Study Guide C: Chapter 6: Biological Perspectives on Aging

Focus questions and concepts:

1. How do environmental hazards, developmental processes, and genetic tendencies contribute to the aging process? [Know: wear and tear, somatic mutation, immune function, cross-linkage, free radical, and genetic control theories]

2. What is the difference between normal aging and pathological aging? [Know: senescence and active life expectancy]

3. How does aging change a person’s physical appearance and mental functioning? [Skin and hair changes, central nervous and peripheral nervous systems, neurons, sensory nerves and motor nerves, cerebellum, post-fall syndrome, sleep pattern changes]

4. How does aging affect a person’s sensory organs? [Know: presbyopia, cataract, glaucoma, presbycusis]

5. What effects does aging have on the bones, joints, and muscles? [Know: osteoporosis, hormone replacement therapy, arthritis]

6. How does aging change a person’s sexual capacity? [Know: climacteric, menopause, erectile dysfunction]

7. What effects does aging have on the heart and blood vessels? [Know: hypertension, hypertensive cardiovascular disease, angina]

Assignment: Answer one of these thinking about aging questions [the first two are mentioned in the book, and the third is my own suggestion]:

1. Some scientists believe that the human lifespan can be extended far beyond its current limits. What do you think of this idea? Do the theories of aging you have read about in this chapter seem to support it?

2. In the United States, the cosmetic surgery business is in the midst of a boom. Many patients who request this type of surgery are motivated by a wish to regain their once youthful appearance. Why do you think Americans are so concerned with the outward signs of aging, most of which are relatively harmless? Is this a positive or a negative social trend?

3. Having reviewed the trends of physical and mental aging, what kind of program would you prescribe for yourself to “age successfully?”
NATIONAL RESOURCES
National organizations of support and research include:

American Diabetes Association (http://www.diabetes.org)
American Heart Association (Stroke Connection) (http://www.anhrt.org)
Epilepsy Foundation of America (http://www.efa.org)

INTERNET RESOURCES AND ACTIVITIES
1. The National Center for Health Statistics (http://www.cdc.gov/nchs/) has a new series of reports on health and aging. They include the leading causes of death, oral health, vision and hearing, and the changing profile of nursing home residents.
2. The National Institute on Aging (http://www.nih.gov/nia/) has publications, research and fact sheets on a variety of age-related physical conditions and diseases, in addition to osteoporosis. Topics that could be searched include aging and your eyes, exercise, foot care, hearing, hearts and arteries, high blood pressure, stroke, menopause, prostate problems, and urinary incontinence.
3. MEDSCAPE's Women's Health MedPulse (http://womenshealth.medscape.com) can be a useful site for accessing the latest research and treatment information related to health. There is a resource center on osteoporosis and regular updates on a variety of topics related to aging can be obtained for a free list-serve subscription. Be aware that it is a commercial site with much of the research sponsored by pharmaceutical companies, but you should find the reports of interest.

SUGGESTED READINGS


