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## **Risk Perception**

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# Lesson Plan

**TITLE:** Risk Perception

**SUBJECT AREA:** Social studies, mathematics, school health education, biology

**OBJECTIVE:** At the end of this instructional unit, the student will understand that risk perceptions are influenced not only by the probability of an adverse consequence but also by a host of other, subjective factors.

**TIME FRAME:** Two 50-minute class periods

**PREREQUISITE KNOWLEDGE:** None

**MATERIALS NEEDED:** Computer with Internet access

**PROCEDURE:** The instructional unit consists of a series of questions, discussion points, and activities related to risk perception. Part I begins with a risk quiz as an introductory activity. Epidemiologic and behavioral factors related to risk quantification and perception are discussed in the section that follows. Part II consists of an activity in which the students analyze an advertising campaign to prevent or reduce smoking and the ways in which an understanding of risk perception is useful in health education.

**ASSESSMENT:** With an understanding gained in the instructional unit about behavioral factors that influence risk perception, students will create advertisements to target the prevention of certain risk behaviors.

## **LINK TO STANDARDS:**

### **Social Studies Standards**

2. Social studies programs should include experiences that provide for the study of the ways human beings view themselves in and over time.
3. Social studies programs should include experiences that provide for the study of people, places, and environments.
4. Social studies programs should include experiences that provide for the study of individual development and identity.

Social Studies Standards available at: [www.ncss.com](http://www.ncss.com)

## Mathematics Standards

1. Number and Operations: Computing and estimating the results of calculations; interpreting rates of chance from graphic and numerical data.
4. Problem solving: Expressing ideas and conclusions with clarity and precision; interpreting the results of mathematical computations in real contexts.
5. Connections: Building connections between and among mathematical ideas, as well as connections between mathematics and the other scientific disciplines.
6. Representation: Representing problems algebraically, geometrically, and graphically in ways that help in understanding and solving mathematical problems. E.g. . . . ideas of risk would be best understood as ratios and represented with fractions, and a cluster of cases might best be represented as dots on a map.

Math Standards available at: <http://standards.nctm.org/document/chapter7/index.htm>

## School Health Education

1. Students will comprehend concepts related to health promotion and disease prevention.
2. Students will demonstrate the ability to access valid health information and health-promoting products and services.
3. Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks.
4. Students will analyze the influence of culture, media, technology, and other factors on health.
5. Students will demonstrate the ability to use interpersonal communication skills to enhance health.
6. Students will demonstrate the ability to use goal-setting and decision-making skills to enhance health.
7. Students will demonstrate the ability to advocate for personal, family, and community health.

Health Education Standards available at: <http://www.ericfacility.net/ericdigests/ed387483.html>

## Science (Content Standard F—Personal and Community Health)

As a result of activities in grades 9 through 12, all students should develop understanding of:

- Hazards and the potential for accidents exist regardless of the environment the possibility of injury, illness, disability, or death may be present. Humans have a variety of mechanisms—

sensory, motor, emotional, social and technological—that can reduce and modify hazards.

- Personal choice concerning fitness and health involves multiple factors. Personal goals, peer and social pressures, ethnic and religious beliefs, and understanding of biological consequences can all influence decisions about health practice.
- Natural and human-induced hazards present the need for humans to assess potential danger and risk. Many changes in the environment designed by humans bring benefits to society, as well as cause risks. Students should understand the costs and trade-offs of various hazards—ranging from those with minor risk to a few people to major catastrophes with major risk to many people. The scale of events and the accuracy with which scientists and engineers can (and cannot) predict events are important considerations.

Science Standards available at: <http://www.nap.edu/6a.html>

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# Part I: Risk Quiz\* (Student Version)

