McMaster University professor emeritus Dr. Norman L. Jones’ book *The Ins and Outs of Breathing* is an invaluable resource for medical students learning about the respiratory system for the first time, and it is an interesting read for a much wider audience.

While the book accomplishes the objectives of a textbook in respiratory physiology, to call it so would be misleading. Firstly, the narrative style is friendly, accessible, and captivating. Additionally, Dr. Jones spends as much time explaining the respiratory system as recounting how its elements were discovered, weaving a fascinating story about the scientists who refined the concepts central to this book. The integrated historical account facilitates the reader’s understanding of the physiological concepts, so students who learn best by understanding the broad conceptual picture may be better served by Dr. Jones’ book than a traditional textbook.

Dr. Jones explains the fundamentals, origins, applications, and extremes of the human respiratory system across twenty-two chapters, exhibiting impressive breadth. While every chapter adds to a cohesive story of the respiratory system, each also stands on its own by including a review of the necessary background information. For example, a review of the muscles of inspiration and expiration is found within the chapter on singing. Readers with particular interests in, for example, breathing during diving, exercise at high altitudes, or while asleep, are able to skip ahead and indulge their curiosity. Other topics include the evolution of the composition of the Earth’s atmosphere, the neuromuscular control of breathing, and the effects of smoking, pollution, and infection on respiration. Chronicled is the evolution of the diagnosis and treatment of the big respiratory diseases, including asthma, COPD, and tuberculosis, always arriving at the current state of the art. A book that addresses such a wide range of topics
could be multiple volumes long, and Dr. Jones is judicious in summarizing concepts, careful not to sacrifice scientific accuracy for brevity. This is particularly evident in chapter 7, which describes the chemical and neural mechanisms involved in the regulation of breathing.

A background in science will be helpful in some chapters, such as the chapter on exercise physiology, but is usually not required, as Dr. Jones is careful to explain the scientific concepts central to the respiratory system. For example, basic and important concepts such as pressure and the use of scientific symbols are deliberately explained outside the main text. Other fundamental concepts such as pH and the biochemistry of hemoglobin are seamlessly integrated in the narrative, often along with their historical origin. Even rudimentary topics are made interesting to those already familiar with them, so the book should appeal not just to learners but to experts as well, a sentiment which has also been endorsed from this perspective. Stylistically, in the occasional passage, long sentences somewhat obscure the message being conveyed. Nonetheless, I expect many students, physicians, and curious members of the public will be highly satisfied with this book.

Should you decide to read *The Ins and Outs of Breathing*, be careful in choosing where to do so. The chapters on breathing at a depth and on dyspnea may inspire the urge to hold your breath. You may be tempted to go for a jog after chapter 10, to observe what you have just discovered. In chapter 17, you may find yourself experimenting with the shape of your upper airway to hear its effects on the production of vowel sounds.

While the topics at hand are exceedingly complex, the questions they answer frequently seem to be the type of universal question one ponders as a child, such as: How do animals like seals stay under water for 20 minutes? Perhaps this is why reading about the respiratory system is so satisfying.

**REFERENCES**


**Author Biography**

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