

HIV/AIDS & Other STDs, Day 1: Germs & Risk

Special Education: Secondary, Lesson #24

Student Learning Objectives:

To be able to...

1. Understand that germs are invisible organisms that are all around us
2. Understand that some germs are bad because they cause illness
3. Understand that germs travel in different ways
4. Understand that we can stay healthy by taking simple precautions
5. Define risk
6. Explain why people take risks

Materials Needed:

4 Transparencies

Box of tissues, bar of soap, nailbrush, rubber gloves

One copy of the Germ Transmission Prevention Worksheet for each student

Whiteboard or butcher paper and pens for brainstorming

Optional: Paprika and vegetable oil for demonstration of germs

Optional: A pair of scissors for each student for the matching game

Agenda:

1. What is a germ?
2. Why are some germs bad?
3. How do germs travel?
4. How do you keep germs from traveling?
5. I can keep germs from traveling.
6. What is risk?
7. Why do people take risks?
8. I can make healthy choices.

Understanding what germs are, how they travel, and how they are related to illness or disease can be tricky concepts. This lesson uses pictures and objects to help students learn about germs in their world, and what they can do to stay healthy.

This lesson can be used in other contexts as well: as a follow-up to the Sexual Health and Hygiene lesson, in preparation for a job involving food handling or providing personal care, or just as important information to have and use in daily living.

Risk is another prerequisite concept - a critical part of understanding safe and risky behaviors related to STD and HIV transmission.

Activities:

Draw a happy helper germ on the board (like bacteria in the stomach), and a harmful hurtger germ (like a cold virus) on the board. Discuss that one kind of germ keeps us healthy (well) and the other kind makes us sick.

Role-play, dramatize illness - sneezing, sniffing, tired.

1. What is a germ?

- A. Ask the class, "What is a germ?" Ask them to brainstorm answers.
- B. Explain to the class that:

"Germs are found everywhere - both inside and outside of our bodies. The scientific terms for germ are 'microorganism' or 'microbe.' Germs can be bacteria, viruses, or fungi (like bread mold). There are many different kinds of germs. Some kinds of germs help us and other kinds of germs hurt us. Some germs are inside our bodies and do important jobs to help us live. For example, they help us digest our food and help us to kill other germs that are unwanted inside our bodies. Other germs, though, don't help us to live. These germs make our bodies feel sick."

2. Why are some germs bad?

- A. Ask if anyone has had a cold or the flu lately. How did they get it? They got it from a germ that made them sick.
- B. Show the Illness Transparency. Discuss with students their thoughts on how the person who is sick in bed might have gotten sick.

3. How do germs travel?

- C. Discuss travel modes of germs. Ask students to brainstorm different ways that germs travel. Be sure to include:
 - behaviors such as sneezing and coughing and not washing hands
 - air
 - water
 - food
 - insects
 - blood
 - feces
 - touch
- D. Discuss the fact that different kinds of germs travel in different ways.
- E. Model modes of germ travel for students.
 - a sneeze, a cough
 - touching something (or someone) that someone else (with germs) has touched.

Role-play how each of the prevention tools is used.

Be sure to emphasize that hands should be washed before preparing food, before eating, and after using the toilet. Visit the bathroom and practice effective hand washing.

“What might happen if you...?”

Remind students that they have trusted adult friends they can talk to about risk-taking.

F. If your class can manage an analogy, without taking it literally, play a handshake game. Ask for 3 volunteers. Put a small amount of vegetable oil on their hands and sprinkle with paprika. Explain to students that this is a model of how germs travel through touch. Show their paprika spots (“germs”) to students while on their hands. Then ask everyone to move around the room and shake hands with at least five other people. The “germs” will be left on the hands and surfaces they touched. The prevention part of the model occurs when you clean off the “germs” using warm water and soap.

4. How to keep germs from traveling.

A. Brainstorm ways of preventing germs from traveling - ways of staying healthy.

B. Bring in a box of tissues, a bar of soap (or liquid soap) and some gloves. [Hand sanitizer containing alcohol has been shown to equally as effective in killing germs.¹ Several studies have confirmed that bacteria and viruses continue to live on bar soap.² However, other studies show that bar soap does not transfer germs from one person to another.³ In public restrooms, paper towels remove more germs than air dryers.⁴] Ask students to tell you:

- what each item is for
- why it is used
- how it is used

Point out that flowing warm water and soap are necessary to kill germs when washing hands. Remind students that bar soap is ok to use at home, but that they should look for liquid soap in public. However, washing with bar soap is better than no soap at all. Discuss when you should wash your hands.

5. I can keep germs from traveling.

A. Hand out the Germ Transmission Prevention Worksheet and project it as a Transparency.

B. Ask students to work individually, in small groups or as a total class to draw a line indicating a match between phrases of travel modes of germs and phrases of prevention behaviors.