**Answer the following quiz questions and test your sense of adventure!**

1. Your friend invites you, a ski novice, to hit the slopes. You accept. When you get to Mt. Enormous, the first thing you do is . . .
  - a. Head for the hardest slope. Nothing ventured, nothing gained!
  - b. Sign up for a lesson. A broken leg is not your idea of fun.
  - c. Take a seat by the fire at the lodge. You'll leave the daredevil stuff to your friends.
2. One of your fellow teammates invites you to her birthday party, but you won't know a soul there. You say
  - a. Yes! I can't wait to meet all those cool new people!
  - b. Can I bring my three best friends? We travel as a group.
  - c. Um, thanks, but I have to rearrange the furniture in my room this weekend.
3. You will wait on a long line at the amusement park just to get on
  - a. The ten-story bungee jump—free fall is so excellent!
  - b. The log ride . . . you like the splash without the crash.
  - c. The carousel—now that you're older, it doesn't make you dizzy.
4. Your parents leave town and give you strict instructions against throwing a party. They guarantee harsh punishment if you disobey. At 9 p.m. a group of your pals rings the doorbell ready to party. You . . .
  - a. Fling your door open wide and shout, "Let the party begin."
  - b. Grab your coat and meet them outside. Maybe you can't host a party, but no parents means no curfew.
  - c. Hide in the dark and later lie and say you didn't hear the doorbell.
5. You're hanging out with people whom you don't know well. The conversation is slow and you remember a hilarious joke that a friend recently told you. You . . .
  - a. Tell the joke of course!
  - b. Quietly tell the joke to the person next to you—if he thinks it's funny, then you'll repeat it to rest of the group.
  - c. Would never tell a joke in public.

\*Risk Quiz adapted from Cosmo Girl and Emode.com

6. You're hanging out with a group of friends in the mountains, when you see some other teens jumping off a high rock into the cool blue waters. Someone in your group tries to rally everyone to take the plunge. You . . .
  - a. Are the person cajoling everyone to jump.
  - b. Find a lower rock to jump from.
  - c. Hang out in the wading area.
7. You're sitting in math class when you realize that your teacher is wrong about the formula needed for the problem. You . . .
  - a. Raise your hand and explain that the formula that you really need is on the next page.
  - b. Cause a distraction. If you can't correct the teacher, you might as well change the subject.
  - c. Keep quiet—contradicting a teacher is a death wish.
8. You have just been invited to lunch with your friend who got his driver's license 6 months ago. He still drives like a 6-year-old. You know that he will be devastated if you tell him about his driving skills. As he rolls over the curb to pick you up, you. . . .
  - a. Say a little prayer and hope that the restaurant isn't too far away. You want to enjoy a long fruitful life.
  - b. Suggest that he park the car and you walk to lunch. Your sudden interest in conserving energy will be your excuse for wanting the fresh air.
  - c. Say thanks but no thanks, remind him of his three recent fender benders and recommend a place for driving practice!

## Quiz Results

Are your answers mostly "a"? You are a **Daredevil!**

Fear is not an option for you. You've never met a risk you didn't take, and the idea of adventure drives many of your decisions. Your spontaneity also makes you the life of the party. Once in a while, though, you leap, dive or bungee jump before you look and get into trouble. Anticipate some risks. A little research can help: Take a lesson before you ski Mt. Enormous. You'll still have a thrill-filled life—just without the potential dangers.

Are your answers mostly "b"? You are a **Reasonable Risktaker!**

With your great sense of adventure, you have the guts to try just about anything—within reason. But you also know when it's time to be careful, like when you suggest walking to lunch instead of riding with your reckless driver friend. Your courage is a great asset, but your sense of safety is enough to keep you from grave danger.

Are your answers mostly “c”? You like to **Play it Safe!**

Sometimes your “that-could-be-way-too-embarrassing” radar keeps you from doing things you might enjoy, like trying something other than the carousel at the amusement park. Although protecting your life is admirable, don’t spend your years watching adventures pass you by. Start by taking little risks—accept an invitation you’d normally nix or say hi to someone you don’t know well. Soon, taking a chance will get much easier.



# A Closer Look at Risk (Student Version)

## Introduction

The results of the quiz that you just took reveal that different people have very different attitudes toward risk. Some people experience terror about situations that they perceive to be dangerous to their health or safety. Others seem oblivious to even well-known hazards. In this instructional unit, we will explore some of the issues related to risk perception.

A person's perception of the riskiness of an event, activity, situation or exposure can be thought of as being made up of two components, one objective and one subjective. The first component is the probability that an adverse outcome will result from the event, activity, situation or exposure. This component can be quantified using epidemiologic measures. The second component consists of a complex of social and psychologic factors that can influence how a person interprets the probability and the seriousness of the adverse outcome. In the first section of this instructional unit, we will discuss ways to quantify the risk of an adverse outcome. Then we will go on to explore the other factors that influence our perception of risk.

