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Erica Charters, *Disease, War, and the Imperial State: The Welfare of the British Armed Forces during the Seven Years' War*. Chicago: Univ. of Chicago Press, 2014. Pp. xiii, 285. ISBN 978-0-226-18000-7.

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I know of no previous medical history of the Seven Years War (1754-63; also called the French and Indian War). Erica Charters (Oxford Univ.) now makes good that gap in the literature in a fine study that will interest serious students eighteenth-century warfare and anyone curious about historical advances in military medicine and government-funded biomedical research. The author adopts a global perspective on the British experience during the war to reveal its influences on the development of western medicine. She wisely concentrates on disease in warfare rather than the wound trauma that preoccupies most historians of military medicine, since disease killed far more soldiers than did bullets or bayonets.

The state of British medical science, both military and civilian, in the eighteenth century was based on theories of such things as miasmas, humors, and “putrescent juices” hardly recognizable to present-day practitioners or patients. The horrifying descriptions of British military hospitals during the Crimean War, a century later, still resonate in popular culture. Why, then, study eighteenth-century military medicine, except as a cautionary tale from a deep dark past?

Charters contends that the British Army in the Seven Years War had to respond to public pressure to understand and overcome virulent outbreaks of disease. In the process, it transformed medical science by creating institutions and mechanisms that enhanced state authority and allowed physicians to better understand how the human body reacted to disease and climate.

The war is sometimes described as the first global or world war and Charters considers the primary medical problem in each of its theaters. Her research focuses on how warfare and disease intersect with the development of the nation state in the eighteenth century. She both explains how disease was understood in the context of medical practice of the time and informs the reader about twenty-first-century knowledge of relevant maladies.

Chapter 1, “Wilderness Warfare, American Provincials, and Disease in North America,” concerns the impact of scurvy and smallpox on British forces in North America. Charters notes that British soldiers tended to be in better health than American provincials, which the British attributed to indiscipline and lethargy rather than increased susceptibility to disease, since most American towns lacked the population density to be breeding grounds for such illnesses. The discrepancy exacerbated tensions between the British and the American colonists.

The second chapter, “The Black Vomit and the Provincial Press: The Campaigns in the West Indies,” describes the challenges posed by yellow fever in military operations in the Caribbean. Since diseases were attributed to the hot climate, the British Army, which relied on troops from Europe and North America, attacked quickly upon arriving in theater, before inevitable losses to sickness could winnow the force.

Chapter 3, “Flux, Fever, and Politics: The European Theater of War,” explores how the British Army fared in the familiar environment of northern Europe. While the disease rate was significantly lower than in the Americas, fatalities due to diarrhea and dysentery caused both Parliament and the press to demand reforms. Unlike other armies, the British Army began to tabulate the number of sick soldiers. While such statistics did not necessarily improve patients’ quality of health care, simply quantifying the problem was a crucial first step in identifying solutions.

The fourth chapter, “The Royal Navy’s Western Squadron: Trials, Innovation, and Medical Efficacy,” describes the Royal Navy’s response to scurvy. Although it knew how to prevent the condition, applying the appropriate countermeasures proved logistically difficult. In an early example of state-sponsored biomed-

cal research, commissioners of the Sick and Hurt Board developed a “portable soup” that provided sailors the nutrients needed to prevent scurvy, thereby enabling naval vessels to keep a constant presence off the coast of France and control the sea lines of communication, thus ensuring victory.

“Adaptation and Hot Climates: Fighting in India” is the title of chapter 5. When Europeans first arrived in South Asia, the assumption was that, since all human beings had in common their descent from Adam and Eve, Europeans would be as able as Asians to survive in the local climate. Physicians of the period believed climate and disease were intertwined. Excessive heat and fetid air caused British soldiers to suffer from putrid and intermittent fevers (that is, malaria), jaundice, and inflammation of the liver. Their susceptibility to tropical disease led the British to conclude that Europeans could not in fact adapt to the local environment. This in turn prompted a heavier reliance on British-led native sepoy, which transformed the nature of Great Britain’s colonial rule.

