

# THE ANTIBIOTIC HUNTERS

## FACT SHEET

- Antibiotics only kill bacteria, not viruses. They shouldn't be used to treat viral infections like the common cold and many respiratory tract illnesses.
- Antibiotics typically last for only five to ten years before losing their effectiveness.
- As many as 12,000 people die of antibiotic-resistant infections every year in Canada.
- Of the myriad of antibiotic drugs that have come on the market over the last 60 years, 99% are derived from micro-organisms, primarily bacteria and fungi in soil. We essentially use drugs created from bacteria, to fight bacteria.
- 20 years ago, four new antibiotics were being introduced each year. In this century, there's been one new antibiotic every 3 years.
- Bacterial cells account for about 15 pounds of every human being. When we take an antibiotic, we disturb that entire community of bacteria, not just the bacteria that are causing the infection, and that disturbance can lead to other kinds of diseases.
- Alexander Fleming discovered penicillin, the first antibiotic, in 1928, although it wasn't put into therapeutic use until the 1940's. By 1947, when he received the Nobel Prize for his discovery, the first penicillin-resistant bacteria were starting to appear, and Fleming warned that the misuse of antibiotics could lead to the end of their effectiveness.
- A Harvard study found that doctors prescribe antibiotics in 60 percent of visits for sore throats, and 73 percent of visits for acute bronchitis. The prescription rate should be between zero and 10 percent. Kids' ear infections are another huge problem area. Medical associations are trying to get the message out to physicians and new medical students, but old habits die hard. There is no simple test that will easily and quickly determine whether an infection is viral or bacterial, so some physicians prescribe antibiotics 'just in case'.



- Up to 80% of antibiotics are used not on humans, but on farm animals – with the intent of fattening them faster and keeping them healthy in crowded conditions. This widespread use of antibiotics is contributing to antibiotic resistance.
- There's always been some chance of bringing the bacteria *E. coli* home from the grocery store. But now the bugs you eat are more likely to be drug-resistant. The more intensively antibiotics are used on the farm, the more likely the bacteria that remain on the retail meat will be drug-resistant.
- Precautionary use of low-dose antibiotics on farm animals was banned outright in the European Union in 2006. But most farms in the US and Canada still use antibiotics.
- Komodo dragons are the largest lizards on the planet. Their saliva contains more than 50 species of bacteria, and many of them are pathogens, or dangerous bacteria that can cause infection in other animals – so the Komodo dragon must be immune to its own pathogens.