## Epidemiologic Approach to Quantifying Risk

In epidemiology risk is defined as probability. Thus when we speak of the risk of an adverse outcome, we are referring to the probability that the outcome will occur. For example, if we say that your risk of being hit by a car is 1 in 10,000, that is the same as saying that the probability that you will be hit by a car is 1 in 10,000 (which can also be expressed as 0.01% or 0.0001). How are probabilities of particular outcomes determined? They are often derived from epidemiologic studies in which groups of people are identified and followed to determine how many people experience the outcome. The probability of a particular outcome is simply the proportion of a group of people who experience the outcome over a given time period. This proportion is referred to as the incidence proportion.

$$\text{Incidence proportion} = \frac{\text{number of people who experience the outcome over a given time period}}{\text{total number of people observed over the same time period}}$$

For example, say an epidemiologist wanted to quantify the risk of sudden death among joggers. Suppose she did a study in which she enrolled 10,000 joggers and followed them for five years.

If, during that time, 50 people experienced sudden death while jogging, the incidence proportion would be:

$$\text{Incidence proportion} = \frac{50}{10,000} = 0.005$$

From this study, the epidemiologist could conclude that the five-year risk (or probability) of sudden death related to jogging is 0.005, or 0.5%.

**Question 1.** Data that are routinely collected by government agencies can also be used to estimate risks. For example, say you knew from census data that there were 48,931 people in a particular county in 2002 and that 10 people died in motor vehicle accidents (MVA) in that county during the same year. What is the one-year risk of MVA death for people in that county?

When we say that the one-year risk of MVA death is 2 per 10,000, that is an individual risk. That is, if I am a member of the population that generated the risk estimate (or a similar population), then that probability applies to me as an individual. For the whole society, it might also be meaningful to express the risk in terms of the actual number of deaths. For example, if the results for the hypothetical county in the example were extrapolated to the United States (which has a population of about 290,000,000), then we could estimate that there are about 58,000 ( $0.0002 \times 290,000,000$ ) deaths from MVA per year in the United States. Sometimes lifetime risks (the risk of experiencing an event during an entire lifetime) or reductions in life expectancy are used as ways to express risk.

**Question 2.** Say you read an article that stated that 6 out of 100,000 men in the United States got brain cancer in 2002.

- What was the incidence proportion for brain cancer among men in 2002?
- What is the annual risk of brain cancer for men?
- What is the probability that an individual American man will get brain cancer over a period of one year?
- How do you think the authors of the article determined that 6 out of 100,000 men in the United States got brain cancer in 2002?

## Ranking the Risks

In this section we will consider certain causes of death in the United States, our perceptions about their relative importance and some of the factors that might be influencing these perceptions.

**Question 3.** Examine the causes of death listed in Table 1. Which three do you think are responsible for the largest number of deaths per year in the United States? Which three do you think are responsible for the smallest number of deaths per year in the United States?

*Table 1. Selected Causes of Death, United States, 2000 (All Ages)*

Accidents (all kinds)
Accidents (motor vehicle)
Alcohol (deaths directly attributable to alcohol, plus liver disease)
Alzheimer's disease
Bicycle accident
Bioterrorist attack with anthrax
Cancer
Drowning
Fire
Food poisoning
Heart disease
Homicide
Lightning
Stroke
Suicide

**Question 4.** Now examine Table 2, which presents the mortality risks per 100,000 population for these causes of death. Were you able to rank the three most important and least important causes of death? Can you think of some reasons for incorrect rankings?

*Table 2. Mortality Risk per 100,000, by Selected Causes of Death, United States, 2000 (All Ages)*

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<b>Cause of Death</b>	<b>Mortality Risk /100,000</b>
Heart disease	251.8892
Cancer	195.6947
Stroke	58.8582
Accidents (all kinds)	33.1785
Alzheimer's disease	17.3853
Alcohol (direct, plus liver disease)	16.1031
Accidents (motor vehicle)	14.8258
Suicide	8.2706
Homicide	6.4767
Food poisoning	1.7723
Drowning	1.5617
Fire	1.2052
Bicycle accident	0.2658
Lightning	0.0223
Bioterrorist attack with anthrax	0.0018

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## Behavioral Factors That Affect Risk Perception

Various authors have identified behavioral factors that may affect the perceptions that people have about risks. Some of these factors are described in Table 3 below.

