



## Organisms and Pathogens Quiz by Laura King, MA, ELS

**Directions:** Edit the following sentences based on your understanding of [section 15.4](#) of the *AMA Manual of Style*.

---

1. In March 2004, the Chicago Department of Public Health was notified of a cluster of bloodstream infections with *klebsiella oxytoca* and *enterobacter cloacae* at a chemotherapy center.

**ANSWER:**

In March 2004, the Chicago Department of Public Health was notified of a cluster of bloodstream infections with *Klebsiella oxytoca* and *Enterobacter cloacae* at a chemotherapy center.

**Editor's Note:** According to international codes, initial capitals are used for all taxa, except for the second portion of the binomial, and italics are always used for the genus and species components of the binomial ([§15.14.1](#), Biological Nomenclature, Style for Scientific Names, pp 741-743 in print).

2. The genera *Bartonella* and *Rochalimaea* are currently classified in different families (Bartonellaceae and Rickettsiaceae) in the order Rickettsiales.

**ANSWER:**

The genera *Bartonella* and *Rochalimaea* are currently classified in different families (Bartonellaceae and Rickettsiaceae) in the order Rickettsiales.

**Editor's Note:** Major ranks are kingdom, domain (bacteria), phylum (animals, fungi, and bacteria) or division (plants and bacteria), class, order, family, genus, and species. All codes capitalize scientific names of taxa but differ on italicizing higher taxa. AMA style recommends not italicizing taxa above genus. Therefore, in this example, the genus names *Bartonella* and *Rochalimaea* are italicized but the family (Bartonellaceae and Rickettsiaceae) and order (Rickettsiales) names

## LEARNING RESOURCES

are not ([§15.14.1](#), Biological Nomenclature, Style for Scientific Names, pp 741-743 in print).

3. Infection with Shiga toxin–producing *Escherichia coli* (eg, *E coli* O157:H7) can cause hemorrhagic colitis and hemolytic uremic syndrome.

### **ANSWER:**

Infection with Shiga toxin–producing *Escherichia coli* (eg, *E coli* O157:H7) can cause hemorrhagic colitis and hemolytic uremic syndrome.

**Editor’s Note:** The O:K:H serotype profile of *Escherichia coli* is based on the somatic O antigen, capsular K antigen, and flagellar H antigen. The O is a capital O, not a zero. The abbreviations O, K, and H within the terms need not be expanded and are not italicized ([§15.14.2](#), Bacteria: Additional Terminology, *Escherichia coli*, p 749 in print).

4. Before the late 1990s, when the rate of *Escherichia coli* infections decreased, approximately 73 000 STEC infections and 60 deaths occurred annually in the United States.

### **ANSWER:**

Before the late 1990s, when the rate of *Escherichia coli* infections decreased, approximately 73 000 Shiga toxin–producing *E coli* infections and 60 deaths occurred annually in the United States.

**Editor’s Note:** Diarrheogenic *Escherichia coli* strains have standard abbreviations (ie, EAaggEC, EIEC, EPEC, ETEC, STEC, and VTEC). STEC stands for Shiga toxin–producing *E coli* and should be expanded at first mention ([§15.14.2](#), Bacteria: Additional Terminology, *Escherichia coli*, p 749 in print).



Copyright © American Medical Association, 2010. For educational use only.

[www.amamanualofstyle.com](http://www.amamanualofstyle.com)

## LEARNING RESOURCES

5. Proposals for new combinations for the *Rochalimaea* species include the following: *Bartonella quintana* comb. nov., *Bartonella vinsonii* comb. nov., *Bartonella henselae* comb. nov., and *Bartonella elizabethae* comb. nov.

### **ANSWER:**

Proposals for new combinations for the *Rochalimaea* species include the following: *Bartonella quintana* comb nov, *Bartonella vinsonii* comb nov, *Bartonella henselae* comb nov, and *Bartonella elizabethae* comb nov.

