Science Time

Program Content for February 1, 2017

Read the article 'Drug-resistant infections found at alarming level in China study' on page A2 of the Saturday, January 28, 2017 edition of The Seattle Times.

Objective

- I can explain the recent scientific findings and risks associated with antibiotic resistant bacteria.

Next Generation Science Standards (NGSS) connection

Disciplinary Core Idea - Adaptation

- Changes in the physical environment, whether naturally occurring or human induced, have thus contributed to the expansion of some species, the emergence of new distinct species as populations diverge under different conditions, and the decline–and sometimes the extinction–of some species. (HS-LS4-5),(HS-LS4-6)

Pre-reading and Vocabulary: Define each term and then use it in a sentence to demonstrate your understanding.

1. antibiotic
2. resistant
3. microbiology
4. gene

Comprehension Questions

1. What does new research related to bacteria in China suggest?
2. For the research highlighted in the question above; how many patients were examined?
3. What antibiotic is considered a "last option"?
4. Why was this antibiotic (use answer to question 3) used in China's agricultural industry?
5. What worries do health officials have about a colistin-resistant bacteria?
6. How has the United Nations responded to drug resistant germs?
7. How are people infected with resistant strains of bacteria usually treated?
8. What is one warning doctors have about the way resistant strains of bacteria are currently treated?
9. What is one surprise experts noted during this study?
10. What did a separate study on patients with blood infections done by Chinese researcher discover?

Prompts and Extensions

1. Deepen your background knowledge about superbugs and antibiotics.
    - This Seattle Times article answers frequently asked questions (FAQs).
    - This Times article from May, 2016 highlights the arrival of antibiotic resistant bacteria in the U.S.
    - This video documents how this superbug was found in the U.S.
2. Antibiotic resistance is an example of evolution. Watch video 6, 'Why does evolution matter now?' at this website to learn how antibiotic resistance is connected to evolution.
3. Use this website to learn more about microbes, antibiotics, antibiotic resistant bacteria, and the helpful bacteria that make up the human microbiome.

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