*Table 3. Behavioral Factors That May Affect Perceptions About Risks*

<b>Factor</b>	<b>Example</b>
Natural substances or situations may be perceived as less risky than manmade substances or situations.	People may fear radon from radium-contaminated industrial waste more than they fear naturally occurring radon in homes (which causes 14,000 deaths from cancer per year).
Voluntary exposures or activities may be perceived as less risky than involuntary exposures or activities.	Voluntary activities such as sunbathing or smoking may be considered less risky than involuntary exposures such as chemicals in drinking water or pesticides in food. Yet the risks related to sunbathing and smoking are clearly much larger than those related to chemicals in drinking water.
Situations and outcomes that inspire dread may be considered riskier than those that are not dreaded.	Women fear breast cancer (a dreaded disease) much more than heart disease. In a 1997 poll American women ranked breast cancer as the leading risk for their health. Yet heart disease is responsible for 30% of deaths in American women, whereas breast cancer accounts for only 3%.
Familiar substances and activities may be perceived as less risky than unfamiliar substances and activities.	People tend to overestimate the danger of rare events, such as a plane crash, yet underestimate dangers of more common events like driving a car. Yet motor vehicle accidents are responsible for many more deaths every year than plane crashes.
Chronic activities or exposures may be perceived as less risky than catastrophic activities or exposures.	Smoking kills 350,000 people a year. But much greater fear would be experienced if 350,000 people died on a single day in a single city.
Controllable substances and activities may be perceived as less risky than uncontrollable ones.	One of the reasons people fear airplane crashes more than they fear car accidents may be that they believe they control the safety of their own car more than the safety of a plane.
Situations that are memorable because of personal experience, experience of friends or family, or news reports may be perceived as more risky than situations that are not memorable.	News reports about severe acute respiratory syndrome (SARS) in recent months may have contributed to the public's fear of this disease, even though other infectious diseases, such as influenza, pose a much greater risk.

**Question 5.** Examine the factors in Table 3. Can you think of ways in which these factors might have affected your rankings of the causes of death in Table 1?

**Question 6.** When people make decisions about whether to engage in a potentially risky behavior, they take two things into consideration: the perceived *probability* of a particular adverse outcome and the perceived *seriousness* of the outcome. Can you think of some behaviors or exposures that people might fear or avoid, even though the probability of an adverse outcome is low, because the perceived seriousness of the outcome is very high?

**Question 7.** Are there any human activities that are completely safe? Can you think of any risks associated with the following activities?

- Walking down the street
- Sleeping in your bed
- Having a medical condition treated with a medication that is thought to be safe
- Not getting a medical condition treated when the treatment is thought to be risky

**Question 8.** Some behaviors affect only the risk of the person who practices the behavior, whereas some behaviors also affect the risk of other people. Can you think of examples of the two types of risk behavior?

## Part II: Media Campaigns and Risk (Student Version)

Now we look more in depth at a media campaign aimed at changing public response to a common risk behavior, smoking.

**Question 9.** Can you think of some popular media campaigns aimed at changing attitude and behavior toward certain risks?

Now let us analyze a campaign in Canada that involved putting health warnings on cigarette packages and cartons.

**Question 10.** What risks associated with smoking are highlighted by these ads?

**Question 11.** Carefully examine each ad. Do you think it would be effective in reducing or preventing cigarette smoking? Why or why not? Consider whether the ad might be more effective for certain groups in the population than others (e.g., males versus females, adolescents versus adults).

# Assessment

Now with your group members, focus on a risk-related issue that is relevant to adolescents. For example, you could choose underage drinking, speeding, marijuana use or unprotected sex. Create an ad campaign (two or three ads) highlighting the potential risks of this behavior. Share the ads with the class.



# A Closer Look at Risk (Teacher's Annotated Version)

## Introduction

The results of the quiz that you just took reveal that different people have very different attitudes toward risk. Some people experience terror about situations that they perceive to be dangerous to their health or safety. Others seem oblivious to even well-known hazards. In this instructional unit, we will explore some of the issues related to risk perception.

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If, during that time, 50 people experienced sudden death while jogging, the incidence proportion would be:

$$\text{Incidence proportion} = \frac{50}{10,000} = 0.005$$

From this study, the epidemiologist could conclude that the five-year risk (or probability) of sudden death related to jogging is 0.005, or 0.5%.

**Question 1.** Data that are routinely collected by government agencies can also be used to estimate risks. For example, say you knew from census data that there were 48,931 people in a particular county in 2002 and that 10 people died in motor vehicle accidents (MVA) in that county during the same year. What is the one-year risk of MVA death for people in that county?