**Editor's Note:** Abbreviations such as sp nov (species nova, new species), gen nov (genus novum, new genus), and comb nov (combination novum, new combination) are used in published proposals of new genus and species designations and combinations. These abbreviations do not take periods and do not need to be spelled out at first mention (§15.14.1, Biological Nomenclature, Abbreviation of Genus and Other Abbreviations, pp 743-744 in print).

6. Infection with group B *Streptococcus* is a leading cause of morbidity in newborns and causes substantial disease in elderly individuals.

### **ANSWER:**

Infection with group B streptococcus is a leading cause of morbidity in newborns and causes substantial disease in elderly individuals.

**Editor's Note:** When streptococcus is used generically to refer to any member of the genus *Streptococcus*, do not italicize or capitalize (§15.14.2, Bacteria: Additional Terminology, Streptococci, pp 752-753 in print).

7. The study evaluated adult patients in Paris, France, who were found to be colonized with MRSA at the time of discharge from a network of public hospitals and found that the prevalence of MRSA in this group was high.

### **ANSWER:**

The study evaluated adult patients in Paris, France, who were found to be colonized with methicillin-resistant *Staphylococcus aureus* (MRSA) at the time of discharge from a network of public hospitals and found that the prevalence of MRSA in this group was high.

**Editor's Note:** Although 2-letter abbreviations for binomials (eg, SA for *Staphylococcus aureus* and SE for *Staphylococcus epidermidis*) should not be used, longer expressions that include scientific names may be abbreviated (eg, MRSA for methicillin-resistant *Staphylococcus aureus*) (§15.14.1, Biological



## LEARNING RESOURCES

Nomenclature, Abbreviation of Genus and Other Abbreviations, pp 743-744 in print).

8. *Haemophilus influenzae* type b (HIB) conjugate vaccine is not perceived as a public health priority in Africa because data on HIB disease burden and vaccine effectiveness are scarce.

### **ANSWER:**

*Haemophilus influenzae* type b (Hib) conjugate vaccine is not perceived as a public health priority in Africa because data on Hib disease burden and vaccine effectiveness are scarce.

**Editor's Note:** *Haemophilus influenzae* strains are defined by capsular antigens, designated types a through f (eg, *Haemophilus influenzae* type b). In these instances, after first mention, *Haemophilus influenzae* can be abbreviated to Hi with the antigen letter immediately following (eg, Hib) ([§15.14.2](#), Bacteria: Additional Terminology, *Haemophilus*, p 750 in print).

9. In animal models, the probiotic *Lactobacillus* LGG enhances the activity of lactoferrin, but this has not been studied in human infants.

### **ANSWER:**

In animal models, the probiotic *Lactobacillus* GG enhances the activity of lactoferrin, but this has not been studied in human infants.

**Editor's Note:** *Lactobacillus* GG refers to a strain of *Lactobacillus rhamnosus* named for the authors who isolated it. After first mention (as either *Lactobacillus* GG or *Lactobacillus rhamnosus* GG), the abbreviation LGG can be used ([§15.14.2](#), Bacteria: Additional Terminology, *Lactobacillus* GG, p 750 in print).



Copyright © American Medical Association, 2010. For educational use only.

[www.amamanualofstyle.com](http://www.amamanualofstyle.com)

## LEARNING RESOURCES

10. All baseline cultures of cerebrospinal fluid in Barbour-Stoenner-Kelly medium or in hypotonic saline, a method to detect spheroplast L-forms, were negative for *Borrelia burgdorferi*.

### **ANSWER:**

All baseline cultures of cerebrospinal fluid in Barbour-Stoenner-Kelly medium or in hypotonic saline, a method to detect spheroplast L forms, were negative for *Borrelia burgdorferi*.

**Editor's Note:** L phase variants, or L forms, are forms of various bacteria with deficient or defective cell walls. L form is hyphenated only when used as a modifier (eg, L-form *Borrelia burgdorferi*) (§15.14.2, Bacteria: Additional Terminology, L Forms, p 750 in print).

11. We examined trends in macrolide use and resistance, including examination of 2 subtypes, the M phenotype and the MLS<sub>B</sub> phenotype.

