Section 2: Nutrition Communication is Science-Based

This section establishes the rationale for communicating accurate, current, science-based messages. Students and practitioners alike often feel uncomfortable finding research and even less adequate in their ability to read and interpret it. Properly citing references, both orally and in writing, is a critical skill along with avoiding plagiarism. Professional ethics related to communication is also addressed.

The titles emphasize the main ideas of each of the six chapters:

* Chapter 4: Nutrition Communicators Access Scientific Research
* Chapter 5: Nutrition Communicators Identify Credible Sources
* Chapter 6: Nutrition Communicators Read and Interpret Research
* Chapter 7: Nutrition Communicators Clearly Communicate Science
* Chapter 8: Nutrition Communicators Properly Reference Sources
* Chapter 9: Nutrition Communicators Adhere to the Code of Ethics for the Nutrition and Dietetics Profession

Use the following questions as you read the section showcase and Chapters 4 through 9 to increase your understanding and put your knowledge into practice.

Section 2 Showcase

1. As described in the story of Angham, describe another example of a belief or experience that may prevent someone from having a healthy relationship with food and eating:

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1. The author emphasizes the importance of nutrition professionals countering issues, such as what you describe above, with both empathy and evidence. What would this look like?

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1. The author describes some common health issues and misinformation among female refugees in the Arab world as well as some creative solutions. What is an example of a population you are familiar with, common health issues they experience and common sources of misinformation? What would be a creative way to reach this audience with evidence-based information using a channel or technology they use?

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Chapter 4

1. The first part of this chapter describes a variety of websites where nutrition professionals can find health and nutrition information and guidelines. As you read this section, locate one of the sites mentioned in each category below and write down which site you accessed and a specific example of the information it provides:

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| Sources of health information on the web: |
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| Sources for health statistics: |
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| Sources for health-related goals and guidelines: |
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1. The next part of the chapter describes where nutrition professionals can find scientific research. What does it mean for a journal to be refereed? Go to Ulrich’s Global Serial Directory and find an example of a nutrition journal that is refereed and one that is not.

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1. What is impact factor?

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1. What is a predatory journal?

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1. If you are affiliated with a medical or university library, go on their site and locate where you can access databases. If not, go to: <https://www.nlm.nih.gov/services/databases_subject.html>   
   Estimate how many databases are available; it is likely in the hundreds. Find one or more of the ones listed in the chapter. Write the name here:

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1. Visit the two search engines described in the chapter, Google Scholar and Science.gov. Select a nutrition topic to search and enter it into each search engine. How do the results compare?

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1. The final part of the chapter describes how nutrition professionals can assist consumers in locating health and nutrition information and research. This may be important when consumers or clients ask you questions about something they read or heard. What are some common issues with the reporting of health news and research?

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1. What is “native advertising”? Can you locate an example?

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1. Where are several places a consumer can locate research if they are not affiliated with an academic or medical library?

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1. What do the following terms mean and how are they used?

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| MeSH terms |
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| Boolean operators |
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| Nesting |
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| Exact phrase search |
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| Wildcard |
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Chapter 5

1. How might you paraphrase the quote by Daniel Patrick Moynihan on page 67? How is it related to the concept of “fake news”?

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1. Describe in your own words the five key features for determining the credibility of a news story:

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1. What are the three red flags described in Figure 5.1?

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1. What clues do credible writers share in an article?

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1. What does it mean to disclose a potential conflict of interest? Why is it important? Describe an example.

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1. Which type of news spreads more rapidly—accurate articles or “fake news”? Why?

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1. What clues can be used to question a source?

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1. A common error found in questionable articles is confusing correlation for causation, or using anecdotal evidence. How might you explain this to a consumer?

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1. Describe an example of one of the unethical practices described on page 74.

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1. Locate a post on social media that makes a health or nutrition claim. What is the claim? Using the 10 fact-versus-fiction filters listed in the Words of Experience on page 74, analyze the claim:

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1. What steps can a nutrition professional use to teach consumers how to differentiate credible from questionable sources of information?

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Chapter 6

1. Select 5 or more terms from the Terms to Know table that are new to you, less familiar, or you find confusing, and create flash cards to practice their definitions. List the words you chose below:

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1. Chapter 6 describes an example of how we undertake research on a personal level. Can you think of an example of something you have researched before making a decision or to determine an answer or outcome? What data did you seek? Where did you find it?

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1. Why must registered dietitian nutritionists and other nutrition professionals understand how to read and interpret research studies?

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1. The first step in the research process is “identifying a research problem.” What leads up to this step? What takes place prior to this? In other words, what are the sources of information and activities that potentially lead to identifying a problem?

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1. What is the purpose of a literature review?

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1. What are the two primary ways that the purpose of a research study is stated?

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1. What are the two main categories of research designs? What is the combination called? How would you describe the main differences between these two types of research design?

