Human Aging 2nd edition Foos Test Bank

SKU: 9780205544011-TEST-BANK

Instructor's Manual and Test Bank

for

Foos and Clark

Human Aging

Second Edition

prepared by

M. Cherie Clark
Queens University of Charlotte

Arlo Clark-Foos
University of Georgia

Paul W. Foos
UNC - Charlotte



Boston New York San Francisco
Mexico City Montreal Toronto London Madrid Munich Paris
Hong Kong Singapore Tokyo Cape Town Sydney

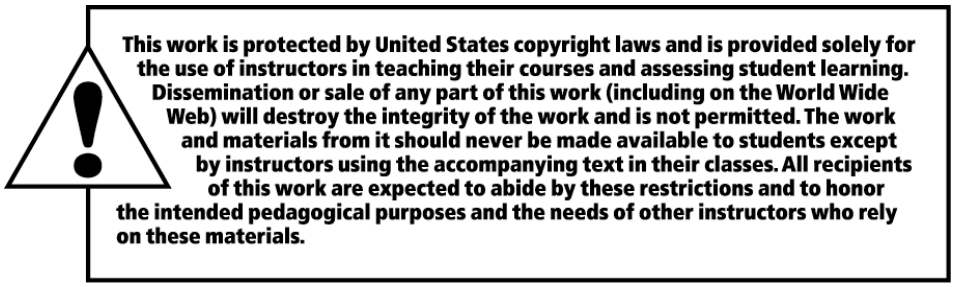
Human Aging 2nd edition Foos Test Bank

Copyright © 2009 Pearson Education, Inc.

All rights reserved. The contents, or parts thereof, may be reproduced with *Human Aging*, Second Edition, by Paul W. Foos and M. Cherie Clark, provided such reproductions bear copyright notice, but may not be reproduced in any form for any other purpose without written permission from the copyright owner.

To obtain permission(s) to use the material from this work, please submit a written request to Allyn and Bacon, Permissions Department, 501 Boylston Street, Boston, MA 02116 or fax your request to 617-671-2290.

ISBN-13: 978-0-205-54487-6
ISBN-10: 0-205-54487-8



Human Aging 2nd edition Foos Test Bank

Table of Contents

Introduction

Instructor Manual

Chapter 1	An Introduction to Human Aging	1
Chapter 2	Research Methods and Issues	5
Chapter 3	Physical Aspects of Aging: Changes in Our Bodies	8
Chapter 4	Theories of Senescence and Aging	13
Chapter 5	Health and Longevity	16
Chapter 6	Sensation, Perception, and Slowing	24
Chapter 7	Memory and Cognition	30
Chapter 8	Intelligence, Wisdom, and Creativity	35
Chapter 9	Personality	41
Chapter 10	Relationships	45
Chapter 11	Work and Retirement	50
Chapter 12	Psychopathology	54
Chapter 13	Healthy/Helpful Environments	59
Chapter 14	Death and Bereavement	65
Chapter 15	Looking to the Future	73

Test Bank 76

Chapter 1	An Introduction to Human Aging	77
Chapter 2	Research Methods and Issues	81
Chapter 3	Physical Aspects of Aging: Changes in Our Bodies	85
Chapter 4	Theories of Senescence and Aging	91
Chapter 5	Health and Longevity	95
Chapter 6	Sensation, Perception, and Slowing	102
Chapter 7	Memory and Cognition	107
Chapter 8	Intelligence, Wisdom, and Creativity	113
Chapter 9	Personality	119
Chapter 10	Relationships	127
Chapter 11	Work and Retirement	135
Chapter 12	Psychopathology	141
Chapter 13	Healthy/Helpful Environments	149
Chapter 14	Death and Bereavement	154
Chapter 15	Looking to the Future	161

References 165

Human Aging 2nd edition Foos Test Bank

Introduction

This Instructor's Manual is intended to add to the material presented in our text. We hope you will find this material useful. For each chapter in the text you will find:

- **Suggestions** for classroom demonstrations, discussion topics, related research and/or theory to the topics presented in the text are given and new information (not found in the text) is also offered.

- **Web sites** are provided throughout the manual and are the ones that we frequently use in class. They provide up to the minute information, demonstrations, and often lead to vigorous discussions.

- **Project descriptions and expansions**. Each chapter contains a project that is intended to promote active learning. Our expansions presented here make those projects a bit larger by involving your entire class or adding extra activities.

- **Premium Companion Website (password protected)** Additional resources can be found at www.mydevelopmentkit.com. These include audio interviews about aging with adults from throughout the United States, practice tests, chapter summaries, web links, and flashcards. For information on how to access these resources, please contact your local Pearson representative.

Test Bank

This section contains 20-30 multiple-choice questions for each chapter in the text plus several essay questions.

Other Information

Service learning is a valuable pedagogical technique that fits in well in gerontology classes. Several studies have shown that service learning enhances students' understanding of course content and helps them gain further insights about aging and older adults (see the special issue on service learning in Educational Gerontology, 27, 2001). We have used service learning in both a formal, closely monitored fashion and in a looser, more informal way. Either way has educational (as seen in test answers and group discussions) and enjoyable (as seen in student evaluations of projects) aspects. A surprise to us is the number of students who have had little or no exposure to or experience with older persons. Service learning greatly helps these students overcome fear and stereotypes and appreciate older persons as real human beings. Many of our students have continued to volunteer after the semester ended. We have incorporated a few ideas for service learning projects in this manual.

Human Aging 2nd edition Foos Test Bank

The benefits derived from taking an undergraduate course in the psychology of aging are presented by Harris and Dollinger (2001). They compared attitudes toward aging and anxieties about older adults and one's own aging in students who completed such a course versus those who had not yet done so. Those who completed the course had more knowledge about aging (obviously) and better attitudes toward older adults but did not differ in anxiety about their own aging. You may find a way to reduce this anxiety in your course. The authors do not tell us which text was used in the aging course but it was not ours. We like to believe that if it had been ours, anxiety about growing older would have been reduced.

