



## A Community Program for Wise Use of Antibiotics

by Mary Carson, PhD

**D**o Bugs Need Drugs? is a community education program about the wise use of antibiotics. The program started as a pilot in 1998 in Grande Prairie, and now it is available throughout Alberta and British Columbia and in other health units across Canada. We have found that the public has many misconceptions about antibiotics and that nurses play a key role in educating the community about what antibiotics can and cannot do.

Nurses are an important source of medical information in the community, particularly that type of informal advice given to family members, neighbors, and friends. One of the most common questions that nurses receive is how to manage respiratory infections. Concerns about influenza and H1N1 have led many more requests for advice. A recent issue of the American Journal of Nursing reported that nurses are often asked about respiratory tract infections (RTIs) including use of antibiotics. The study also noted that nursing programs offer little or no training about therapies for respiratory infections and the indications for appropriate antibiotic use.

The information below is from the Do Bugs Need Drugs? program ([www.dobugsneeddrugs.org](http://www.dobugsneeddrugs.org)). We hope you find it helpful in discussing antibiotic use with patients, family, and friends.

### Not all bugs are created equal

Many patients have misconceptions about when antibiotics will work. In a survey conducted by the National Information Program on Antibiotics, over half of adult Canadians thought that antibiotics were effective against viral infections. Explain

to patients that the right treatment for their RTI depends on what is making them sick. Antibiotics work against bacteria but not against viruses.

Most RTIs are caused by viruses and antibiotics will not help. Pneumonia, one of the most serious respiratory infections, can be caused by viruses or bacteria. Antibiotics are an important therapy for bacterial pneumonia.

ILLNESS	CAUSE	
	Virus	Bacteria
Colds	Always	
Influenza	Always	
Sore throat	Most	
Laryngitis	Most	
Croup	Most	
Bronchitis	Most	
Bronchiolitis	Most	
Sinusitis	Most	
Pneumonia	Some	Some

Many patients believe that if they have not recovered in a week or so, their RTI must be bacterial. This is another misconception. Viral RTIs can go on for weeks. About 25% of patients with a cold will still have symptoms after 14 days. For bronchitis, 45% of patients will be coughing at two weeks, and 25% at three weeks. Recovery from a viral RTI can take a long time and, unless symptoms worsen, it does not mean you have a bacterial infection. Reassure patients that respiratory infections take a long time to resolve and that antibiotics will not speed up their recovery.

Green sputum or nasal discharge is a normal part of recovery from an RTI and does not mean the infection is bacterial. Help patients understand that the colour changes seen in respiratory secretions during an RTI are a result of the inflammatory process. The green or yellowish colour occurs whether the infection is viral or bacterial.

## Use antibiotics wisely

Encourage patients to view antibiotics as potent medicines. In the past, using antibiotics when not really needed was considered low risk. One example was the practice of treating children with antibiotics to prevent otitis media. Current evidence clearly shows there are risks associated with antibiotic use, even when used appropriately. The risks for the patient are that antibiotic use leads to carriage of resistant bacteria and a greater chance that the next infection will be caused by resistant organisms. The risk for the community is a greater number of infections that cannot be successfully treated with antibiotics.

Antibiotic resistance is not an easy concept. People often think they are resistant when it is bacteria that become resistant. When bacteria are exposed to an antibiotic, some of them will develop ways to avoid being killed by the antibiotic. These bacteria are/have “antibiotic resistance”. If you or the next person becomes infected with resistant bacteria, antibiotics that would have worked in the past are no longer effective. This results in treatment failures and sometimes death.

Antibiotic resistance is an unwanted and unavoidable after-effect of antibiotic use, whether they are used for the right or wrong reasons. Help patients understand the risks and why it is important to use antibiotics only when they are really needed.

Patients may often feel they need an antibiotic because “it worked the last time” or because of the severity of their illness. Explain that, if their illness was viral, their recovery was not related to antibiotic therapy and would have occurred anyway. Likewise, explain that viral infections can be quite severe and that it is the organisms and not their symptoms which determine whether antibiotics will work. Help patients understand that antibiotics are serious drugs with serious consequences.

## Handwashing is the best way to stop the spread of infections

- Since curative treatments for viral infections are limited, the best thing you can do is not get sick in the first place. Eighty percent of respiratory tract infections can be spread by the hands. Handwashing is the best way to stop the spread of infections.

- Review the steps of handwashing with adults and children. For public washrooms:

1. Wet your hands
2. Apply soap
3. Rub hands together for 20 seconds making sure to do the palms, between the fingers, backs of hands, thumbs, wrists and fingertips and nails

4. Rinse your hands
5. Dry hands with a disposable towel
6. Use the towel to turn off the taps and let yourself out the washroom door

Children can be encouraged to rub their hands together for 20 seconds by singing Twinkle Twinkle Little Star or the ABC song. Older adults prefer A Bicycle Built for Two. Don't worry, they'll teach you if you're not familiar with the song yourself!

- Remind patients about the important times to wash their hands:
  - Before eating or preparing food
  - Before breastfeeding
  - After using the toilet or helping a child use the toilet
  - Before and after diapering
  - After blowing your nose or wiping a child's nose
  - After handling shared objects
- Stress the importance of not spreading germs. Teach patients to cough and sneeze in their sleeve. This avoids getting germs on the hands and in the air.
- Explain that germs cause illness when they enter the body through the mucous membranes. Advise patients to keep their hands away from their eyes, nose and mouth, because these are the places where germs get in to cause illness.
- Last, encourage patients to receive an annual influenza vaccine.

Antibiotics have saved countless lives and are one of the most important tools of modern medicine. Antibiotic resistance prevents antibiotics from working. Help patients to know how antibiotics should be used. ■

For more information about Do Bugs Need Drugs? visit the website, [www.dobugsneeddrugs.org](http://www.dobugsneeddrugs.org). To learn more about the print resources that are available (at no charge in Alberta) please contact us at: [info@dobugsneeddrugs.org](mailto:info@dobugsneeddrugs.org) or 1-800-931-9111. Do Bugs Need Drugs? is supported by Alberta Health and Wellness.



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