



# THE PRAEGER GUIDE TO HEARING AND HEARING LOSS

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Assessment, Treatment, and Prevention

Susan Dalebout



**Greenwood**  
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# The Praeger Guide to Hearing and Hearing Loss

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*For my father  
who bears hearing (and vision) loss with incredible  
grace and good humor.*

*And for my mother  
who is the reason that he's always so cheerful.*

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# Preface

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I was inspired to write this book by my father and his friends with hearing loss (many of whom I have known all my life). Most of them—even those with hearing aids—understand surprisingly little about their hearing problems and what can be done about them. They are wary of exaggerated advertising claims, buying something that doesn't really help, and being overcharged. They are confused about whose advice they should trust, and sometimes they call on me. This book was written as a resource for them and so many others like them.

I had significant help along the way from two very special people. The first is Robert L. Shook, author of many books and mentor to many aspiring authors. Bob, whose late mother had a hearing loss, was tenacious in encouraging me to write this book. He went out of his way to be kind, and he has been remarkably generous with his valuable time.

The other person is my husband, Harry Levins, without whom this book would never have been finished. I know of no one with greater intellect, powers of analysis, and problem-solving ability, and I am grateful that he was willing to apply his exceptional talents to this endeavor. In addition to making an enormous investment of time, his patience, encouragement, and resolve have been steadfast. I am truly blessed to have a husband who is as capable as he is loving.

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# Abbreviations

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AAA	American Academy of Audiology
ABA	American Board of Audiology
ABR	Auditory Brainstem Response
ADA	Americans with Disabilities Act of 1990
ALD	Assistive Listening Device
ALDA	Association of Late-Deafened Adults
ALD/S	Assistive Listening Device/System
ALS	Assistive Listening System
ASHA	American Speech-Language-Hearing Association
ASL	American Sign Language
ATA	American Tinnitus Association
AuD	Doctor of Audiology
BC-HIS	Board Certified in Hearing Instrument Sciences
BICROS	Bilateral CROS
BTE	Behind-the-Ear Hearing Aid
CA	Communication Assistant
CAN	Computer-Assisted Note-Taking
CART	Computer-Assisted Real-Time Transcription
CBT	Cognitive Behavioral Therapy
CCC-A	Certificate of Clinical Competence-Audiology
CD	Compact Disk
CIC	Completely-in-the-Canal Hearing Aid
CN	Cranial Nerve
CPA	Cerebellopontine Angle
CROS	Contralateral Routing of the Signal



DAI	Direct Audio Input
dB	Decibels
DSP	Digital Signal Processing
EEG	Electroencephalographic
ENT	Ear, Nose, and Throat
EPA	Environmental Protection Agency
FCC	Federal Communications Commission
FDA	Food and Drug Administration
FM	Frequency Modulated
HAC	Hearing Aid Compatible/Hearing Aid Compatibility
HAT	Hearing Assistance Technology
H.E.A.R.	Hearing Education and Awareness for Rockers
HEAR	Medicare Hearing Enhancement and Auditory Rehabilitation Act of 2007
Hz	Hertz
HLAA	Hearing Loss Association of America
IHS	International Hearing Society
IL	Induction Loop
IP	Internet Protocol
IR	Infrared
ITC	In-the-Canal Hearing Aid
ITE	In-the-Ear Hearing Aid
LACE	Listening and Communication Enhancement Program
LDL	Loudness Discomfort Level
NAC	N-acetylcysteine
NBC-HIS	National Board for Certification in Hearing Instrument Sciences
NIOSH	National Institute for Occupational Safety and Health
NPC	Noise Pollution Clearinghouse
NRR	Noise Reduction Rating
OAEs	Otoacoustic Emissions
OME	Otitis Media with Effusion
OSHA	Occupational Safety and Health Administration
PE	Pressure Equalization
RF	Radio Frequency
RITE	Receiver-in-the-Ear Hearing Aid
SHHH	Self Help for Hard of Hearing People (now HLAA)
SNR	Signal-to-Noise Ratio (also used here for Signal-to-Noise Relationship)
SRT	Speech Reception Threshold
TL	Tolerance Level
TMJ	Temporomandibular Joint Syndrome
TRS	Telecommunication Relay Services
TRT	Tinnitus Retraining Therapy
TTD	Telecommunication Device for the Deaf