We are available to help you if we can. Feel free to send questions, comments, and even criticism to M. Cherie Clark (clarkc@queens.edu) and/or Paul W. Foos (pwfoos@.uncc.edu).

The **Research Directory for Older People** was compiled by the National Institute on Aging and the Administration on Aging (AOA) to help people find information on aging issues. It is a very comprehensive and annotated list of Federal agencies, AOA supported resource centers, professional societies, private groups, and volunteer programs. A brief overview and complete contact information is provided for each of the many organizations listed. This information can be very helpful in providing additional course material and updates of current issues in aging. Students will also find this resource helpful for projects and papers. The directory can be found at http://www.AOA.gov/directory/default.htm .

An entire issue of Educational Gerontology edited by Dena Shenk and Dana B. Bradley has been devoted to teaching research in Gerontology (2001, Vol. 27, No. 7). Although many of the articles in this issue are more appropriate for graduate courses in gerontology, there are a number of useful tips for undergraduate courses as well. The articles by Shenk, Rowles, Peacock, Mitchell, Fisher, Moore, and Hare (2001), Zablotsky (2001), and Hare (2001) are particularly useful for those of us who teach an undergraduate course in aging and who include research methods as a part of those courses. We recommend you take a look at the articles in this issue.

Another recent article in Educational Gerontology may also be of some interest to teachers of undergraduate gerontology. Stanberry and Azria-Evans (2001) discuss the process of choosing teaching strategies that will match the purpose and content of your course.

CHAPTER 1

AN INTRODUCTION TO HUMAN AGING

Chapter Outline

- Why Study Human Aging?
  - Changes in Population
    - Baby Boom Generation
    - Birth Rate
    - Lifespan and Life Expectancy
  - Career Implications
- The Study of Aging
  - What is Aging?
  - Who is Old?
- Stereotypes
  - Electronic Media
  - Print Media
  - Attitudes Toward Aging

Chapter Boxes (Since every chapter contains a Box with a Senior View, one with a Project, and another with a set of Social Policy Applications these will not be listed in this Manual. Projects are, however, described at the end of each chapter in this Manual.)

- Careers in Gerontology
- Who is Old?
- Positive Humor
- Be Fair (how can we get the media to be more positive about aging?)

Chapter Summary

This chapter looks at why we study aging, the factors involved in the ever increasing proportion of older adults, who counts as being old, and the prevalent stereotypes of aging and older adults. The suggestions given below give you information and techniques not found in the text that may enhance your presentation of the material.

Suggestion---More and More Older Adults

There are a number of web sites that you can bring up in a smart classroom or download for display to show students the increasing numbers of older adults. The site, www.censusscope.org/us/map_65plus.html allows you to select your own or any other state. Another site with similar information and projections is http://seniorjournal.com/SeniorStats.htm. The Department of Health and Human Services Administration on Aging publishes a very comprehensive list of statistics and

Human Aging 2nd edition Foos Test Bank

fact sheets on older Americans including separate minority reports. This is available at http://www.aoa.gov/press/prodsmats/ProductsMaterials.asp For detailed graphs and tables of international statistics on population aging, go to http://www.un.org/esa/population/unpop.htm You can use these to spark discussion on what underlies the disparities in population aging across the world.

Suggestion—Life Expectancy

Sometimes students have difficulty understanding the differences between life expectancy at birth (LEAB) and life expectancy at a specified age (LEASA). A useful way to illustrate these differences and to show why the latter is always a little longer is to draw a horizontal line on the board and label it with age. Start at birth then 10, 20, 30, and so on up to 100 years of age. Mark the line at ages where deaths have occurred (make up data and give a death at 5, 10, 15, 20 and so on). The average age of all of those deaths that you have marked is LEAB. Now choose an age, such as 50, and show that the only deaths (marks) going into that average, for LEASA of age 50, are those that occur at and after age 50. Most students will immediately see why LEASA must be higher than LEAB. LEASA does not include those earlier deaths in its calculation.

Students often grasp the concept when they see the horizontal line because it is then clear that LEASA uses only a restricted range of ages, older ages, while LEAB uses everyone. Students who look at the line may argue that it is unfair since there are many more deaths beyond 65 than before 65 but, of course, many more people die in old age. Students can recalculate using any age of death they wish and see that LEASA is still higher than LEAB even when many more marks (deaths) are made for the older ages. The point is then easily made that getting through infancy, childhood, adolescence, and young adulthood is a great advantage to growing old. Events and circumstances that could have killed you when you were young, you survived. Eventually even your stubborn students will understand the difference between the two life expectancies.

Suggestion---Life Span

If your students are interested in checking on who are the record holders for the oldest human beings, there are a number of different websites and news articles dealing with this topic. A great assignment is to have students search online for the oldest living man and woman and bring the information and source to class. A quick reporting out will show that there is a lot of conflicting data and a lot of questionable sources for the data. This allows for a good discussion of what it takes to verify age and birth records. The Guinness World Records is considered by many as a the “official” source for the oldest human but the entire book is not available online. Wikipedia has extensive lists on who is closing in on Jean Calment’s record as well as interesting breakdowns of the data including by gender, centenarian status, country of origin, currently l living versus ever lived, etc. These can be found at http://en.Wikipedia.org/wiki/Oldest_people Wikipedia does occasionally have some useful information.

