

Activity: Determinants of Health

Purpose:

This activity will highlight the interconnections of the various determinants of health, assist participants in discovering how the determinants can have an environmental component and identify areas where we can promote health and reduce the risks of a negative impact on child health.

Props

1. Graphic from Child Health and Environment – A Primer p. 5
2. Determinants of Health Worksheet

Key take-away messages:

1. Multiple factors contribute to child health. These factors can interact.
2. Some health determinants can be changed and others can't.
3. Environmental exposures are preventable. Some can be prevented through personal choices while others require societal changes.

What makes people healthy?

"Why is Jason in the hospital?

Because he has a bad infection in his leg.

But why does he have an infection?

Because he has a cut on his leg and it got infected.

But why does he have a cut on his leg?

Because he was playing in the junk yard next to his apartment building and there was some sharp, jagged steel there that he fell on.

But why was he playing in a junk yard?

Because his neighbourhood is kind of run down. A lot of kids play there and there is no one to supervise them.

But why does he live in that neighbourhood?

Because his parents can't afford a nicer place to live.

But why can't his parents afford a nicer place to live?

Because his Dad is unemployed and his Mom is sick.

But why is his Dad unemployed?

Because he doesn't have much education and he can't find a job.

But why ...?"

- from *Toward a Healthy Future: Second Report on the Health of Canadians*

available at www.phac-aspc.gc.ca/ph-sp/report-rapport/toward/index-eng.php

For more information about determinants of health, see:

- Child Health and Environment – A Primer p. 5
- Health Canada *What Determines Health?*
www.phac-aspc.gc.ca/ph-sp/determinants/index-eng.php
- World Health Organization *The determinants of health*
www.who.int/hia/evidence/doh/en/index.html

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Determinants of Health Worksheet

Using a 6-sided dice and the procedures described below, determine the health determinants of a hypothetical child. *This is a game!* While it is based on real data and actual research, it is not meant to be a way to predict a child's actual health status. It is meant to generate discussion about how some health determinants can be influenced most easily through personal choices and/or societal and political change. Some health determinants can't be changed.

For each of the health determinants, record the points you accumulate through the worksheet on the chart on the last page.

1. Gender

Gender can influence the likelihood of someone developing particular diseases. The reasons for the gender differences are largely unknown but several have been suggested including genetic, hormonal, physiological and potentially behavioural differences between the sexes.

Roll the dice:

On a 1, 2 or 3, the person is a male. On a 4, 5 or 6 the person is female.

Check the appropriate box on the worksheet chart.

2. Culture

According to the 2001 census by Statistics Canada, Canada has 34 ethnic groups with at least one hundred thousand members each. Immigrants and their children represent an increasing proportion of the Canada-wide population. The results below reflect the Canadian demographics. *How can culture influence chemical exposures and health?*

Roll the dice:

On a 1 to 5, the person is white. On a 6, roll again, on a 1, 2 and 3 roll again and select from Table A, on a 4, 5, and 6 from Table B.

Table A		Table B	
On a 1-2	Aboriginal	On a 1, 2 or 3	Asian
On a 3-4	Indian	On a 4 or 5	Black
On a 5	Arab	On a 6	Latin American
On a 6	Filipino		

Everyone rolls again - on a 1, the person is an immigrant or refugee.

Enter your results in the worksheet chart.

3. Income and Social Status

Poverty is well established as a major determinant of health and is also associated with greater likelihood and opportunities for environmental exposures. Poverty can also contribute to greater susceptibility to harmful effects of such exposures, compounding health and income disparities. In Canada, one child out of 6 lives in poverty. *How can poverty increase exposure to harmful environmental exposures?*

Roll a dice:

On a 1, the child lives in poverty. On a 2, low income. On a 3, moderate income.
On a 4 or 5 good income. On a 6, high income.

Enter your dice roll in the points box on the worksheet chart.

4. Social Support Networks

Some experts have concluded that the health effect of support from families, friends and communities may be as important as established risk factors such as smoking, physical activity, obesity and high blood pressure. *How do social support networks affect our ability to advocate for changes that would be beneficial to our health?*

Roll a dice:

On a 1, no or little support.	Enter a 1 in the points box on the worksheet chart.
On a 2 or 3, some support.	Enter a 2 in the points box on the worksheet chart.
On a 4, 5, or 6, good support	Enter a 3 in the points box on the worksheet chart.

5. Education

Higher levels of education provide better access to healthy physical environments. People with higher levels of education tend to smoke less, be more physically active and eat healthier foods. *Do people with higher levels of education have better access to healthier environments?*

Roll a dice:

On a 1, less than high school	On a 2, high school level	On a 3, trade school
On a 4, college level	On a 5, university level	On a 6, post-bach education

Record your dice roll here: _____

If the child's parents had a high income (a 6 at #3), increase your points by 1.

If the child lives in poverty or a low income (a 1 or 2 at #3), reduce your points by 1.

Should a point be deducted if university education was acquired outside of Canada?

Enter your total points on the worksheet chart.

