

Quest Through the Archives

Directions: After reading the article "[New 'rules' for finding antibiotics](http://www.sciencenews.org)," use the archives at www.sciencenews.org to answer these questions:

1. Search for the oldest article in *Science News* that mentions antibiotics. What bacteria are discussed, and what does the article say about fighting disease caused by the bacteria?
2. Viruses, like Zika and Ebola, cause public alarm. Search for an article focused on bacterial infections that could have widespread implications for public health. What does it say?
3. Penicillin may be the most famous antibiotic of all, yet many people can't use it because they are allergic to it. Search for an article about the connection between penicillin and allergies. What does it say?

Responses to Quest Through the Archives

1. **Search for the oldest article in *Science News* that mentions antibiotics. What bacteria are discussed, and what does the article say about fighting disease caused by the bacteria?** Possible student response: The article "[Phage against dysentery](#)," published 5/13/1944, discusses a bacteriophage that protects mice against eight types of dysentery. Conflicting ideas about how the bacteriophage works are attributed to the type of experimentation performed. Scientists are not sure whether this bacteriophage is a living organism, an enzyme or a ferment, but they believe that it kills germs by lysis or dissolution.

2. **Viruses, like Zika and Ebola, cause public alarm. Search for an article focused on bacterial infections that could have widespread implications for public health. What does it say?** Possible student response: The article "[Doctors enlisted to turn the tide on antibiotic resistance](#)," published 9/19/2014, discusses antibiotic resistance in well-known bacteria that have widespread public health implications — such as *Staphylococcus*, *Streptococcus*, *Escherichia coli*, *Salmonella* and *Neisseria gonorrhoeae*. Overuse of antibiotics is increasing the likelihood that these bacteria become drug resistant. Educating doctors and patients on appropriate use of antibiotics may help combat resistant microbes.

3. **Penicillin may be the most famous antibiotic of all, yet many people can't use it because they are allergic to it. Search for an article about the connection between penicillin and allergies. What does it say?** Possible student response: The article "[Penicillin allergy? Think again](#)," published 12/11/2016, discusses the idea that about 10 percent of the U.S. population believes they have a penicillin allergy, but researchers are learning that about 90 percent of those people aren't actually allergic. Rashes that doctors or parents think are caused by a reaction to penicillin, especially when babies receive the antibiotic, may actually be symptoms of the infection being treated. Furthermore, the prescription of broad-spectrum antibiotics in place of penicillin when there is a suspected allergy may be contributing to the prevalence of antibiotic-resistant bacteria.