

CASE TEACHING NOTES

for

"A Healthy Retirement?"

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INTRODUCTION / BACKGROUND

The overall purpose of this case study is to identify some healthy and not-so-healthy lifestyle choices and the consequences of those choices. It also demonstrates that men and women suffering from the same disease often experience different symptoms.

The case study was designed for an introductory or lower-level human biology, anatomy and physiology, or health and wellness course. However, if one went into more detail in the explanations given and in terms of the answers expected from students, the case could be used in an upper-level anatomy and physiology course.

I have used this case at the end of an introductory course as a way of summarizing and reviewing some of the course material. The students commented that they thought they could answer the basic questions at the beginning of the course but would not have known the "why's" or "how's." The case study could be used at the beginning of the course to introduce students to concepts they will be learning throughout the term. This case study could also be used during a unit on the cardiovascular system. Part II, the more focused part of the case study, deals with the idea that men and women often have different symptoms for the same disease. It introduces students to "atypical" or "angina equivalent symptoms," which many women with coronary artery disease experience. I have also used Part II to help students understand the importance of including women and people of color in medical research studies.

Objectives

- Interpret basic medical test results, e.g., blood pressure, blood glucose, and lipid levels.
- Identify healthy and not-so-healthy lifestyle choices.
- Identify the medical consequences of these lifestyle choices.
- Describe some of the mechanisms that lead to these medical consequences.
- Compare and contrast symptoms of coronary artery disease and heart attack in men and women.
- Explain the importance of including both sexes and individuals of different racial and ethnic backgrounds in clinical studies.

CLASSROOM MANAGEMENT

This case is divided into two parts and is designed as an interrupted, directed case. Groups of 3 to 5 students discuss each part and answer all of the questions. Following class discussion of Part I, the groups are given Part II, and the scenario is repeated. The entire case study takes a lab period or two lecture periods to complete.

Part I

Let's say there are six groups of students. I have a representative from each of three groups collaborate to put lists on the board for Jim's healthy and not-so-healthy factors and a representative from each of the other groups collaborate to compile lists on the board for Nancy.

As a class, we discuss one list at a time, e.g., Jim's healthy factors. Each group involved in providing information for that list presents one lifestyle choice or test result and explains the medical consequences. Although the groups responsible for the list on the board are the primary respondents, discussion is really directed to the entire class. The interaction between the primary respondents and the class continues until all the factors identified have been examined. When we finish discussing the factors in one particular list, other groups are given the opportunity to add factors to that list. It is during the general class discussion that students are asked to define "mg/dL." After discussing all of the observations made about Nancy and Jim, I then ask the class what other information would be helpful in assessing their health status and to explain how it would help.

The depth of discussion of the medical consequences and the mechanisms that lead to those consequences will depend very much on the level of the course and the background of the students.

Part II

After student groups have completed their written answers to Part II, I call on different groups to explain their answers. The finding that men and women may have a different set of symptoms for coronary artery disease and heart attack leads us into discussions about (1) ways we obtain information about health issues and (2) the importance of using diverse groups in clinical studies.

ANSWER KEY

Answers to the questions posed in the case study are provided in a separate answer key to the case. Those answers are password-protected. To access the answers for this case, go to [the key](#). You will be prompted for a username and password. For the username and password, contact the National Center for Case Study Teaching in Science administrator at answerkey@sciencecases.org.

REFERENCES

Print:

- Goldberg, N. 2002. *Women Are Not Small Men: Life-saving Strategies for Preventing and Healing Heart Disease in Women*. New York: Ballantine Books. New York.
- Nelson, H.D., L.L. Humphrey, P. Nygren, S.M. Teutsch, and J.D. Allan. 2002. Postmenopausal hormone replacement therapy: Scientific review. *Journal of the American Medical Association* 288(7):872-882.

Internet:

- NIH Policy and Guidelines on the Inclusion of Women and Minorities as Subjects in Clinical Research - Amended, October, 2001.
http://grants1.nih.gov/grants/funding/women_min/guidelines_amended_10_2001.htm

- Breakthroughs in Bioscience Series (includes information on cardiovascular disease, diabetes, and osteoporosis)
<http://www.faseb.org/opar/break>
- National Heart, Lung, and Blood Institute
<http://www.nhlbi.nih.gov/>
- National Institute of Diabetes, Digestive & Kidney Diseases
<http://www.niddk.nih.gov/>
- MedlinePlus Health Information—a service of the U.S. Library of Medicine and the National Institutes of Health
<http://www.nlm.nih.gov/medlineplus/>
- National Osteoporosis Foundation
<http://www.nof.org>
- Women Heart: National Coalition for Women with Heart Disease
<http://www.womenheart.org>

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