**The one-year risk of MVA death is  $10 \div 48,931 = 0.0002$ , which can also be expressed as 0.02%, or 2 per 10,000.**

When we say that the one-year risk of MVA death is 2 per 10,000, that is an individual risk. That is, if I am a member of the population that generated the risk estimate (or a similar population), then that probability applies to me as an individual. For the whole society, it might also be meaningful to express the risk in terms of the actual number of deaths. For example, if the results for the hypothetical county in the example were extrapolated to the United States (which has a population of about 290,000,000), then we could estimate that there are about 58,000 ( $0.0002 \times 290,000,000$ ) deaths from MVA per year in the United States. Sometimes lifetime risks (the risk of experiencing an event during an entire lifetime) or reductions in life expectancy are used as ways to express risk.

**Question 2.** Say you read an article that stated that 6 out of 100,000 men in the United States got brain cancer in 2002.

- What was the incidence proportion for brain cancer among men in 2002?
- What is the annual risk of brain cancer for men?
- What is the probability that an individual American man will get brain cancer over a period of one year?
- How do you think the authors of the article determined that 6 out of 100,000 men in the United States got brain cancer in 2002?
- **The incidence proportion is 6 per 100,000 (or 0.6 per 10,000, or 0.06 per 1,000, or 0.006%, or 0.00006).**
- **The annual risk of brain cancer is the same (6 per 100,000).**
- **The probability that an individual will get brain cancer is the same (6 per 100,000).**

- They may have used cancer registry data to estimate the number of cases of brain cancer among men reported in 2002 and census data to estimate the size of the male population.

## Ranking the Risks

In this section we will consider certain causes of death in the United States, our perceptions about their relative importance and some of the factors that might be influencing these perceptions.

**Question 3.** Examine the causes of death listed in Table 1. Which three do you think are responsible for the largest number of deaths per year in the United States? Which three do you think are responsible for the smallest number of deaths per year in the United States?

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Alzheimer's disease
Bicycle accident
Bioterrorist attack with anthrax
Cancer
Drowning
Fire
Food poisoning
Heart disease
Homicide
Lightning
Stroke
Suicide

**(The students may feel that they do not have enough knowledge to answer this question. Assure them that the purpose is not only to test their knowledge of the relative importance of these causes of death but also to analyze the factors that affect their perceptions.)**

**The three most common causes of death were heart disease, cancer and stroke. The three least common causes of death were bicycle accidents, lightning and bioterrorist attacks with anthrax.**

**Question 4.** Now examine Table 2, which presents the mortality risks per 100,000 population for these causes of death. Were you able to rank the three most important and least important causes of death? Can you think of some reasons for incorrect rankings?

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Food poisoning	1.7723
Drowning	1.5617
Fire	1.2052
Bicycle accident	0.2658
Lightning	0.0223
Bioterrorist attack with anthrax	0.0018

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**Students will probably not be able to correctly rank the three most and three least important causes of death. The discussion should center on factors that might have contributed to incorrect rankings. Some of the ideas that might be uncovered are influence of media and family or friends on knowledge of particular risks (e.g., Alzheimer's disease, cancer); fear associated with certain outcomes (e.g., bioterrorism). The numbers in this table may provoke a discussion of whether the cost of national biodefense is justified, given the very low risk of death due to bioterrorism.**

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Controllable substances and activities may be perceived as less risky than uncontrollable ones.	One of the reasons people fear airplane crashes more than they fear car accidents may be that they believe they control the safety of their own car more than the safety of a plane.
Situations that are memorable because of personal experience, experience of friends or family, or news reports may be perceived as more risky than situations that are not memorable.	News reports about severe acute respiratory syndrome (SARS) in recent months may have contributed to the public's fear of this disease, even though other infectious diseases, such as influenza, pose a much greater risk.

**Question 5.** Examine the factors in Table 3. Can you think of ways in which these factors might have affected your rankings of the causes of death in Table 1?