TTS	Temporary Threshold Shift
TTY	Teletypewriter
UCL	Uncomfortable level
VBA	Veterans Benefits Administration
VCO	Voice Carry Over

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## PART I

# Learning about the Problems

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## CHAPTER 1

# Is This You or Someone You Love?

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Oh you men who think or say that I am malevolent, stubborn, or misanthropic, how greatly do you wrong me. You do not know the secret cause which makes me seem that way to you. . . . For six years now I have been hopelessly afflicted . . . by the . . . sad experience of my bad hearing. Ah, how could I possibly admit an infirmity in the one sense which ought to be more perfect in me than others, a sense which I once possessed in the highest perfection, a perfection such as few in my profession enjoy or ever have enjoyed. Oh I cannot do it; therefore forgive me when you see me draw back when I would have gladly mingled with you. My misfortune is doubly painful to me because I am bound to be misunderstood; for me there can be no relaxation with my fellow men, no refined conversations, no mutual exchange of ideas. I must live almost alone, like one who has been banished; I can mix with society only as much as true necessity demands. If I approach near to people a hot terror seizes upon me, and I fear being exposed to the danger that my condition might be noticed. . . .

Ludwig van Beethoven, October 6th, 1802

### **DO YOU RECOGNIZE YOURSELF OR SOMEONE YOU LOVE IN ANY OF THESE SITUATIONS?**

You and your spouse have always been socially active. You enjoy concerts, plays, lectures, movies, religious services, dining out, and travel. But now you must work to understand what's being said, and sometimes the effort is exhausting. And, try as you might, there are times when you get only bits and pieces. Occasionally, you give yourself a break and let your mind wander. But then you lose track of the conversation. You feel self-conscious and worry that your problem will be discovered. Eventually,

you decide that social activities just aren't as much fun as they used to be, and one by one, you give them up. You tell your spouse that you've lost interest in them—that you'd simply rather not go out. It's clear that he's disappointed about the changes in your lifestyle. You feel guilty about depriving him of activities you once enjoyed together, but it's no longer possible to *share* them in quite the same way. After all, your hearing loss makes it difficult for you to speak privately to one another in public places. As a result, your ability to experience an event *together* has been diminished. Your spouse worries that you're becoming withdrawn and perhaps depressed. Sadly, you realize that your hearing loss has changed his life as much as it's changed yours. And it's taking a toll on your relationship.

You're at a business dinner. You give your order to the waitress and return your attention to your dining companions. Then you realize that the waitress is still standing over you. Judging from the expectant look on her face, you suspect that she's asked you a question. You ask her to repeat what she has said. Apparently she does, but all that you hear is the din of multiple conversations, clattering dishes, and unwanted music. You ask her to repeat again. She mumbles something, but you still don't get it. Why doesn't she make some effort to help you understand? You feel upset. Your companions look anxious—not knowing whether to intervene and risk embarrassing you, or be polite and pretend not to notice. Eventually the meal is served, but you have to work at hearing throughout the evening. In the future, you'll think twice about having a business meeting in a restaurant. Although your hearing is adequate in the quiet of your office, attempting to have an important conversation in a noisy restaurant is just too stressful.

You're a baby boomer in your mid-fifties. You eat a healthy diet, run and weight train each day, and often bicycle 100 miles. You take good care of yourself, and you're in great shape. These days you're careful to protect your hearing while mowing the lawn, but you've enjoyed your share of loud music and rock concerts in the past. You were happy to learn that your hearing was normal when an audiologist tested it about 5 years ago, but lately you're having trouble understanding friends in noisy situations. You wonder if you're beginning to lose some hearing.

You're at a family gathering. You've been looking forward to the event for months, and you're eager to interact with your children and grandchildren. But suddenly it seems like everyone is talking at once. You hear their voices, but you can't make out their words. You ask people to repeat, but even then you have trouble understanding. You're aware that asking for repetition disrupts the conversation, and so you decide to just listen and catch whatever you can. As the conversation jumps from person to person, however, you can't keep up. Eventually, you become lost. You quit trying and let your mind drift to other things. Suddenly, someone asks you a question. Caught off guard, you make your best guess and give a vague response. The looks you receive suggest that your answer was off target, but no one bothers to pursue it. The conversation quickly moves on. You

worry that people might think you're becoming senile. You wonder if they might be right. You're ready to go home—to a place where your hearing loss isn't a problem. Next time, you'll be less enthusiastic about attending an event with so many people.