### **ANSWER:**

We examined trends in macrolide use and resistance, including examination of 2 subtypes, the M phenotype and the MLSB phenotype.

**Editor's Note:** Macrolide-resistance phenotypes are expressed without subscript or superscript letters (eg, MLSB, cMLSB, and iMLSB) (§15.14.2, Bacteria: Additional Terminology, Macrolide Resistance, p 750 in print).

12. Multi-drug-resistant *Salmonella* serotype *typhi* infections have been reported worldwide, but data on the incidence of resistant strains of *Salmonella* serotype *typhi* in the United States are lacking.

### **ANSWER:**

Multi-drug-resistant *Salmonella* ser Typhi infections have been reported worldwide, but data on the incidence of resistant strains of *S* Typhi in the United States are lacking.

**Editor's Note:** In salmonellae nomenclature, what had once been considered separate species have now been shown to be strains. Therefore, the traditional binomial species designation no longer applies, and serotypes should be capitalized and set in roman type (eg, Typhi). At first mention *serotype* should be abbreviated to *ser* (eg, *Salmonella* ser Typhi) and at subsequent mentions *ser* should be omitted and the genus name abbreviated to a single letter (eg, *S* Typhi) (§15.14.2, Bacteria: Additional Terminology, *Salmonella*, pp 751-752 in print).



## LEARNING RESOURCES

13. Quality control of antimicrobial susceptibility testing was performed with each test run using the following ATCC standard strains: *Enterococcus faecalis* ATCC 29212, *Pseudomonas aeruginosa* ATCC 27583, *Bacteroides fragilis* ATCC 25285, and *Bacteroides thetaiotaomicron* ATCC 29741.

### **ANSWER:**

Quality control of antimicrobial susceptibility testing was performed with each test run using the following American Type Culture Collection standard strains: *Enterococcus faecalis* ATCC 29212, *Pseudomonas aeruginosa* ATCC 27583, *Bacteroides fragilis* ATCC 25285, and *Bacteroides thetaiotaomicron* ATCC 29741.

**Editor's Note:** Strains and groups are designated in various ways, sometimes alone, sometimes following the binomial species name. These additional designations are not italicized. Strains are sometimes designated by the abbreviation of a culture collection repository and number. Such abbreviations need not be expanded when used in strain names only, but should be otherwise (§15.14.2, Bacteria: Additional Terminology, Strain and Group Designations, p 752 in print).

14. The *Mycobacterium avium* and *intracellulare* complex is an endemic, atypical mycobacterium of minimal virulence in immunocompetent hosts that consists of *M avium* and the morphologically and biochemically similar *M intracellulare*.

### **ANSWER:**

The *Mycobacterium avium-intracellulare* complex is an endemic, atypical mycobacterium of minimal virulence in immunocompetent hosts that consists of *M avium* and the morphologically and biochemically similar *M intracellulare*.

**Editor's Note:** The term *Mycobacterium avium-intracellulare* indicates that in a particular context the 2 species *M avium* and *M intracellulare* are indistinguishable; therefore, conventionally the species are linked with a hyphen. Because the genus name *Mycobacterium* has already been linked with both species names, in subsequent mentions of these 2 binomials *Mycobacterium* can be abbreviated to *M* (§15.14.2, Bacteria: Additional Terminology, *Mycobacterium avium-intracellulare*, p 750 in print).



Copyright © American Medical Association, 2010. For educational use only.

## LEARNING RESOURCES

15. Most of the study patients with *Chlamydia pneumoniae* developed lower respiratory tract disease.

**ANSWER:**

Most of the study patients with *Chlamydia pneumoniae* infection developed lower respiratory tract disease.

**Editor's Note:** In text dealing with infectious conditions, it is important to distinguish between the infectious agent and the condition. Infectious agents, infections, and diseases are not equivalent ([§15.14.1](#), Biological Nomenclature, Usage, p 748 in print).



Copyright © American Medical Association, 2010. For educational use only.

[www.amamanualofstyle.com](http://www.amamanualofstyle.com)