The subject of the sixth and last chapter, “Imperial War at Home: The Welfare of French Prisoners of War,” is the medical treatment of the very numerous captured service members, mostly sailors, who were not paroled back to France and remained in England for the duration of the war. The presence of so many prisoners could not be hidden from the general public, who also resented the guards being quartered in their communities and considered it a matter of civic pride that the prisoners should receive good care. The Committee on French Prisoners was formed to raise money and supplies for the care of POWs.

Of the various topics treated in the volume, scurvy stands out as particularly well explained. And the condition’s prevalence in many theaters allows for a comparative analysis of its treatment. In a first-ever clinical trial, Scottish physician James Lind had discovered that lemon juice prevented scurvy a few years before the Seven Years War, but, as Charters notes, his understanding of the etiology of the condition bears little resemblance to twenty-first-century knowledge of it:

Cold, according to Lind’s empirically grounded theory, “obstructs or diminishes insensible perspiration.” Moist air was also to blame for putrid diseases, as it impeded perspiration and made digestion more difficult by interfering with breathing and encouraging the natural process of putrefaction. More dangerous still was the combination of moist air with a diet that was difficult to digest and break down into a substance that could be mixed “with the blood, and all the rest of our humours.” The diet most difficult to break down, Lind noted, was one based on salt meats and unleavened breads, such as biscuits used as bread rations by the army and the navy. All hope was not lost for those forced to subsist on army rations of salted meat and biscuits, and live in cold and damp conditions. Such evils could be corrected by substances and practices that preserved the body from putrefaction and corrected putrid tendencies. In cold climates, Lind recommended exercise to encourage insensible perspiration. Vegetables and acids, such as vinegar, and especially acidic fruits, such as lemons and oranges, helped break down what Lind called “a gross and viscid [viscous] diet.” (33)

While the Royal Navy understood how to prevent scurvy, operational tempo made it hard to keep its sailors healthy, which in turn jeopardized missions. Charters documents the crown’s struggle to overcome these obstacles through improved logistics and new ways to enhance diet, specifically with meat and vegetables, especially during winter, when soldiers could not forage as they did in other seasons. Besides planting vegetable gardens in forts, commanders adopted a Native American beverage—spruce beer—to combat scurvy.

The author has made an important contribution by clarifying these nuances of scurvy treatment and prevention on both land and sea in the post-Lind era. It is a pity, however, that she has not addressed other pressing questions. For example, was scurvy a problem in the European and South Asian theaters of the war? And, too, although diarrhea and dysentery (or flux) were ubiquitous among soldiers during the eighteenth-, nineteenth-, and twentieth-century wars, Charters touches on them only in her chapter on the European theater of operations. Did no soldiers suffer from dysentery in America or South Asia? And were there no variations in its treatment across the wide geographical dispersion of troops?

These are, however, minor criticisms of a book that so perceptively explores the military and political effects of the diseases suffered by the British Army in the eighteenth century, while contrasting medical science of the era with present-day knowledge. Especially salutary is the author’s revelation that many of

the trends she identifies—popular demands for government accountability for the care of soldiers and POWs, the collection of disease statistics, and the development of state-run biomedical research institutions—in fact date to the mid-eighteenth century and not to the second half of the nineteenth, as I had thought.

Reading *Disease, War, and the Imperial State* will reward several audiences. Students of medical science will appreciate its insights into a relatively unexplored and poorly understood period of its history. Military historians will value its elucidation of the effects of disease control (or the lack of it) on the outcome of military operations in the Seven Years War. Political scientists will learn much from its account of the consequences of disease for military-civilian relations and early government-sponsored medical research and healthcare reforms. All in all, Erica Charters has conclusively proven that the foundations of effective military medicine were laid in the eighteenth century.