



Activity 3

What have we done to create this problem?

Clearly the misuse of antibiotics may lead to increasing the burden of antibiotic resistance:

<https://www.nature.com/news/spread-of-antibiotic-resistance-gene-does-not-spell-bacterial-apocalypse-yet-1.19037>

Doctors and vets are increasingly thinking about 'antibiotic stewardship', by which they mean the proper use of antibiotics.



(https://upload.wikimedia.org/wikipedia/commons/thumb/3/3c/Pig_in_a_bucket.jpg/800px-Pig_in_a_bucket.jpg)

Do you think that there are disadvantages in stopping the use of antibiotics as growth promoters (things that make farm animals grow more rapidly or require less food)?

http://europa.eu/rapid/press-release_IP-05-1687_en.htm

There have been many campaigns to persuade patients not to ask for antibiotics when they might not need them:

<https://familydoctor.org/antibiotics-when-they-can-and-cant-help/>

Antibiotics are only effective against bacteria and so, if your sore throat is caused by virus infection rather than bacteria, taking a course of antibiotics will not cure you but will give a select for resistant bacteria in your gut.

Why might a doctor or a vet give antibiotics when they aren't necessary? For example, consider infections that cause severe disease (e.g. bacterial meningitis). If we hold back on the antibiotics because we're not absolutely sure of the diagnosis we may miss the opportunity to treat the infection before it causes serious problems.



(https://commons.wikimedia.org/wiki/File:Mail_order_pharmacy_dispensers.jpg)

In many countries the sale of antibiotics is controlled while in others their use is unrestricted. How might this add to the problem? Why don't these countries enact laws to control antibiotic use? When we travel abroad and return home we may be bringing back souvenirs of a different bacterial ecosystem in our guts and on our skins. There are no simple solutions to this problem.