Your spouse tells you that you don't hear well, but you refuse to believe it. After all, who can understand someone who talks with the water running, from behind a newspaper, or from another room? Your hearing is all right; it's just that your spouse—and everyone else—mumbles. You can hear them talking, but you don't catch *everything* they're saying. You hate asking them to repeat things—that only confirms what they already think about your hearing and makes you feel foolish. Most of the time, you just keep quiet. Sometimes you pretend that you heard what was said; other times you act as if you weren't paying attention. When forced to give a response, you bluff and hope that your answer doesn't give you away.

You're attending a meeting with a group of acquaintances, and the speaker isn't using the microphone. You raise your hand and politely ask that she do so. She replies, "I think everyone will be able to hear me if I speak up." You object and ask again that she use the microphone. Others in the audience react to your request with annoyance and sarcastically suggest that you get a hearing aid. Apparently, they're unaware that you already depend on hearing aids, but that hearing aids can't solve every listening problem. You feel humiliated and angry. You wonder how people can be so insensitive.

You and your spouse are meeting friends at a restaurant for dinner. You haven't seen these friends in a long time, and so there'll be quite a bit of catching up to do. Your spouse has been looking forward to the evening with enthusiasm, but you've been dreading it. Because this is a social event, she reminds you to wear your hearing aid. You try to remember where you put it, because you haven't worn it for some time. You bought it 5 or 6 years ago to please her—she thought it would make a world of difference. You don't wear it often, only on occasions when you know that hearing will be difficult. You arrive at the restaurant and—no surprise—it's a noisy place. You keep fumbling with your hearing aid, trying to adjust it to catch more of the conversation. Your spouse keeps telling you that it's whistling. Finally, looking embarrassed and irritated, she insists that you turn it off (which is a relief). As you tune out, you begin thinking about all of the things that your audiologist has told you over the years . . . like the more you used the aid, the more you would benefit from it . . . that your brain would need time to adjust to different sound input, and that adjustment would not occur unless you wore the aid regularly . . . that you should practice wearing the hearing aid in easy listening situations before using it in more challenging ones. She offered you and your spouse hearing rehabilitation sessions that she said would help, but you weren't interested. You figured it was just a marketing ploy. She said that you would hear better with two hearing aids than with just one, and that over time speech understanding in your unaided ear might deteriorate from



lack of use, but you figured that was just another sales tactic. She told you about dramatic improvements in hearing aid technology over the last few years, but you refused to spend money on a new hearing aid. Leaving the restaurant, you can't help but notice how disappointed your spouse looks. Is it time to reconsider some of your audiologist's advice?

## **MY TURN**

My mother is lying on a hospital gurney being prepped for surgery. I've traveled from another state to be there, and I wait with my father. Although my parents are vigorous and appear younger than their age, they've been married for nearly 60 years. They share and consult about everything. No experience, thought, or decision escapes thorough analysis and discussion between the two of them. This morning, my father and I wait nervously for an opportunity to see my mother before surgery. The institutional rooms we pass through are cold, with hard walls, hard floors, and hard ceilings that make listening conditions poor. In addition, people and machines are making noise everywhere. Finally, someone comes to tell us where to find my mother, what to expect, and what we're supposed to do next. I turn to my father and realize that he's missed much of what was said. We continue to receive instructions throughout the morning, and I watch my father struggle to hear them. We spend hours listening for our names to be called in the surgical lounge. Finally, it's time to speak with the surgeon about my mother's condition. Thankfully, she gives us her report in a small room intended for counseling, but even then, my father understands little of what is said. On this day, I am obviously very concerned about my mother, but I am also very concerned about my father. I realize that in difficult listening situations he's lost without my mother. As a daughter, it's painful to see my father looking vulnerable because he can't hear. In my case it's especially painful, because I've been an audiologist for more than 30 years.

## **THIS BOOK**

If reading any of this makes you think of yourself or someone you love, then you probably have stories of your own to tell. The question is, are there solutions to these problems? The answer isn't simple. When it comes to hearing loss, there is no silver bullet. Unlike vision, which can usually be restored to normal with medical/surgical treatment or corrective lenses, most hearing losses can't be medically treated or restored to normal with amplification. Nonetheless, there are many things that you can do to minimize the negative impact of hearing loss and significantly improve the quality of your life. And that's what this book is about.