Human Aging 2nd edition Foos Test Bank

Suggestion---Careers in Aging

An extension of the material presented on careers in aging can be found through the Association of Gerontology in Higher Education website. More complete descriptions of careers in gerontology, information on preparation for and advantages of working in gerontology, as well as current jobs available are included. Go to http://www.careersinaging.com

Suggestion---Stereotypes

Sheldon (1998) presents a useful technique for having students generate stereotypes about older adults. The class is divided into small groups and each group attempts to generate 10 positive and 10 negative stereotypes about older adults. When the task is complete, the instructor writes the stereotypes on the board making a positive list and a negative list. Typically the negative list is much longer and students can see that the prevailing stereotypes about older adults are negative rather than positive. Although each group may have generated 10 positive there will be a lot of overlap; for example the stereotype “wise” will occur for almost every group. There will be far less overlap (and, thus, more total stereotypes) for the negative list. Typical negative stereotypes generated by students are frail, arthritic, senile, toothless, confused, incontinent, deaf, dangerous/slow drivers, ultra-conservative, sick, blind, smell bad, and so on. Typical positive stereotypes generated are wise, respected, spiritual, and kind. One can then use these lists throughout the rest of the term and present each stereotype once again as it comes under discussion in the text and in class. One can do this by asking students to copy the items on the board or the instructor might hand out a short list of the generated stereotypes as each new topic pertaining to a stereotype is begun.

Students can also be challenged to look for examples of stereotypes throughout the semester. As they watch TV, go to movies, shop, eat out, and so on they can be encouraged to watch for stereotypes which can then be brought to class as examples of positive or negative stereotypes. Setting aside 5 to 10 minutes each week to share these examples can be a fun and educational experience.

Suggestion---Non-Text Topic---Elderspeak

The text does not talk about **elderspeak** but you may wish to include it as an example of treating older adults as if they were children when stereotypes and attitudes toward older adults are discussed. Elderspeak is like babytalk but to older adults. It typically involves speaking slower, using simplified syntax, using small words, using short sentences, being repetitive, and exaggerating prosodic features. Stress and intonation are examples of prosodic features. Such speech is usually regarded as patronizing and very disrespectful but it is thought that in some instances it may facilitate communication with impaired older adults. Three studies varied syntax, prosody, semantic elaboration, sentence length, slower speaking rate, higher pitch, and the use of embedded and subordinate clauses with groups of young and old adults.

Human Aging 2nd edition Foos Test Bank

Participants watched a videotape in which directions to a location were given using the variations in speech described above. Participants attempted to draw the correct route on a map that they held. The use of short sentences, high pitch, and a slower speaking rate actually reduced performance while semantic elaboration and reductions of embedded and subordinate clauses improved performance (Kemper & Harden, 1999). Perhaps some aspects of elderspeak are beneficial (for young as well as old) while others are not. An interesting homework assignment would be to have students go to a senior residential facility or to a restaurant or mall where seniors patronize. They can observe for a period of time and write down the conversations they hear. An analysis of these conversations in terms of sentence length, pitch, words used, speech rate and volume might reveal aspects of stereotyped behavior including elderspeak. Students should be encouraged to compare speech directed to elders by young and old and by familiar and non familiar persons. Discuss these in class and have students determine the relative benefit and harm of elderspeak.

Suggestion---Diversity

If you wish to emphasize the diversity of our aging population an excellent book filled with many vignettes and exercises is the one by Fried and Mehrota (1998). A review of this book and examples of how to use it in a class on adult development and aging can be found in Usita (2000).

Project 1

The project in this chapter asks students to rate birthday cards for different age groups as being positive, neutral, or negative. Students may want to discuss what they find during a class meeting and the most likely outcome is that the most frequent negative stereotypes will be for the older adult cards.

You might expand on this project by having students rate advertisements or commercials in magazine, newspapers, and television. Students might be asked to bring in examples of print advertisements. A good discussion can revolve around the aspect(s) of aging that the various ads portray, which aspects are more frequently portrayed negatively or positively, why, and how might an older adult respond to such ads. In examining ads, students are likely to find a fair number of positive portrayals since the intention is frequently to get an older adult to buy the product or service advertised. Does the positive or negative portrayal depend upon the target of the advertisement (e.g., older adults vs. caregivers)?

Group projects or individual papers focusing on one area or medium or comparing print and electronic media are other ways to more formally incorporate this project into class pedagogy.

Human Aging 2nd edition Foos Test Bank

CHAPTER 2

RESEARCH METHODS AND ISSUES

Chapter Outline

- Guiding Principles and Issues
- Theory
- Research Methods
  - Relationship Methods
  - Difference Methods
  - Descriptive Methods
  - Data Sources
- Ethics

Chapter Boxes

What do You Mean? (problems with coding answers to open-ended questions)

Chapter Summary

This chapter examines the guiding principles for research on aging, the major issues that are addressed, the methods used by researchers, and the ethics of research with human participants.

Suggestion---Relationship vs. Difference Methods

Students sometimes have difficulty in understanding whether or not a relationship method such as correlation does or does not tell us about differences. The answer is, of course, that it does. A correlation between age and number of friends tells us that adults of some age have more friends than adults of another age. The difference between relationship and difference methods is primarily in the intentions of the researcher and corresponding hypotheses. One way to illustrate this is to ask members of your class what questions about aging they would like to have answered. Their responses will illustrate the two approaches. Some will say they want to know if old people are as happy as young people, if old people lose their memories, if young people are more able to handle new technology, if old people are more conservative, and so on. These all are, of course, differences. Others will say they want to know if you get more wise as you grow older, if you become more frail, if you begin to eat and sleep less, and so on. These are, of course, relationships. Our line between relationship and difference methods is quite soft but, we think, a useful way to categorize and separate correlation and quasi-experimental methods.

Human Aging 2nd edition Foos Test Bank

Suggestion---Cohort Effects

Students sometimes have difficulty understanding cohort differences and may want to assume that any obtained difference is truly an age difference. Old people are just different than young people because they are old rather than because they were born in a different time. To help clarify cohort differences, you might select research questions that more obviously suggest cohort/generational differences such as:

- Are there age and/or cohort differences in attitudes toward the distribution of condoms in public high schools?
- Are there age and/or cohort differences in what adults name as their favorite movies? Music? Foods? Dances?
- Do age and/or cohort correlate with hours spent on the Internet?