C. Alternately, have students cut out the squares and make pairs of “a way germs travel” with “a way to stop them.”.

6. What is Risk?

A. Ask students to brainstorm a definition of the word ‘risk’. Say something like, *“Risk involves doing something without knowing for sure what the result will be. The result could be good or bad, healthy or unhealthy!”*

B. Ask students to brainstorm examples of risks and discuss whether the result would be more likely to be good or bad,

safe or unsafe, healthy or unhealthy.

- C. Show the Risks Transparency and discuss whether the risks pictured are safe or unsafe risks to take. What might happen as a result of taking these risks? Can they think of others?

7. Why do people take risks?

- A. Brainstorm reasons why people take risks - it may be helpful to consider a couple of specific risks (smoking, asking someone on a date, skateboarding) and ask "Why would someone do that?"
- B. Write students' ideas on the board. Be sure to include and discuss:
- peer pressure
 - to feel like they fit in
 - to feel better about themselves
 - to relieve stress, relax, have fun (like snowboarding)
 - to feel "normal" or "adult"
 - because they didn't think about their decision first - even though the decision was one that required more thought
 - because they made a mistake
 - sometimes they take risks because they like the risky behavior (like sex, getting high, riding motorcycles)

8. I can make healthy choices.

- A. What do people do that involves risk of catching germs? Be sure to include:
- touching a friend with a cold
 - eating from someone else's fork
 - kissing someone
 - having sex
- B. Brainstorm things people should think about before they take risks that might have unsafe or unhealthy results. Write students' ideas on the board. Be sure to include:
- hanging around with people you trust
 - thinking hard about what might happen before making decisions about risks
 - thinking hard about the effects your decision might have on other people
- C. To summarize this part of the lesson, project the Summary Thoughts Transparency. Ask volunteers to read each quote aloud. Choose a student the others respect to read the second quote if possible. Ask students what they think the authors meant. Ask them to remind you how people can lower their risks.

Dear Trusted Adult,

In class we talked about germs. We discussed the fact that germs are everywhere, that some kinds of germs are helpful (for example, they help us digest our food), and other types of germs make us sick.

We explored ways that germs travel and discussed preventing illness by using hygiene tools and good hand washing techniques (warm flowing water, soap or hand sanitizer).

You can support this learning by:

- Encouraging good hand-washing techniques and other hygiene practices that prevent the spread of germs that cause illness.
- Practicing the steps of hand-washing together.
 1. Turn on warm water and wet hands
 2. Put soap on hands and rub together ten times
 3. Rinse soap off with warm water
 4. Dry hands with a clean towel
 5. Use towel to turn off the faucet
 6. Use towel to open bathroom door
 7. Throw away towel
- Keeping hand sanitizer around while out of the house for use before eating or after using public restrooms that have no soap.

If you have any questions or comments, please call me.

Sincerely,

Teacher, Principal or Nurse

NOTE: All Trusted Adult Exercises are Optional.

Illness Transparency



Germ Transmission Prevention Worksheet & Transparency

Directions: Match each thing in the first column with 1 from the other column.

How Germs Travel

A. Sneezing
B. Coughing
C. Using the toilet
D. Eating food at a picnic (no sink)
E. Cutting your hand

How to Stop Them

1. Cover your mouth with your sleeve
2. Rub hands with alcohol hand sanitizer
3. Wash hands with soap and flowing water
4. Wash with soap and water, cover with bandage
5. Cover your mouth with a tissue

Risks Transparency



Summary Thoughts Transparency

**“Look twice
before you
leap.”**

-- Charlotte Bronte (1816 - 1855)

“I used to think that sex was what everybody did in high school and that sooner or later it would happen to me. But now that I think about it, I realize that I don't want an STD, and I don't want to get pregnant.”

-- Quote from a teen on a weblog

REFERENCES:

1. Sandora TJ, Taveras FM, Shih MC, Resnick, et al. A randomized, controlled trial of a multi-faceted intervention including alcohol-based hand sanitizer and hand-hygiene education to reduce illness transmission in the home. *Pediatrics*. 2005; 116(3): 587-94.
2. Kabara JJ, Brady MB. Contamination of bar soaps under "in-use" conditions. *Journal of Environmental Pathology, Toxicology, and Oncology*. 1984; 5(4-5): 1-14.
3. Heinze JE, Yackovich FY. Washing with contaminated bar soap is unlikely to transfer bacteria. *Epidemiology and Infection*. 1988; 101: 135-142.
4. Blackmore, MA. A comparison of hand drying methods. *Catering and Health*. 1989; 1: 189-198.