Illness Prevention

Length: 20 minutes

Materials: Worksheet #3 printed for each student, computer and projector for Powerpoint slides and optional video.

PowerPoint Slides: If using the prepared slide deck, this section will go through slides 28 to the end of the slide deck

- Another important way we can prevent antibiotic resistance is by preventing the spread of infections – if we don't get sick, we don't need antibiotics in the first place!

- One way to prevent infections is to practice good hand hygiene. This includes handwashing, hand drying, and choosing the right product to clean your hands.

- Drying your hands is a very important step of hand hygiene, as wet hands actually transmit germs better than dry hands and drying your more germs than washing alone. Some hot air dryers can promote the growth of bacteria, as bacteria like warm places, so it's best to use clean towels or paper towels when possible.

- Both soap and water and alcohol-based sanitizers can be used to clean your hands. Soap and water is good because it gets rid of bad bacteria and viruses, but good bacteria are not as easily removed. However, if you do not have access to water or a way to dry your hands, alcohol-based sanitizers are a good option. Alcohol-based sanitizers kill good bacteria as well as bad bacteria. Alcohol-based sanitizers are also not effective if your hands are greasy or visibly dirty – you must use soap and water.

- Alcohol based sanitizers and plain soap do not cause bacteria to develop antibiotic resistance. However, some sanitizers and soaps have ingredients that are antibacterial agents, such as triclosan or quaternary ammonium compounds (quats). These can promote resistance and can remove good bacteria. Products labelled "antibacterial" usually have these agents. These products should be avoided as they are not needed to achieve good hand hygiene.

- Have students get in small groups to work on **Worksheet #3** titled: "How can we prevent infections?". If students have a difficult time thinking of ideas, prompt them with hints such as – what are ways to stay healthy, or to prevent others from getting sick when we are sick?

- **Optional activity:**
  Bring any of the following: hand soaps, alcohol-based sanitizers, antibacterial sanitizers, and/or toothpaste. Pass them around to student groups. Ask students if they can find any "ingredients to avoid" in the label, such as triclosan or quats, or signs that the product is appropriate to use (ex. "triclosan free" label, alcohol-based ingredients like ethanol). Alternatively, ask students to try this at home and check the products they use.

Worksheet # 3 Name: _____

Brainstorm: How can we prevent infections?

1. Which hand hygiene methods are appropriate to use?

Soap and water	Yes	No
Alcohol-based sanitizers	Yes	No
Soaps and sanitizers with triclosan	Yes	No
Soaps and sanitizers with quats	Yes	No

2. What vaccines are routinely given in Grade 9 in BC? You can use the internet for research.

Answer Key # 3 Name: _____

Brainstorm: How can we prevent infections?

Wash your hands frequently
- Use soap and water or alcohol-based sanitizers, NOT antibacterial agents
- Always remember to dry your hands, preferably with a clean paper towel

If you are sick, protect others from getting sick
- Stay home when you are sick

Stay up to date with vaccines (if you don't get sick you don't need an antibiotic)

Use antibiotics correctly
- Don't take antibiotics for colds and flus (see Doctor if you are unsure)
- Only take antibiotics prescribed to you, following the doctor's instructions.
- Dispose of any unused antibiotics (at a pharmacy)
- Don't share antibiotics with anyone.

1. Which hand hygiene methods are appropriate to use?

Soap and water	**Yes**	No
Alcohol-based sanitizers	**Yes**	No
Soaps and sanitizers with triclosan	Yes	**No**
Soaps and sanitizers with quats	Yes	**No**

2. What vaccines are routinely given in Grade 9 in BC? You can use the internet for research.

The routine grade 9 vaccine in BC are:
- Meningococcal quadrivalent conjugate vaccine
- Tdap vaccine (Tetanus, diphtheria, pertussis)

Some students may be offered other vaccines too if they haven't received them before

Summary

- Bacteria and viruses are different. They both can cause illness but only bacterial illnesses can be treated with antibiotics.
- Use antibiotics wisely. Bacteria can become resistant to antibiotics, so ask your doctor how to appropriately use antibiotics when they are prescribed to you.
- By preventing illness, we can minimize antibiotic use and stop the spread of superbugs. Handwashing with plain soap is the best way to stop the spread of infection. Receiving your routine immunization and staying home when you are sick also helps to stop the spread of infections.

Additional Activities for Enhanced Learning

- Watch the video on understanding the term microbiome.

“The Hidden World of Microbiomes” (3:12 mins)

https://www.youtube.com/watch?v=MjhDRG-mQ7w