Suggestion---Survey

Box 1-2 from Chapter 1 describes results from a survey examining what people think about aging. Students are encouraged to consider their own answers to questions from the survey. An extension of this application is to have students ask these same questions of others and could include additional questions generated in class or suggested by the instructor (e.g., Is old age a happy time?). An exercise we have successfully used in class many times is to have students administer this mini-survey to 2 to 3 people under age 20 (as young as possible), 2 to 3 people aged 20 to 50, and 2 to 3 people over 60 (or as old as possible). The results can be discussed in class with interesting age, race, and gender differences (students need to keep track of these demographics when they administer the survey). Students enjoy seeing how their own answers differ from those collected by peers and from the research presented in the book. Are these age and/or cohort differences and how could we find out?

Suggestion--- Where is the research

Another search and report exercise for students is to send them out to the internet in search of sites on aging research. Have them identify the source of the information and the validity of the research (at least an attempt at the latter). Ask them to find one short research report to share with the class. The ensuing class discussion can provide an excellent platform for bringing research designs, issues, and applications to life.

Suggestion--- And now for something completely different

The following exercise has been used by Cherie Clark for several years and always works well. Using the poem, “Warning” by Jenny Joseph, found in “When I am an Old Woman I Shall Wear Purple” edited by Sandra Martz and online in many places, have students read the poem and then write their own “Warning” poem. Emphasize

Human Aging 2nd edition Foos Test Bank

that it is an exercise in thinking about their own aging, not in writing. They often need to be reassured about that! This exercise needs to be done early in the semester. You can talk about these poems at the end of a research class for a break and/or collect them and hold on to them until the end of the semester. Ask them to write again at the end of the semester, give them back their first poems and let them see how their attitudes have or have not changed. This poem was the inspiration for the Red Hat Society which will be discussed later in the semester.

Project 2

This project talks about the difficulty of getting people to engage in ongoing research particularly when they must participate more than once (in longitudinal or sequential designs). Students are asked to gather data from three young, three middle-aged, and three older adults by administering a brief survey. Clearly one way to expand this project is to increase the number of participants but another is to lengthen the survey itself. An issue that often plays a role in an individual's decision to participate in research is the type of research being conducted. The following items attempt to assess participant willingness as a function of type of research and can be easily added to (or replace) the items in the text:

- I would be willing to participate in medical research investigating the effects of new medical procedures.
- I would be willing to participate in a study examining the effects of a new drug treatment.
- I would be willing to participate in research on memory.
- I would be willing to participate in research that might involve some deception as long as I was told the truth eventually.
- I would be willing to participate in research investigating my sexual activity.
- I would be willing to participate in research on personality characteristics.

Human Aging 2nd edition Foos Test Bank

CHAPTER 3

PHYSICAL ASPECTS OF AGING: CHANGES IN OUR BODIES

Chapter Outline

- Individual Differences
- Changes in Physical Appearance
  - Skin
  - Hair
  - Height and Weight
  - Voice
  - Facial Appearance
- Internal Changes
  - Muscles
  - Skeletal System
  - Cardiovascular System
    - Blood Pressure
    - The Heart
    - Blood Vessels
    - Blood
  - Respiratory System
  - Digestive System
  - Reproductive System
  - Immune System
  - Nervous System
- Chronic Conditions
  - Interactions

Chapter Boxes

- Short on Stamina
- Sleep and Aging
- Dreams and Aging

Chapter Summary

This chapter begins by distinguishing between biological aging and senescence. Biological aging refers to physical, chemical, and biological changes that occur in vital organ systems, tissues, and physical appearance. Such changes occur all throughout life. Senescence refers to the increased vulnerability that may accompany biological aging. There are great individual differences in both biological aging and senescence. The text emphasizes that there is also great variability within the same person where some systems may be quite senescent while others are intact.

Human Aging 2nd edition Foos Test Bank

Suggestion---Individual Differences

To illustrate individual differences, the chapter includes photos of five persons and students are asked to determine who is oldest and who is youngest. It is often enjoyable to discuss these photos and student guesses in class. Students are also frequently quite good at providing their own examples of individuals who appear younger than they really are (Dick Clark) or older than they really are (Susan Sarandon) and this can be an enjoyable short discussion in class. You as a faculty person might, if you dare, ask them about the ages of other faculty members. Students usually do not have difficulty in grasping the idea that some people look older than others while some look younger even though they may be nearly the same age. Some of the reasons for such differences will be presented in Chapters 4 and 5 so you may be able to build some anticipation. A project could involve asking students to find and bring to class pictures of middle-aged and older persons who do and do not "look their age."

Suggestion---Changes in Skin

When discussing the sagging of skin, you might have students pinch the skin on the back of their own hand and then release it. For young students, the skin will immediately return to its original position. You might then show them that older skin does not return so rapidly if there is an older student in the class who will volunteer or if you are old enough to show the slower skin return. You can do the same with the lines on the palms of hands and have students look at cell structure, represented by the lines on the palm, on young and older hands to see the differences in organization.

Suggestion---Digestive System

You might find it useful to point out to your students that any sign of blood in their stool or urine is a very serious signal. Urine blood could mean a kidney stone or serious kidney or bladder problems. For adults past the age of 50 it is very important to have a bowel examination at least every 5 to 6 years. These exams, called **flexible sigmoidoscopy** and **colonoscopy**, consist of the insertion of a small tube and camera into the rectum to search for polyps. Polyps are small bubbles in the intestinal lining that can become cancerous. As polyps they are easily removed; if ignored, cancer can spread throughout the intestinal tract. Students might ask their parents or grandparents if they have had such a test and encourage them to do so.

