

## Book Review

### HOW MEN AGE: WHAT EVOLUTION REVEALS ABOUT MALE HEALTH AND MORTALITY

Richard G. Bribiescas

Princeton University Press, Princeton, NJ, 2016, \$24.95 (hardcover), \$14.49 (e-book), 177 pp.

The world's population is rapidly aging; between 2010 and 2050, the number of individuals over age 65 is expected to triple worldwide. This necessitates a close look at the aging process and the maladies that senescence brings—the focus of Richard Bribiescas' new book "How Men Age." True to the title, the book examines a breadth of scientific research on the ecology of male aging, with special emphasis on male reproductive endocrinology. Bribiescas' self-deprecating humor and personal anecdotes add personality and readability to an otherwise complex and often dry area of study.

While the book touches on many aspects of male aging, it excels when discussing life history and emphasizing the role of evolutionary trade-offs and constraints in the aging process, and distilling this large literature into a very accessible text. Life history theory is the focus of the first chapter, which then sets the stage for discussing male–female differences in mortality, male physiology/metabolism, obesity, fatherhood, and male fertility more generally. Morbidities common to aging males are discussed at length; benign prostatic hyperplasia, prostate cancer, erectile dysfunction, and of course the highly medicalized problem of "low testosterone."

As a popular text, this book will appeal to its intended audience—older men (and their partners) and those with an interest in human evolutionary ecology or aging. As a textbook for undergraduate courses, it might do better as a companion to Bribiescas' pre-cursor "Men: Evolutionary and Life History" which gives a more complete view of the life course, and goes into more detail and depth on male endocrine regulation.

Bribiescas does an excellent job assembling and presenting the studies on male aging in non-industrial populations, and spends significant time discussing both the populations he has worked with, and diverse populations around the world. Sadly, the evidence from such populations is limited, but what data do exist, Bribiescas presents and synthesizes here. In a rapidly globalizing world, many traditional populations are becoming market integrated and experiencing a suite of changes in sanitation, diet, and physical activity. Collecting

data on male (and female) aging before, during, and after these market transitions is an area where human biologists and anthropologists can contribute to our understanding of the basic biology and ecology of human aging.

Similarly, Bribiescas laments the current lack of information about the reproductive ecology of gay men (such as the endocrinology of male–male pair bonds) and notes that overall we "Probably know more about the evolutionary biology of male aging in our closest cousin, the chimpanzee, than we do about this important segment of the human experience" (p. 127). Citing alarming mortality and depression data among both homosexual men and women, Bribiescas suggests the need for additional research in non-heterosexual populations, while also noting that such research needs to be conducted cautiously given the checkered past of biological anthropology.

The first five chapters of the book lay down a theoretically driven take on current research in male aging, and the sixth chapter focuses on the importance of evolutionary medicine in understanding and hopefully treating the chronic effects of senescence.

Why do we need a sex-specific book about male aging? Though the title may give the impression that this manuscript is only about men, and that certainly is the main focus—it also presents substantial information about female aging in contrast to men. Explaining differences in the male and female aging process is much easier when both sexes are discussed together. Indeed, half of the figures show both male and female data. Comparing and contrasting sex differences in the aging process gives insight both into the evolutionary constraints that differentially impact the sexes, as well as potential paths to differential treatment of age-related morbidities.

We live in a rapidly graying world and clearly more research is needed to help understand the aging process and find better treatments for chronic diseases of aging. Bribiescas eloquently concludes the book with the statement "Evolutionary biology can inform us about the origin of age-associated health issues in men and can empower us to understand the male aging process with more finesse and depth" (p. 143), and he is absolutely correct. Overall, this book offers a compelling presentation of what we know about male aging, and importantly touches on numerous topics in which we still need more research.

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