



## Grade 8 Sample Lesson Plan: Chronic Disease Prevention

### SOLs

- Explain the roles of preventive health measures, immunization, and treatment in disease prevention.
- Identify pathogenic, genetic, age, cultural, environmental, and behavioral factors that influence the degree of risk of diabetes, heart disease, and stroke.
- Analyze the risk factors associated with communicable and non-communicable diseases.
- Describe personal and family preventive health measures, including immunizations, nutrition, physical activity, and sleep, in preventing diabetes, heart disease, stroke, and other chronic diseases.
- Develop practical solutions for removing barriers to physical activity and healthy food choices.
- Develop a strategy to prevent diabetes, heart disease, stroke, and other chronic diseases and conditions.
- Analyze opportunities for community service.

### Objectives/Goals

- Students will understand the difference between communicable and non-communicable diseases, be able to identify risk factors and preventive measures, and be able to make recommendations to improve community health.

### Materials

- Internet access,
- Background information materials
- Worksheets
- Community advocacy letter templates

### Procedure

#### *Understanding Chronic Disease Risk and Prevention*

- Introduce students to the differences between communicable and non-communicable diseases. Communicable diseases are spread fairly quickly from individual to another as a result of germs, viruses, etc. and non-communicable

(chronic) diseases develop over time, are not spread between people. Chronic diseases can be and can be prevented. In three ways.

1. Medical screening tests (e.g., mammograms) for early identification (e.g. certain cancers)
  2. Immunizations or vaccinations. Some cancers are caused by viruses and can be prevented by vaccines (e.g., human papilloma virus (HPV) and hepatitis)
  3. Lifestyle behaviors such as avoiding tobacco, limiting alcohol use, protecting your skin from the sun and avoiding indoor tanning, eating a diet rich in fruits and vegetables, keeping a healthy weight, and being physically active
- Provide students with definitions for the following terms
    - Pathogenic – e.g., causing or capable of causing disease (bacteria, virus, etc.)
    - Genetic - e.g., relating to genes or heredity
    - Culture – e.g., a way of life of a group of people (behaviors, beliefs, values, etc.); Often passed down from one generation to the next
    - Environment - e.g., the surroundings or conditions in which a person lives
    - Behavior - e.g., the way in which an individual acts or conducts him/herself
    - Risk factor- e.g., any attribute, characteristic or exposure of an individual that increases the likelihood of developing a disease or injury
    - Preventive measure - e.g., action taken to stop something from happening or arising
  - Discuss how all of these influence the onset or progression of chronic diseases.
  - Provide students with background information and/or access to various websites that have information on chronic disease causes, risk factors, and prevention measures.
  - Have students complete worksheets to identify risk factors and preventive measures for various chronic diseases (see provided samples).

*Community Prevention Activity*

- Assign students to work in teams to draft a letter to the principal or county or city council to improve the community's health. The letter should identify barriers to physical activity and healthy food choices in your school or community and proposes solutions to remove those barriers.

Additional resources are provided in the references below.

**Assessment Idea**

- Evaluate student participation in discussion, and teamwork, accuracy and completeness of assignments.

**References**

- AHA – Our Challenge: A Look At the Obesity Epidemic [https://www.heart.org/idc/groups/heart-public/@wcm/@fc/documents/downloadable/ucm\\_452021.pdf](https://www.heart.org/idc/groups/heart-public/@wcm/@fc/documents/downloadable/ucm_452021.pdf)
- AHA - What or Who Influences Your Food Choices [https://www.heart.org/idc/groups/heart-public/@wcm/@global/documents/downloadable/ucm\\_314238.pdf](https://www.heart.org/idc/groups/heart-public/@wcm/@global/documents/downloadable/ucm_314238.pdf)
- CDC Chronic Disease Prevention Program <https://www.cdc.gov/chronicdisease/>
- Place Matters Lesson [http://www.unnaturalcauses.org/assets/uploads/file/Place Matters Lessons.pdf](http://www.unnaturalcauses.org/assets/uploads/file/Place_Matters_Lessons.pdf)
- Communicable Disease Lesson Plan - Danny Clark [www.dannyclark10.weebly.com/uploads/1/2/2/1/12211660/health\\_lp\\_showcase.docx](http://www.dannyclark10.weebly.com/uploads/1/2/2/1/12211660/health_lp_showcase.docx)
- Communicable and Non Communicable Diseases Lesson Plan <https://www.bcpss.org/webapps/cmsmain/webui/institution/CURRICULUM/Health>
- Communicable and NonCommunicable Diseases PPT Presentation <https://sharemylesson.com> Food Span -Johns Hopkins Center for a Livable Future: <http://foodspanlearning.org/>
- Glencoe Online Learning Center - Unit 1, Lesson 4 - Analyzing Influences on Health <http://www.warrenkyschools.org/userfiles/2798/Classes/16329/lesson04.pdfPE>
- Central Non-Communicable Diseases Research Lesson Idea [www.pecentral.org](http://www.pecentral.org)
- PE Central – Non or Communicable Disease Lesson Plan [www.pecentral.org](http://www.pecentral.org)

**Handout**

The next page includes a handout for the lesson. The handout is designed for print use only.

## Sample Student Worksheet # 1

### Risk Factors

**Instruction:** For each chronic disease identified in the left column below, identify at least one risk factor for each of the 6 categories of risk.

<b>Chronic Disease</b>	<b>Pathogens</b>	<b>Genetic/ Heredity</b>	<b>Age</b>	<b>Culture (Social)</b>	<b>Physical Environment</b>	<b>Individual Behaviors</b>
<b>Cancer</b> Type:	<i>e.g., Human Papilloma Virus (HPV)</i>	<i>e.g., Female w/ Family History of Breast and Cervical Cancer</i>	<i>e.g., Over 30</i>	<i>e.g., Family members smoke</i>	<i>e.g., No sidewalks to walk</i>	<i>e.g., High Fat Diet</i>
<b>Heart Disease/ Stroke</b>						
<b>Diabetes</b>						
<b>Arthritis</b>						
<b>Asthma</b>						
<b>Communicable Disease</b> Type:						

## Student Worksheet # 2

### Individual Preventive Measures

**Instruction:** For each chronic disease, research and identify at least one individual prevention strategy for each of the 6 categories below.

<b>Chronic Disease</b>	<b>Pathogens</b>	<b>Genetic/ Heredity</b>	<b>Age</b>	<b>Culture (Social)</b>	<b>Physical Environment</b>	<b>Individual Behaviors</b>
<b>Cancer</b> Type:	<i>e.g., Keep immunizations up to date. Reducing transmission through behavior change</i>	<i>e.g., Letting doctor know my risk and having regular screenings</i>	<i>e.g., Having age appropriate medical checkups</i>	<i>e.g., Contacting 1-800-Quitline for family smoking cessation resources</i>	<i>e.g., Exercising to home videos</i>	<i>e.g., Following USDA guidelines to improve nutrition</i>
<b>Heart Disease/ Stroke</b>						
<b>Diabetes</b>						
<b>Arthritis</b>						
<b>Asthma</b>						
<b>Communicable Disease</b> Type:						