6. Employment and Working Conditions

Unemployment, underemployment, stressful or unsafe work are associated with poorer health. Physical and social work condition can significantly impact people's physical and emotional health and well-being. *How do working conditions affect exposure to potentially harmful chemicals?*

Roll a dice:

On a 1, unemployed
On a 2 or 3, employed in a stressful or unsafe environment (may involve exposure to chemicals)
On a 4 or 5, a stable job
On a 6, a well-paid job with benefits and opportunities for growth

Enter your dice roll in the points box in the worksheet chart.

7. Physical Environments

Factors related to housing, indoor air quality, and the design of communities and transportation systems can significantly influence our health. *How does where you live affect environmental health?*

Roll a dice:

On a 1, 2 or 3, the child lives in an urban environment
On a 4 or 5, the child lives in the suburbs
On a 6, the child lives in a rural / country environment

Reflect back to your result in #3 (income and social status), and discuss how these two health determinants (and others) may interact, adjust your score accordingly and enter a number between 1 and 6 in the points box in the chart.

8. Biology and Genetics

Many diseases have a genetic component that may predispose a person to develop them. Disease is often the result of the interaction between genes and the environment. While genetics can't be changed, environmental exposures can be controlled.

Roll a dice:

On a 1 or 2, the child is predisposed to specific diseases with a genetic component. Enter 0.

On a 3, 4, 5, or 6, the child is not predisposed. Enter 6.

For example, gender may predispose to certain diseases:

For boys: increased risk of asthma before the age of 15, learning disabilities and behavioural disorders (autism, ADHD, Tourette's syndrome, cerebral palsy, dyslexia), some cancers (testicular, non-Hodgkin's lymphoma), and some birth defects (for example cryptorchidism and hypospadias).

For girls: increased risk of asthma after age 15, some cancers (breast, uterine, ovarian), and birth defects especially *spina bifida* and congenital hip dislocation.

9. Personal Health Practices and Coping Skills

Personal health practices and coping skills are important in supporting healthy lifestyles. People with good coping skills are better able to deal with events, challenges and stress. People can make informed choices and adopt healthy behaviours and lifestyles. *How do personal choices affect health? Are personal choices sufficient to ensure health?*

Everyone starts with 3 points and makes some personal choices:

Add 1 point for each of the following:

Healthy eating habits

Regular exercise

Regular visits to the doctors

Deduct 1 point for each of the following:

Smoking

Alcohol

Overweight Enter your total in the points box in the chart.

10. Social Environments

The values and norms of a society influence in varying ways the health and well being of individuals and populations. *How do social norms and values influence the health and well-being of an individual? How can individuals affect those norms and values to foster health?*

Roll a dice:

On 1 or 2, poor

On a 3 or 4, good

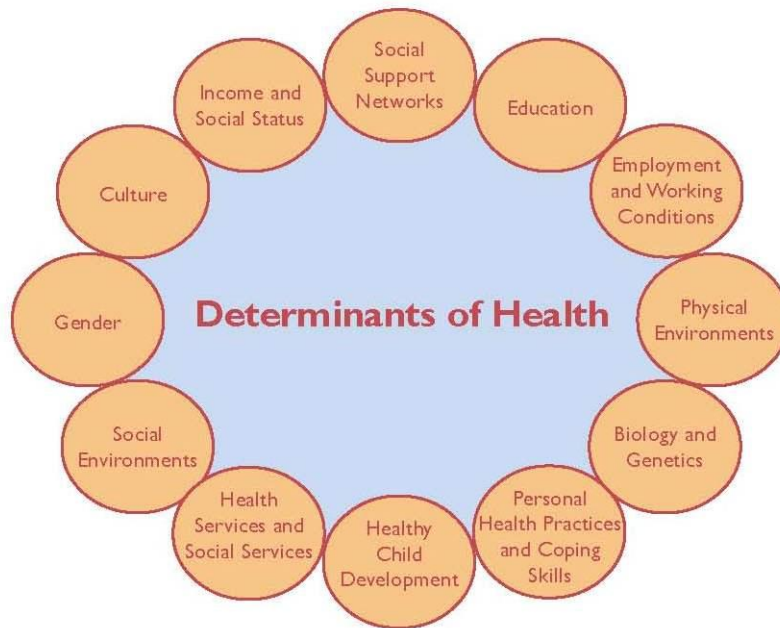
On a 5 or 6, excellent

11. Health and Social Services

Access to health services can contribute to population health. The health services continuum of care includes health promotion, health treatment and secondary prevention. *What measures can contribute to better health?*

Everyone starts with 6 points because Canada provides universal health care! However, deduct 1 point if you rolled a 1 or 2 in Health Determinant #3 as you may not have access to eye care, dentistry, a drug plan or alternative health treatments.

Figure 1: Determinants of Health



Source: World Health Organization, undated.

1.	Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female
2.	Culture: Born in Canada or immigrant/refugee?	
3.	Income and Social Status	Points:
4.	Social Support Networks	Points:
5.	Education	Points:
6.	Employment and Working Conditions	Points:
7.	Physical Environments	Points:
8.	Biology and Genetics	Points:
9.	Personal Health Practices and Coping Skills	Points:
10.	Social Environments	Points:
11.	Health and Social Services	Points:
	TOTAL	

Discuss how your total might reflect the child's health status.

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