**The purpose is to have the students speculate about the effect of behavioral factors on their perception of the riskiness of the situations and diseases in Table 1. They may mention that they perceived cancer to be more important than it is because it is a dreaded disease or because there is someone in their family who had it. They may have overestimated the importance of homicide because of the amount of media attention it receives. They may have overestimated the importance of death due to a bioterrorist attack for many reasons: media attention, the dread factor, the catastrophic factor, the uncontrollability factor. They may have overestimated the importance of death due to lightning because of the spectacular nature of such events. They may have underestimated the importance of heart disease because it is not a dreaded disease—in a sense, the fact that it is so common may make it less feared.**

**Question 6.** When people make decisions about whether to engage in a potentially risky behavior, they take two things into consideration: the perceived *probability* of a particular adverse outcome and the perceived *seriousness* of the outcome. Can you think of some behaviors or exposures that people might fear or avoid, even though the probability of an adverse outcome is low, because the perceived seriousness of the outcome is very high?

**There are many possible examples. People may fear plane crashes more than car crashes because the consequences of a plane crash are perceived as much more devastating than the consequences of a car crash, even though plane crashes are less likely to occur. People may avoid riding on a roller coaster because the consequences of an accident are perceived as horrific, even though roller coaster accidents are very rare. Some people have profound fears about terrorist attacks even though the probability that any particular person will be the victim of an attack is extremely low.**

**Question 7.** Are there any human activities that are completely safe? Can you think of any risks associated with the following activities?

- Walking down the street
- Sleeping in your bed
- Having a medical condition treated with a medication that is thought to be safe
- Not getting a medical condition treated when the treatment is thought to be risky

**The discussion should center on the fact that no activity can be considered completely risk free. In some cases (e.g., deciding to have a medical condition treated when the treatment is thought to be risky), it is necessary to weigh the relative risks and benefits of a particular course of action.**

**Question 8.** Some behaviors affect only the risk of the person who practices the behavior, whereas some behaviors also affect the risk of other people. Can you think of examples of the two types of risk behavior?

**There are many possible answers to this question. Examples of behaviors that apparently affect only the risk of the person who practices the behavior include the following: not wearing a seat belt, sun tanning, not pursuing treatment for a medical condition when the treatment is risky. Examples of behaviors that affect the risk of others include the following: speeding, driving drunk, having unprotected sex. This may provoke a discussion about the fact that activities that seem to affect only the person carrying out the activity may actually have an impact on others. For example, injuries caused by not wearing a seat belt may have an impact on the injured person's family and on the cost of health care.**

## Part II: Media Campaigns and Risk (Teacher's Annotated Version)

Now we look more in depth at a media campaign aimed at changing public response to a common risk behavior, smoking.

**Question 9.** Can you think of some popular media campaigns aimed at changing attitude and behavior toward certain risks?

**Antismoking television advertising campaigns (truth ads)**

**Pink ribbon**

**Just Say No (1980s)**

Now let us analyze a campaign in Canada that involved putting health warnings on cigarette packages and cartons.

**Divide the students in the class into several groups of three or four students.**

**Distribute the copies of the cigarette labels. If Internet resources are available, have the students access the following Web site and view the ads online at [http://www.nsra-adnf.ca/news\\_info.php?news\\_id=78](http://www.nsra-adnf.ca/news_info.php?news_id=78). If not, the teacher can download the low-resolution version of the ads and make copies for the students.**

**Question 10.** What risks associated with smoking are highlighted by these ads?

**Addiction, children and second-hand smoke, impotence, risk of oral diseases.**

**Question 11.** Carefully examine each ad. Do you think it would be effective in reducing or preventing cigarette smoking? Why or why not? Consider whether the ad might be more effective for certain groups in the population than others (e.g., males versus females, adolescents versus adults).

**The goal is to have the students reflect on the intent and impact of the ads, in the framework of their understanding of risk perception. They may conclude that fear of dreaded consequences (e.g., lung cancer) would be an effective deterrent against cigarette smoking, even though lung cancer is not the most common negative outcome of cigarette smoking. They may conclude that ads focusing on outcomes that are salient to most people (e.g., oral disease, which can cause bad breath and unattractive appearance) would have the most impact even though these outcomes are not fatal like lung cancer. They may speculate that the ad related to impotence would be more effective for males and the ad related to pregnancy would be more effective for females. It would be particularly interesting to have them discuss which of the ads they perceive as being most effective for adolescents and why.**



# Assessment

Now with your group members, focus on a risk-related issue that is relevant to adolescents. For example, you could choose underage drinking, speeding, marijuana use or unprotected sex. Create an ad campaign (two or three ads) highlighting the potential risks of this behavior. Share the ads with the class.