This book was written for my father and the millions like him, whose lives have been altered by hearing loss. In fact, I have used my father's

hearing loss to illustrate information presented throughout the book. This book is also for my mother and the millions like her, whose lives have been changed by a partner's hearing loss. In truth, this is a book for adults of any age with *any* degree of hearing loss—from slight to profound—and the people who love them.

### **Could You Have a Hearing Loss?**

Do your best to answer these questions *honestly*.

Do you

- Think that people mumble or don't speak clearly?
- Hear people talking but have trouble understanding their words?
- Find yourself asking people to repeat what they've said?
- Miss details in meetings, lectures, plays, or religious services?
- Get complaints about the television being too loud?
- Fail to hear the doorbell or telephone ring?
- Have trouble hearing over the telephone?
- Notice that it's more difficult to hear with one ear than the other?
- Have difficulty understanding when there are multiple conversations (or other background noise) in the room?
- Find that watching people's faces makes it easier to understand, especially in poor listening conditions?
- Have difficulty understanding conversations in restaurants?
- Get complaints about speaking too loudly?
- Feel tired or stressed after a conversation?
- Find understanding the words of women and children particularly difficult?
- Have difficulty following the dialogue in movies?
- Have trouble understanding speakers in public places?
- Have trouble understanding soft or whispered speech?
- Have difficulty hearing birds singing or a watch ticking?
- Have difficulty determining where sounds are coming from?
- Misunderstand what people are saying and respond inappropriately?
- Feel that people get annoyed because you've misunderstood them?
- Guess at what people have said because you're unable to catch all of the words?
- Pretend to understand when you don't?
- Feel anxious or avoid situations because you fear it will be difficult to hear?
- Find that music is no longer enjoyable?
- Have friends or relatives who've questioned your hearing?

If you answered "yes" to more than two of these questions, you need to have a hearing evaluation. Don't wait to invest in your relationships and improve the quality of your life. Help for hearing loss *is* available.

## CHAPTER 2

# The Sensual Ear: Hearing and Hearing Loss

---

Blindness cuts us off from things, but deafness cuts us off from people.

Helen Keller

By most estimates, more than 31 million Americans experience significant hearing loss—that's a whopping one in ten of us. Even that figure, however, fails to convey the real impact, because hearing loss never affects just one person. The family members, friends, and coworkers of every person with hearing loss are affected as well.

It's a myth that hearing loss affects only old people. Although it's more common among people who are older, more than half of all Americans with hearing loss are under the age of 50. And hearing loss is becoming evident in younger and younger people all the time. Among adults, the breakdown is something like this: one in twelve 30-year-olds, one in eight 50-year-olds, one in three 65-year-olds, and one in two 75-year-olds has a hearing loss.

The vast majority of people with hearing loss grew up with normal (or relatively normal) hearing and gradually began losing it as adults. If you're part of that large and ever-expanding group, this book is meant for you. The book is intended to help you minimize the negative impact of your hearing loss and maximize the quality of your life.

### **ALL HEARING LOSSES ARE NOT THE SAME**

People with hearing loss may be considered hard of hearing, deaf, or Deaf. Those with measured hearing levels in the severe-to-profound hearing loss range are usually considered deaf. Those with lesser degrees of

hearing loss are generally considered hard of hearing. People who are “Deaf” identify *themselves* as members of the Deaf community and are said to be culturally Deaf. Membership in the Deaf community is based less on the degree of hearing loss and more on the use of American Sign Language (ASL) as the primary mode of communication. ASL is not English that’s signed; rather, it’s a complete language unto itself, altogether different from English. Most members of the Deaf community have been deaf since birth or early childhood, or they come from Deaf families. Among the 31.5 million Americans with hearing loss, 95 to 98 percent are hard of hearing; a relatively small number are deaf (perhaps 1 million), and an even smaller number are culturally Deaf. It’s estimated that about 300,000 Americans use ASL as their primary language.<sup>1</sup>

The term *hearing impaired* is sometimes used to describe all people with hearing loss. Although this is convenient, the term is not used here because many people who are culturally Deaf find it objectionable. Members of the Deaf community generally do not consider themselves impaired; rather, they consider deafness an essential part of their nature. Given a choice, most would not change their deafness any more than most people would change their race or gender. In contrast, people who once relied on hearing for communication miss it dearly when it’s gone. Given a choice, they would enthusiastically choose normal hearing. The perspectives of these groups couldn’t be more different. While both are perfectly valid, this book is intended for people who want to hear better.