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1. What are the four main methodologies used in qualitative research?

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1. What are the most common data collection methods in qualitative research?

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1. How are data analyzed in qualitative research?

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1. What is saturation and how is it used?

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1. What are the two main categories of quantitative research? What are examples of each type? Which type of research study can be in either category?

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1. Which research design is considered the gold-standard? Why?

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1. What do the terms independent and dependent variables mean?

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1. What types of data collections methods are commonly used in quantitative research?

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1. How are data analyzed in quantitative research?

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1. What is a *P* value?

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1. List each section of a research article along with a one sentence description of the section. Add one or two important features of each section.

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1. Use the questions in Figure 6.3 and answer for the article provided. Did these questions help you interpret the research? Were there any questions you could not answer?

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1. What should be considered when interpreting research findings?

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Chapter 7

1. What does the quote on page 105 describe as our challenge? Have you seen this to be true in your experience?

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1. What does it mean to translate research findings into practical guidance? Why is it an important task of credentialed food and nutrition professionals?

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1. What does it mean to put research findings into context? Provide an example of context.

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1. A common complaint of consumers is that nutrition scientists keep changing their minds. How could you respond to that complaint? What are some important research principles consumers need to understand?

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1. How does examining the body of knowledge on a topic help to put findings into context? Can you think of an example of a research finding, or the headlines about research, that seemed to contradict the body of knowledge?

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1. The section titled Consider Individual Differences describes how many people inappropriately consume a gluten-free diet because they think research findings apply to them, when in reality they don’t. Think of another example where people apply findings intended for one population to themselves or others incorrectly. How could you explain to someone in this situation the potential consequences?

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1. Why is it important to consider factors, such as the environment in which a study was conducted, the dose of the substance or nutrient being studied, and whether the study was conducted with humans or animals?

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1. Locate a research study and select a sentence to translate into simpler terms using the list in Figure 7.1. Write both versions of the sentence below. Strive for both accuracy and simplicity.

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1. Many news articles reporting research imply causation where only correlation is certain. Think of an example and describe how to word findings in which a correlation was found.

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1. How might you explain to a consumer that the evidence for something is purely anecdotal?

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1. What are suggested approaches for dealing with misinformation and controversial topics?

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1. Locate a graphic representation of nutrition research data and use the data visualization checklist in Figure 7.2 to determine how effective the representation is. Assign a score.

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Chapter 8

1. The introduction to the chapter provides several reasons for properly referencing sources of information. List three:

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1. Do you agree that plagiarism is common? Do you think it is likely that it is becoming more common as stated in the introduction?

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1. When are citations required? When are they recommended but not required? When are they not necessary? Provide an example for each answer.

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1. Practice writing citations, following the directions and examples on page 120 for the AMA style, for a journal article, a book, and a webpage. Use references you are currently using for an assignment or project.

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1. Is it permissible to download a photograph or illustration from a site such as Google images and include it in a document?

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1. What is the penalty for plagiarism at your institution, organization, or place of work?

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1. Box 8.1 describes four types of plagiarism. Were you aware that all of these describe plagiarism? Which type or types do you think are most commonly practiced and possibly not even thought of as plagiarism? Why do you think this is so?

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1. Visit the [Indiana University tutorial](http://www.indiana.edu/~academy/firstPrinciples). List below the most interesting thing you learned about plagiarism.

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1. Visit [the Purdue Online Writing Lab website](https://owl.english.purdue.edu/owl/resource/1017/01). List below the information one can find there for using AMA style for citations.

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Chapter 9

1. Before you start reading this chapter, how would you define ethics? After writing your definition below, read the introduction. How does your definition compare to the one in the book?

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1. What are the four fundamental principles of bioethics? What does each one mean?

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1. What are the four guiding principles of the Academy of Nutrition and Dietetics Commission on Dietetics Registration Code of Ethics?

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1. Box 9.1 lists 5 obligations for consideration in ethical dilemmas. What are they?

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1. Provide several examples of principles from the Code that apply to providing evidence-based information:

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1. Provide one or more examples of principles from the Code that apply to respect for individuals:

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1. Provide one or more examples of principles from the Code that apply to using credentials appropriately:

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1. After reading the section describing the ethics principles of greatest concern in nutrition communication, write down two situations that could pose an ethical dilemma and describe the principle and ethical course of action

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1. Box 9.4 describes how to respect the copyright of reproduced works. Find an example of one of the items on the list and describe how to properly use it.

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1. If you receive a testimonial from a client or patient, what do you need to post it on your website?

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1. Using the guidelines from Box 9.5, describe a possible situation on social media and how it should be resolved.

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1. Using the six steps outlined in the section titled, How Can Nutrition Professionals Promote Ethical Practice? consider a situation, similar to the example provided, and outline how to deal with it following ethical principles:

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