Contents

Preface vii

I | Understanding Your Ears
1 How the Ear Works 3
2 Ear Symptoms: What Do They Mean? 8
3 Common Myths about the Ear 12

II | Common Ear Problems
4 Otitis Media 21
5 An Overview of Hearing Loss 31
6 Hearing Loss in Children 39
7 Age-Related Hearing Loss 50
8 All about Hearing Aids 55
9 All about Cochlear Implants 61
10 Dizziness and Vertigo 71
11 Tinnitus: Ringing in the Ears 81

III | Disorders of the Outer Ear
12 Swimmer’s Ear 93
13 Ear Wax and Foreign Bodies 102
14 Malformations of the Outer Ear 107
15 Bony Growths of the Ear Canal 112
16 Cancer of the Outer Ear 115
17 Trauma: Cauliflower Ear 120
## IV | Disorders of the Middle Ear

18 Perforated Eardrum and Tympanoplasty 127  
19 Otosclerosis and Stapedotomy 134  
20 Mastoiditis and Cholesteatoma 137

## V | Disorders of the Inner Ear

21 Ménière's Disease 145  
22 Noise-Induced Hearing Loss 156  
23 Sudden Deafness and Autoimmune Disease 161  
24 Ototoxic Drugs 167  
25 Acoustic Neuroma and Other Tumors 171

## VI | Other Things You Should Know

26 Hearing and Balance Tests 183  
27 The Ear and Scuba Diving 194  
28 Airplane Ear 199  
29 Bell's Palsy and the Facial Nerve 204  
30 The Future: Gene Therapy and Stem Cell Therapy of the Ear 209

Appendix 1. Commonly Used Medications and Side Effects 213  
Appendix 2. Organizations Offering Information, Support, and Advocacy 215  
Glossary 217  
References 221  
Index 233
Preface

The importance of any organ system of the human body is related to how often it must be addressed by health care professionals. The most common illness requiring a prescription from the pediatrician, the most common operation performed on children, and the most common disability affecting adults in the United States all involve the ear. *The Ear Book* is a comprehensive explanation of the causes, diagnosis, and treatment of these frequently occurring ear disorders. It is written in plain language so it can be useful to all those managing this organ system, including general health care providers and the book’s primary audience—the lay public.

Symptoms caused by conditions affecting the ear such as hearing loss, ringing in the ears, and dizziness can be disabling. Explanations of the cause of the problem and the need and value of testing, as well as treatment options, can be difficult to follow in the physician’s office. Even common problems like ear wax, swimmer’s ear, ear infections, and perforations of the eardrum can be painful and confusing.

Rapid advances in medicine make it difficult to keep up, even for specialists in the field. Exaggerated claims of miraculous cures found in the media may be difficult for patients and providers to separate from established treatments founded in good clinical science. We describe recent innovations in simple terms and sift fact from fiction to help patients and their caregivers stay abreast of modern approaches to the ear.

What You Will Find in This Book

The ear is one of the most complex organs of the body, providing the sense of hearing and balance. Part 1 begins with clear explanations of how
the ear works. After a review of the meaning of different ear symptoms, we dispel some popular myths about the ear.

In Part 2, we review the most prevalent ear disorders—otitis media, hearing loss, dizziness and vertigo, and tinnitus—focusing on finding the right diagnoses and getting the best treatment.

Part 3 looks specifically at problems affecting the outer ear—swimmer’s ear, obstructions, malformations and growths, cancer, and trauma. The middle ear is the focus of part 4, with a closer look at perforations of the eardrum, otosclerosis, and mastoiditis. Part 5 looks into the inner ear. Here we discuss Ménière’s disease and noise-induced hearing loss, two common problems. We also describe the symptoms of sudden deafness and autoimmune diseases as well as the consequences of using some life-saving drugs. We close part 5 with a discussion of tumors.

In the final section we describe different types of hearing and balance tests. Knowing what to expect in advance will help you get the most out of your visit to the doctor. In this section we also address the problems of adjusting to different air pressures (when scuba diving or flying in a plane). Techniques can be learned to lessen the effects of pressure changes. The last chapter looks to the future and the progress that has been made with gene therapy and stem cell research.

At the end of the book you will find a glossary of terms, appendixes providing a list of ear medications and a roster of resources, references for further reading, and an alphabetical index to facilitate easy access to specific topics.

The Ear Book provides up-to-date, reliable information. It follows a conservative approach to surgery. We hope that it will help you in working closely with your primary physician or ear specialist.