Suggestion---Chronic Arthritis

One way to illustrate some of the difficulties that older adults frequently have with arthritis is to simulate them. Clark, Foos, and Faucher (1995) present a series of simulations that can be used to illustrate sensory deficits (and we will describe those when we get to Chapter 6) and manual dexterity and mobility deficits. The following describes manual dexterity and mobility simulations. Preparation of the materials can take some time so you should start early or plan to have the class participate in preparing the materials.

Human Aging 2nd edition Foos Test Bank

- With disposable medical gloves and coffee stirrers one can make arthritic hands for students to wear. Tape a coffee stirrer, folded in half, to each finger of the glove; it may only be necessary to do the first two fingers. It can be helpful to wear the glove while taping it. The idea is to prevent the fingers from bending well. Be sure to use nonpowdered gloves; tape will not stick to powdered gloves. With the gloves on, students can attempt to open doors, open medicine or vitamin bottles, pick up small objects (paper clips, change), try to write with a pen or sign their name, or try to open coffee creamer containers. It is important to point out that an adult with arthritis will not only experience these same sorts of difficulties but will also be in considerable pain while doing these tasks.

- To simulate arthritis that can affect mobility in the legs, 12” by 4” plywood splints are tied to the leg with rope or fabric. One splint is placed in front of the knee and one behind. Ties should be at the ends of the boards to prevent slipping. These splints **must** be sanded smooth to eliminate any chances of slivers or cuts. With a leg immobilized, ask students to tie or untie one of their shoes, pick something up that has fallen on the floor, or walk around the room.

If students walk, they should be accompanied by a partner for safety’s sake. Falling is never a good idea. It is important to point out to students that people with arthritis do not develop a loss of mobility or manual dexterity as rapidly as can be done in a simulation. One caution with all simulation exercises is to be sure to point out that one can never accurately simulate a physical condition. There are many aspects to acquiring a disability, only some of which are physical. For example, arthritis is typically a slow-onset gradual condition. During the progression of arthritis, most people develop alternative ways to complete tasks and continually work on motivating themselves to adapt to their changing abilities. This should be an important part of the discussion following the simulation. Students will often have several ideas about the kinds of compensations that real older adults might use to offset these difficulties.

Suggestion---Sleep and Menopause

You may have students in your class who will ask about sleep and menopause or you may want to bring it up yourself. Work shows that about 43 percent of menopausal and postmenopausal women report some difficulty with sleep. Hot flashes occur, on average, about three times a week and disrupt sleep, on average, five nights a month. On those nights when hot flashes disrupt sleep, the woman may be awakened many times by the uncomfortable heat and night sweats. Hot flashes occur because the lowered levels of estrogen frequently lead to a dilation of the blood vessels near the surface of the skin. The skin then feels hot and perspiration occurs.

Two methods to help sleep not mentioned in the text are melatonin and tryptophan. **Melatonin** is a hormone that regulates biological rhythms and will be discussed in Chapter 4. Levels of melatonin are lower in menopausal women who have insomnia and can be checked by a physician. Sometimes a small dose of melatonin over a short period of time can help restore normal sleep. **Tryptophan** is a protein

Human Aging 2nd edition Foos Test Bank

found in turkey, fish, milk, cheese, bananas, cottage cheese, and yogurt that also seems to aid sleep. One might try a light snack containing tyrptophan before bedtime.

Suggestion---Dreams

Students are almost universally interested in dreams and so will probably be interested in the Box that discusses age and gender differences in dreams. One way to illustrate age differences in dreams is to have students compare one (or more) of their recent dreams with a dream that they remember from long ago. Sometimes students will be able to compare their own recent dreams to the recent dreams of younger brothers or sisters or even to parents. Not everyone will be able to do this but you may need only a couple to begin an interesting conversation. Perhaps one or more of your own dreams could serve as an example of an older person's dream(s).

Suggestion---Work of Art

The book points out that "youth is a gift of nature; age is a work of art". Have students bring in pictures of older adults (personal or from magazines, books, the internet) that illustrate beauty or works of art. You can then discuss why these particular pictures look attractive emphasizing physical changes still evident in these works of art. Another way to do this is to have students search for art in books, museums, or the internet that show different age, sometimes naked, persons. You might be able to show web examples in your class.

Suggestion – A Film Break

Many, especially younger students often report that reading about the physiological changes with age is depressing. A fun vehicle to discuss some of the physiological changes with age and to reinforce positive aging is to watch the film "Waking Ned Devine." As a 1998, but timeless, movie, it is available in all formats and easily rented or bought. Not many current students have seen this movie and some are skeptical at first but all students end up liking it. It is a fun movie that portrays aging in a very positive way. There are plenty of opportunities to observe physical changes so students can easily make the connections to the chapter material. Other movies can serve a similar purpose but this one is just too darned good to pass up and well worth taking the time in class to show it and discuss the applications.

Project 3

This project asks students to observe physical changes in older adults by watching people in some public location such as a mall, park, or library. One question that we did not ask in the project description but that you might want to ask is how students decided who was old enough to observe and who was not.

The second part of the project asks students to build several older adults by randomly selecting three of six listed physical changes for each one. Several questions

Human Aging 2nd edition Foos Test Bank

are then asked about the people they built. We think most of these questions make for good class discussions and you might find some disagreement among those who answer.

A quick way to expand this project is to make the list of physical changes larger that students building older adults select from and/or to vary the number of changes that must be selected for any one, soon-to-be-built, older adult. Students might first role a die to see how many changes must be selected and then randomly select that number of changes from the list provided. In some ways this is a step closer to the real situation but still, of course, not real. This project is very effective in getting students to think about the great variability and individual differences that occur in physical aging.

