

## Bugs & Drugs Dr Paul Martiquet, Medical Health Officer



It is well known that the

overuse of antibiotics can lead to drug-resistant 'superbugs.' The main implication of this is that the tools we have

for dealing with bacteria are becoming less effective, sometimes to the point of uselessness. We are heading towards a world in which there are frightening numbers of 'bugs' that are resistant to essentially everything we have to throw at them. Worryingly, the situation is going to get worse, not better.

Education is one strategy to improving the situation. That is the goal of the "Do Bugs Need Drugs" program. This program was piloted, then expanded, in Alberta and has now been introduced in British Columbia. Do Bugs Need Drugs (DBND) explains the issues and concerns about antibiotic resistance and provides easy steps we can take to prevent antibiotic resistance from developing.

Do Bugs Need Drugs focusses on three messages. First, wash your hands! It's the best prevention against infection. Washing your hands means using soap and

water (NOT antibacterial soap), rubbing vigorously for at least 20 seconds, then drying your hands on a clean towel. As to when you should do this, try: always

Find out more about the Do Bugs Need Drugs program online at www.dobugsneeddrugs.org.

before eating, after using the toilet or changing diapers, after blowing your nose or after playing with shared toys.

The second message is that not all bugs are the same. Though both bacteria and viruses cause infection, viruses are more contagious than bacteria. That means that if more than one person around you has the same illness, chances are it was caused by a virus — antibiotics are useless in that case. They work against bacteria, but not against viruses. Some examples of virus-caused illness include colds, flu, chest colds (bronchitis), laryngitis and most sore throats.

The third key of DBND is to use antibiotics wisely. Overuse leads to resistance and less effectiveness for those who really need them. Eventually, a 'superbug' emerges that is resistant to antibiotics.

The process by which bacteria become resistant to treatment is relatively simple. Because bacteria replicate in uncountable numbers, even if only a miniscule proportion survive an antibiotic, their replication process means the next generation will probably also be resistant. This "survival of the fittest" is simple enough to comprehend, but what can we do about it?

First, see above on the subject of washing your hands - yes, we know we are being repetitive. More importantly, how do we put these good ideas into action? Start at home and set an example. Then make sure soap is available at your child's school or daycare, your workplace, and other public facilities, making sure it is not antibacterial soap. Why not? It kills both good and bad germs and the extra exposure may promote antibiotic resistance.

Where soap is not possible, a good alternative is alcohol-based hand sanitizers. These are effective against germs on the hands.

> You should also trust your doctor if they have not prescribed an antibiotic. After all, she probably knows that your illness is viral and antibiotics

don't work against viruses, do they?

We need to slow the emergence of 'superbugs' or drug-resistant organisms. Taking a few simple steps like handwashing may not sound like much, but it is an important part of acting responsibly. Find out more about the Do Bugs Need Drugs program online at www.dobugsneeddrugs.org. And for a good read on the emergence of 'superbugs,' try "The Killers Within: The deadly rise of drug-resistant bacteria," by Shnayerson & Plotkin.

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