## THE IMPORTANCE OF HEARING IN OUR LIVES

In 1910, Helen Keller wrote, “I am just as deaf as I am blind. The problems of deafness are deeper and more complex, if not more important, than those of blindness. Deafness is a much worse misfortune. For it means the loss of the most vital stimulus—the sound of the voice that brings language, sets thoughts astir and keeps us in the intellectual company of man.”<sup>2</sup> Ms. Keller expressed this sentiment on more than one occasion. In her words, “. . . after a lifetime in silence and darkness to be deaf is a greater affliction than to be blind. . . . Hearing is the soul of knowledge and information of a high order. To be cut off from hearing is to be isolated indeed.”<sup>3</sup>

For most of us, connections to other people depend on hearing—and nothing could be more important. But our dependence on hearing goes beyond even that. Hearing connects us to the world in which we live. It’s been suggested that this connection occurs on at least three levels: primitive, warning, and symbolic.<sup>4</sup>

At the *primitive level*, hearing provides a constant auditory background that gives us a sense of comfort and security. Even though we tune out many background sounds (for example, the refrigerator running, the computer fan humming, the clock ticking), our unconscious awareness of them makes us feel alive and part of a living world. Background sounds also

become part of the “soundscapes” that enrich our lives (leaves crunching underfoot, birds singing in the trees, waves crashing on the shore, children laughing in the distance). The loss of these sounds can leave a listener feeling isolated and alienated, and may result in depression.

For most people, there’s an unconscious expectation that actions will produce sound. To watch a glass fall to the floor without hearing it shatter is disconcerting—like living in a movie with the sound track turned off. And an inability to hear the sounds we make ourselves (like those associated with sneezing, laughing, chewing, or moving about) can be even more unsettling. People who experience sudden hearing loss often report that the world feels “dead” to them.

Fortunately, most listeners lose only part, rather than all, of their hearing, and they lose it very gradually. Although they miss many sounds of importance, they continue to hear enough of the auditory background to feel connected to the world. Even when hearing loss is quite severe, hearing aids and cochlear implants usually restore an auditory background—although a period of adjustment is sometimes required to actually appreciate that. It takes time for the brain to reorient itself to a world filled with sound and to become accustomed to hearing in a new way. In fact, new hearing aid users often find the auditory background annoying at first. Adjustment takes patience and practice. Similarly, when an experienced hearing aid user gets new hearing aids that process incoming sounds in a slightly different way, the brain requires another period of adjustment.

At the *warning level*, sounds provide information about what’s going on around us, even in the dark, around corners, and through walls. We don’t need to see the source of a sound to understand its meaning or know its location. A knock at the door signals the presence of a visitor. A car horn signals potential danger. The cry of a child signals an unmet need.

Naturally, an inability to hear warning sounds creates feelings of anxiety and insecurity. If you can’t hear the alarm clock, you may not sleep for fear of being late for work. If you’re a parent (or grandparent), you may worry constantly about not hearing your child cry out. If you’re startled by people suddenly appearing without having heard them approach, you may find it difficult to concentrate. Fortunately, alerting devices are available to solve most of these problems.

Hearing at the warning level is never turned off; it works around the clock. The brain is always monitoring the sound environment, even when we’re unaware of it. When a sound of potential significance is detected, the brain pushes it into our consciousness. For example, imagine yourself (with normal hearing) in a room where lots of people are talking. You’re having a conversation with a friend when you hear your name mentioned across the room. Your attention was focused on the conversation with your friend, but your brain was monitoring sounds throughout the environment. The sound of your name could be important, so it gets flagged for immediate attention. This unconscious monitoring system allows us to remain vigilant,

even while we rest. A sleeping mother can ignore dozens of sounds—even loud ones—yet awaken the moment her child cries. Hearing at this level also enables us to multitask. For example, a parent can be cooking dinner while monitoring the sounds made by a child playing in a nearby room and feel confident that he is safe.

At the *symbolic level*, sound becomes the primary means for communication, the most human of all experiences. Not only does hearing allow us to detect speech, it makes it possible for us to comprehend its meaning, even subtle nuances of meaning. Virtually all people with hearing loss have some difficulty at this level, especially when listening conditions are poor (for example, when there is background noise). Fortunately, hearing aids, cochlear implants, assistive listening devices, and hearing rehabilitation can, for the most part, restore the ability to detect speech and understand its meaning.