Human Aging 2nd edition Foos Test Bank

CHAPTER 4

THEORIES OF SENESCENCE AND AGING

Chapter Outline

- An Overview
- Programmed Theories
  - Biological Clock
  - Evolution
  - Hormones
- A Middle Category
  - Immune System
- Unprogrammed Theories
  - Wear and Tear
  - Free Radicals
  - Garbage Accumulation
  - DNA Damage and Repair
- All (Many) of the Above

Chapter Boxes

There are no boxes in this chapter

Chapter Summary

Chapter 4 examines theories that attempt to explain why the human body breaks down as we grow older. We begin with programmed theories, then look at theories that fall in the middle between programmed or unprogrammed depending upon which version of the theory is being discussed, and end by examining unprogrammed theories. Major emphases of this chapter are that almost all of the evidence for or against these theories is indirect and that the true explanation for senescence must be more complex than any one of these theories alone.

Suggestion---Genetic Evidence

Another line of evidence that is sometimes cited for genetics being the reason for senescence is the class of disorders known as **progeria**. These are inherited and very rare (about one in every eight million births). Progeria disorders resemble, and are often referred to as, rapid aging disorders. There are two major types.

Hutchinson-Guilford disorder is one where the individual may appear normal at birth but, within the first year of life, the disorder becomes evident. The child does not grow normally, loses hair, and loses the layer of fat under the skin. Over the next decade, atherosclerosis, osteoporosis, blocked arteries, and strokes become highly probable. The skin appears wrinkled like that of an old person. Such individuals do not,

Human Aging 2nd edition Foos Test Bank

however, have other signs of aging such as arthritis, increased risk of cancers, cataracts, or dementia; most die by age 12, usually from heart disease.

Werner's Syndrome, another form of progeria, does not usually become evident until the person is in their 20's or 30's and many of the specific symptoms are different than those found in Hutchinson-Guilford. People with Werner's syndrome tend to show cataracts, connective tissue cancers, diabetes, lipofuscins, and also the hair loss, wrinkles, and osteoporosis of Hutchinson-Guilford. The tested intelligence of people with either form of progeria is typically normal or above average (Schneider & Bynum, 1983).

Since both of these forms of aging are genetic, it is argued that all aging may be genetic. These are, however, disorders, not aging and not all signs of aging appear in either disorder. Sometimes you can generate good class discussion by presenting these examples; several web sites for progeia are also easily found.

Suggestion---Theory Connections

After presenting the theories you might attempt to involve your class in a discussion of possible connections among the various theories. We have suggested possible links in the text by suggesting that Evolution theory may connect the other programmed theories and that Free Radical theory may connect the other unprogrammed theories. Students often enjoy coming up with other possible connections and some may bring Wear and Tear theory back into the mix although we have left it out. They may even find a way to connect all the theories. If they do, please send them to us.

Suggestion---Current controversy

There is a lot of disagreement among scientists and geriatric practitioners regarding the "anti aging movement." Some see this movement as an honest attempt to direct theory and research toward improving aging and extending life. Others see it as an indication of the negative views of aging – as something to be prevented, eliminated or vigorously fought against – and as a way to take advantage of the fears that many have about aging. Products abound, as discussed in Chapter 5, that claim anti-aging properties and many people have made a lot of money in the anti aging movement. Anti aging medicine is the newest growth industry here. Have students gather information from both sides of the controversy or they could take pro or con sides and debate the issue in class. Be sure students go deeper than just whether or not we are using the right term (e.g., anti-aging could be called instead pro-living). Are anti aging medicines a worthwhile pursuit? Are we taking advantage of fears and negative views of aging or are we legitimately trying to age better?

Human Aging 2nd edition Foos Test Bank

Project 4

The project in this chapter is a game that attempts to illustrate how random events can result in regular patterns of senescence. Damage from metabolic errors due to DNA damage, free radicals, and accumulated garbage are named as examples of random damage though, of course, they may not be random at all.

In the game players draw five pieces of paper from a hat containing ten pieces of paper and write down what they have drawn. That is the damage they have experienced in a ten-year period (starting at age 60, the first five draws get them to age 70). Five of the ten pieces of paper contain no damage at all (the text suggests that you just write “oops” on these five but you could write examples of biological aging that are not senescent on them (such as balding, graying, wrinkling, and so on). The game continues with more draws as participants go from 70 to 80 years of age.

This game can be played well in class especially if your class is fairly small. You might add additional changes that can be put on slips of paper (the text is full of them) and we suggest you play the “three strikes and you’re out” version suggested in the text.

One of the more interesting aspects of this game for students is to compare the damage they have selected from the hat with the damage that other luckier or less lucky participants have drawn. This nicely illustrates the great variability in physical changes between different individuals. As the instructor, you will be able to point out that variability within any one individual is also illustrated. You might also point out that everyone can expect to have some good years and some bad years.

Finally, it is important to point out that this is not how it really works. Biological aging and senescence are not random draws from a hat but are largely determined by our genetic make-up and the things we do (smoking) or fail to do (exercise) to ourselves. This makes a good lead in to Chapter 5 where those factors associated with longevity are presented.

Human Aging 2nd edition Foos Test Bank

CHAPTER 5

HEALTH AND LONGEVITY

Chapter Outline

- Overview
- Factors Beyond One's Control
- Factors Within One's Control
  - Diet
  - Exercise
  - Supplements
  - Tobacco
  - Alcohol
  - Stress
- Other Factors
  - Gender
    - Genetic/Biological Explanations
    - Environmental Explanations
  - Race/Culture/SES
- Social Support
- Quality of Life

Chapter Boxes

- Increasing Longevity in Weird Ways
- Body Mass Index
- Sweets for the Sweet
- Estimating Life Expectancy

Chapter Summary

This chapter takes a brief look at longevity around the world and then focuses on factors not within our control (e.g., genetics), within our control (e.g., diet, exercise), and other factors not so clearly categorized (e.g., SES). This chapter is far more focused on practical applications then the prior chapter's theories of senescence. The web sites listed for Chapter 2 in this manual are also quite useful here for discussion of life expectancy and life span.

