

No one really knows for sure how spirituality is related to health. However, it seems the body, mind and spirit are connected. The health of any one of these elements seems to affect the health of the others.

Some research shows that things such as positive beliefs, comfort and strength gained from religion, meditation and prayer can contribute to healing and a sense of well-being. Improving your spiritual health may not cure an illness, but it may help you feel better, prevent some health problems and help you cope with illness, stress or death.

### **How can I improve my spiritual health?**

If you want to improve your spiritual health, you may want to try the following ideas. However, remember that everyone is different, so what works for others may not work for you. Do what is comfortable for you.

- Identify the things in your life that give you a sense of inner peace, comfort, strength, love and connection.

Set aside time every day to do the things that help you spiritually. These may include doing community service or volunteer work, praying, meditating, singing devotional songs, reading inspirational books, taking nature walks, having quiet time for thinking, doing yoga, playing a sport or attending religious services.

1. OSHA – Occupational Safety and Health Administration – a federal agency that establishes and enforces standards that protect workers from job-related injuries and illnesses

2. CDC: CDC – a division of the US Department of Health and Human Services is concerned with the causes, spread and control of diseases in populations.
3. CLIA – the Clinical Laboratory Improvement Amendment is a federal amendment that established standards, regulations, and performance requirements based on the complexity of a test and the risk factors associated with incorrect results. All medical laboratory personnel must adhere to CLIA guidelines.

#### Immunity:

1. The state of being immune from or insusceptible to a particular disease or the like.
2. The condition that permits either natural or acquired resistance to disease.
3. The ability of a cell to react immunologically in the presence of an antigen.

**Natural active:** Occurs during infection. It is active because lymphocytes are activated by antigens on pathogen's surface.

**Artificial active:** Injecting or taking antigens by mouth. Takes time for T and B cells to be activated but gives long lasting immunity.

**Natural passive:** Mother to child through placenta or milk.

**Artificial passive:** Used during potentially fatal diseases. Provides an instant response but only temporary as antibodies are not the body's own so memory cells are not created. E.g. tetanus - injection of antitoxins given.

Memory cells are only produced in active immunity.

Protection for active immunity is permanent whereas in passive immunity it is only temporary.

Antigens are only encountered in active immunity.

Active immunity takes several weeks to become active but passive is immediate

## Fundamentals of Wellness

#### Health:

1. The general condition of the body or mind with reference to soundness and vigor: good health; poor health.
2. Soundness of body or mind; freedom from disease or ailment: to have one's health; to lose one's health.



Wellness:

1. The quality or state of being healthy in body and mind, esp. as the result of deliberate effort.
2. An approach to healthcare that emphasizes preventing illness and prolonging life, as opposed to emphasizing treating diseases.

What behaviors promote Health and Wellness?

Explain how diseases are prevented:

### **Attachments for Learning Experiences:**

### **Notes & Reflections:**

Most of this lesson involves students gathering information about wellness at the Webquest site and answering other questions. They will have two tasks to complete at the website.



## **CULMINATING PERFORMANCE TASK** (Optional)

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### **Culminating Unit Performance Task Title:**

Wellness Webquest

Use the student worksheet for making a quiz.

Use the web quest rubric for grading web quest.

### **Culminating Unit Performance Task Description/Directions/Differentiated Instruction:**

Students will complete all steps in the wellness webquest and be evaluated using the webquest rubric

Teachers may choose to add more tasks to the rubric for the wellness project or prepare a written assessment for c & d of the Health Maintenance Standard

### **Attachments for Culminating Performance Task:**



## UNIT RESOURCES

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### Web Resources:

[www.healthstatus.com](http://www.healthstatus.com)

[www.wellness.com](http://www.wellness.com)

[www.kidshealth.org/teen/](http://www.kidshealth.org/teen/)

<http://www.chebucto.ns.ca/Health/TeenHealth/index.html>

<http://academics.uww.edu/cni/webquest/Fall03/wellness/index.html> (Web Quest)

### Attachment(s):

### Materials & Equipment:

### What 21st Century Technology was used in this unit:

<input type="checkbox"/>	Slide Show Software	<input type="checkbox"/>	Graphing Software	<input type="checkbox"/>	Audio File(s)
<input type="checkbox"/>	Interactive Whiteboard	<input type="checkbox"/>	Calculator	<input type="checkbox"/>	Graphic Organizer
<input type="checkbox"/>	Student Response System	<input type="checkbox"/>	Desktop Publishing	<input type="checkbox"/>	Image File(s)
<input type="checkbox"/>	Web Design Software	<input type="checkbox"/>	Blog	<input type="checkbox"/>	Video
<input type="checkbox"/>	Animation Software	<input type="checkbox"/>	Wiki	<input type="checkbox"/>	Electronic Game or Puzzle Maker
<input type="checkbox"/>	Email	<input checked="" type="checkbox"/>	Website		