Suggestion---Life Expectancy

Near the beginning of this chapter, the text tells students that within the U. S., residents of Hawaii have the longest life expectancy while residents of Washington DC have the shortest life expectancies. In our experience students will frequently ask what the life expectancies are for men and women in the state in which they currently reside. These data come from Kranczer (1998) and are summarized for each state in Table 4-1. Life

Human Aging 2nd edition Foos Test Bank

expectancies for men and women in D.C. are 62 and 74.2, respectively. A discussion about why some areas produce long-lived persons can be interesting, especially if you have students that represent different states.

Table 4-1
Mean Life Expectancies for 50 U. S. States

STATE	Men	Women	STATE	Men	Women
Alabama	69.6	77.6	Nebraska	73.6	80.2
Alaska	71.6	78.6	Nevada	71	77.8
Arizona	72.7	79.6	New Hampshire	73.5	79.8
Arkansas	70.5	78.1	New Jersey	72.2	78.6
California	72.5	79.2	New Mexico	72.2	79.3
Colorado	73.8	80	New York	70.9	78.3
Connecticut	73.6	80	North Carolina	70.6	78.3
Delaware	71.6	77.7	North Dakota	74.4	81
D.C.	62	74.2	Ohio	72	78.5
Florida	72.1	79.6	Oklahoma	71.6	78.5
Georgia	69.7	77.5	Oregon	73.2	79.7
Hawaii	75.4	81.3	Pennsylvania	71.9	78.7
Idaho	73.9	79.9	Rhode Island	73	79.8
Illinois	71.3	78.3	South Carolina	69.6	77.3
Indiana	72	78.6	South Dakota	73.2	80.8
Iowa	73.9	80.5	Tennessee	70.4	78.2
Kansas	73.4	80	Texas	71.4	78.9
Kentucky	70.7	78	Utah	74.9	80.4
Louisiana	69.1	76.9	Vermont	73.3	79.7
Maine	73	79.6	Virginia	71.8	78.6
Maryland	71.3	78.1	Washington	73.8	79.7
Massachusetts	73.3	79.6	West Virginia	70.5	77.9
Michigan	71.7	78.2	Wisconsin	73.6	80
Minnesota	74.5	80.9	Wyoming	73.2	79
Mississippi	68.9	77.1			
Missouri	71.5	78.8			
Montana	73.1	79.5			

The data presented in this Table are taken from Kranczer (1998).

Human Aging 2nd edition Foos Test Bank

Suggestion---Genetic Manipulation

A discussion about gene manipulation or gene therapy could prove very lively. Ethics and child development classes often encourage discussions about the morality of creating smart, beautiful babies or eliminating disease and disability through gene selection. What about doing the same thing for aging? Should researchers be looking for genetic contributions to longevity with an eye toward selecting an embryo's markers for long life? Should one select for an absence of cardiovascular problems? Absence of Alzheimer's? Absence of wrinkles and gray hair? Where does one draw the line?

Suggestion---Obesity

Students may be interested in statistics on the proportion of obese individuals in the country. Data from 2005 showed that 23.9 per cent of adults qualified as obese and that the prevalence increased from 1995 to 2005. In this report, obesity was defined as a BMI of 30 or higher. Another 60.5 per cent were overweight (BMI 25 to 30). The frequency of obesity was 24.2 per cent among men and 23.5 per cent among women. In terms of ethnic/racial groups the highest rate was 33.9 per cent for African Americans. Three states have the highest prevalence of obesity (all 30 per cent or more): Louisiana, Mississippi, and West Virginia (MMWR, 2006).

Suggestion---Anti-oxidants

You can make a connection for students between the material in this chapter and the Free Radical theory presented in the previous chapter by pointing out that antioxidants are frequently added to processed foods to prevent oxygen from combining with food components. Antioxidants do the same thing in our bodies; they prevent oxygen from combining with our DNA, cell membranes, and important proteins. Cereals and baked goods are especially likely to have antioxidants added and food would become stale much quicker without this additive (Hayflick, 1996). You might ask students to examine the food pyramid in this chapter and speculate about which foods are most likely to have added antioxidants and how highly recommended such foods are on that pyramid. Students may also be interested to know that pizza and beer are two foods that seem to result in a lot of free radicals. Perhaps one should take a lot of antioxidant (Vitamins C and E) when consuming pizza and beer.

Suggestion---Gender Gap

The text says that one hypothesis to explain the gender gap is the sex chromosome hypothesis. If a recessive and unhealthy gene, carried on the sex chromosome, is responsible, or partly responsible, for differences in longevity, then females who carry that gene on one X chromosome have a chance to carry the dominant and healthy gene on the other X whereas males do not have a second X chromosome and so would experience the full force of the recessive, and unhealthy gene. A problem for this hypothesis is that in some species, for example birds, it is the male that carries the two X chromosomes (referred to as W's in birds) while the female

Human Aging 2nd edition Foos Test Bank

carries only one (she carries a W and a Z). The chromosome hypothesis predicts that male birds should, therefore live longer but they don't (Ricklefs, 1973).

Suggestion---Race and Ethnic Gaps

The text discusses race and ethnic differences in longevity and puts those differences in the context of geographic and cultural/lifestyle differences. Students are often very interested in this topic and have a lot of personal examples about family habits and practices. Racism and inequities in health care can provide excellent topics for discussion of contributions to gaps in longevity. Recent discussions in the literature about racism and blood pressure add interesting data for this discussion. Immigration status and the changing perceptions of immigrants in the US may be a fruitful topic for discussion of ethnic gaps in longevity.

Suggestion---Stress and Health

The connection between stress and health is nicely illustrated by some older work. Most of the research on stress and health has not manipulated either variable. People who are ill are asked about stress in their lives over the last several weeks, months, or years or people under stressful circumstances are asked about their health. The study presented in the text has some forerunners that you may find worth mentioning. These studies have been fairly direct in examining the probability of catching a cold as a function of stressful events in a person's recent life. People with higher levels of stress are more likely to get sick (Broadbent et al., 1984; Totman et al., 1977). In one such study, seventeen students at the University of Virginia who were participating in a larger study were exposed to rhinovirus infection by inhalation. Before infection, students took the Life Experiences Survey (Sarason, Johnson, & Siegel, 1978) and marked all events, out of a total of 57, which they had experienced during the past year. These events are positive and negative stressors. Students spent the next 6 days in separate hotel rooms with food provided by room service. The 12 who developed colds experienced sneezing, coughing, runny noses, sore throats, and headaches. Researchers found that those who developed colds also reported nearly three times as many stressful events during the prior year. Recent stressful life experiences increase the probability of symptom development following exposure to infection (Stone et al., 1992). In this study, all hotel and food costs were paid for and participants received $350 compensation.

Suggestion---Relieving Stress

Students might be interested in learning ways to reduce stress. It is important for health and longevity that people learn to relax and not blow up or bottle up stress. A certain amount of stress occurs for everyone and the following techniques are ones you might describe to your class.

Biofeedback refers to information obtained from artificial devices about aspects of physiology that are not easily detected without such devices. For people with tension

Human Aging 2nd edition Foos Test Bank

and migraine headaches, biofeedback has been shown to be a very effective treatment (Schwartz & Schwartz, 1993). Biofeedback devices can provide information about heart rate, brain waves, blood pressure, and for purposes of relaxation, hand temperature. Learning to warm your hands involves redirecting blood flow from the head to the hands and can be very relaxing. One method uses a liquid crystal or "biodot" placed on the hand between the thumb and forefinger. The color of the dot indicates the temperature of the skin on the hand. If you can find mental strategies that increase blood flow to the hand to make it warm, the dot will turn blue. You will feel relaxed. Once you have found a mental strategy that works, the dot is no longer needed; you now know how to relax.

If you are interested in using Biodots to help you learn to warm your hands and relax, they are available from Biodot International Inc. at 1-800-272-2340. Other biofeedback techniques are used widely by professionals and you may find them worth pursuing.

Meditation involves gaining control over attention so that a heightened state of relaxation can be achieved. The goal is to eliminate all sources of distraction. It is, of course, relatively easy to find a quiet and private place to meditate and, thus, eliminate all external distractions (you may disagree if you are living in a dorm). It is much harder to control attention and quiet that continual internal "noise". We humans tend to be always thinking of something. To eliminate this internal chatter, meditation techniques focus attention on a picture which is called a mandala, or a sound called a mantra, or some physiological function such as breathing.

Successful meditation is intended to focus the individual on the present moment without evaluating or analyzing that moment. Meditation results in lowered blood pressure, a decrease in heart rate, and seems to be more effective than just closing your eyes and relaxing (Holmes, 1987). On the other hand, meditation is not easy to learn and it requires a fair amount of practice to achieve the meditative state. A good source for such leaning is the report provided by Michael West (1987).

There are a number of relatively simple **relaxation techniques** that are easily learned. These techniques are designed to relax the skeletal muscles and, by so doing, calm the heart and autonomic nervous system (e.g., digestion, hormone output). One of these techniques is referred to as autogenic and involves finding a comfortable place to sit, closing your eyes, and then relaxing muscle by muscle from your toes, up your legs, your backside, your back, your stomach, your chest, your shoulders and down your arms to your finger tips. When those are relaxed, you return to your shoulders and relax your neck, chin, cheeks, eyes, and forehead. Many find it helpful to visualize a blue light progressing up the body with each new relaxed muscle and/or to visualize all tension being pushed out the tips of your fingers and the top of your head. Some areas of the body will take longer to relax then others and this varies from individual to individual. Relaxation is an effective technique for lowering blood pressure and the levels of stress related hormones (Taylor, 1995).

Human Aging 2nd edition Foos Test Bank

Suggestion--- Handedness

Students are often interested in the finding that the proportion of left-handed individuals among the older population (1%) is much smaller than among the younger population (15%). Do most left-handed people die young (along with the good who were supposed to be the only ones)? One explanation is that this difference is a cohort effect. That hypothesis says that many left handed individuals in older cohorts were forced to become right handed by their teachers, relatives, friends, bosses, and culture. If this is so, then many older right-handed individuals were once, when young, left-handed. You might ask your students to gather data on this question by asking older persons whether they are now right or left handed and then asking them if they have always been that way. The cohort explanation suggests that you should find a proportion (10-14%) of older right handed persons reporting that they were left handed when they were young, perhaps very young. You might caution your students that they will have to talk with a fairly large number of older persons to gather such data and that many older individuals truly may not remember.

Suggestion---Life Expectancy Test

A good way to get students involved in thinking about all of the factors that influence health and longevity is to have them take the text's life expectancy exercise in class. This exercise appears as a Table in this chapter. Using this exercise by reading the items to students and having them calculate their expectancy by adding or subtracting for the various items makes the material very relevant for their own lives. Students like to compare their final calculations and talk about why some might expect to live longer than others. Students will also be interested in the influence of variables over which they have some control (e.g., smoking) and those they do not (e.g., gender). Some research has found that doing this exercise in class increases later student performance on tests of those factors that influence health and longevity (Foos, 2001).

You might also find it useful to involve students in discussing questions like the following after taking the life expectancy exercise:

- Based on your answers to specific questions, and what you know from your readings and the textbook, identify 2 ways that you can increase your life expectancy.

- Realistically, do you want to increase your life expectancy? Is it good to be old? Very old? Explain your answer.

- Identify at least one inaccuracy in the life expectancy test based on what you have read about increasing longevity. Do you think too many years are added or subtracted for some questions? Why?

Human Aging 2nd edition Foos Test Bank