In addition to these three basic levels, hearing is a source of enjoyment. For some, the ability to appreciate music is deeply significant. For them, a loss of hearing can mean losing one of life's greatest pleasures. For others, it may be the ability to enjoy the sounds of nature that's critically important. There are people who actually mourn the loss of their favorite sounds.

Hearing affects the quality of our lives in more ways than we could possibly name, but above all, it contributes to the *easy* flow of communication between human beings. Although it's possible to communicate in other ways, most of us choose to hear and speak. And it is through hearing that we come to know the thoughts and feelings—the very essence—of the people in our lives.

## THE TROUBLE WITH HEARING LOSS

It's hard to understand. People who would gladly go out of their way to help someone who's blind or physically disabled are likely to become impatient when talking with someone who's hard of hearing. If you doubt this, try asking someone to repeat more than a couple of times during a conversation. People seem to have less empathy for hearing loss than they do for other disabilities, perhaps because hearing loss is invisible—there's no white cane, no wheelchair to signal the disability. Or perhaps because hearing loss is so common people don't consider it a real disability—maybe they think it's something we all face sooner or later.

Whatever the reason, one thing is clear. People are more inclined to be helpful when they believe a person with hearing loss is doing everything possible to help himself—and most often that means wearing hearing aids. Refusal to use hearing aids can be a source of anger and resentment among family members ("she is so stubborn," or "he is so selfish"), and failure to wear hearing aids that have already been purchased is a common source of frustration ("I have to scream on the telephone; why isn't she wearing the hearing aids we bought her?"). However, it's important to understand that

hearing aids cannot solve all hearing-related problems. Although hearing aids can be incredibly helpful, they cannot bring back normal hearing. There will be situations in which the wearer will continue to have difficulty, and learning to use good communication habits is essential.

People often are reluctant to acknowledge hearing problems, sometimes even to themselves. Because hearing loss is painless, invisible, and usually develops very gradually, it's easy to ignore—at least at first. But there are times when not acknowledging a hearing loss is about more than just missing the signs. Sometimes it's about denial, and sometimes denial is about the lingering stigma attached to hearing loss. Think about it. A person who wouldn't think twice about wearing eyeglasses to correct a vision problem is apt to deny a hearing loss. A loss of vision is acceptable; a loss of hearing is not. People fear that acknowledging a hearing loss will make them appear old or incompetent when, in reality, it's pretending *not* to have a hearing loss that's likely to make them appear confused (or aloof, indecisive, or otherwise befuddled). Attempting to conceal a hearing loss is more likely to make it apparent than wearing hearing aids ever would. When people attempt to bluff their way through conversations, awkward and embarrassing situations are bound to occur. Responses are likely to seem strange or off target, and sometimes rude or insensitive.

People who deny hearing loss sometimes blame others, believing there wouldn't be a problem if people would only speak clearly. They may be convinced that children are no longer taught to speak properly, or that people these days are too rushed, too lazy, or too disrespectful to do so. They may blame family members for talking to them when they're out of "earshot." They may even accuse people of deliberately excluding them from conversations or talking behind their backs. Admittedly, communication partners are imperfect. There's no doubt about that. But if you have an *untreated* hearing loss, your hearing loss is the real source of the problem.

Even people who recognize they have a hearing loss are likely to wait years before seeking help. The average wait is 7 years, but many people wait much longer. People delay for many reasons: they may not believe they have a hearing problem or they may wish to conceal it; they may be unable to afford help; they may be misinformed about the help that's available; or they may simply put off taking action. The truth is, most people *never* seek help. In this country, only 25 percent of the people who could benefit from hearing aids actually use them. In other words, only one in four adults with hearing loss is doing something about it.

Hearing loss affects our ability to function socially, emotionally, and intellectually. Not seeking help—whether because of denial, vanity, money, or procrastination—can take a heavy toll. Research studies have shown that *untreated* hearing loss can lead to embarrassment, fatigue, irritability, tension, stress, social isolation, loneliness, rejection, paranoia, anxiety, negativism, depression, endangered personal safety, impaired memory, and relationship stress. It can also degrade coping skills, the ability to learn

new tasks, alertness to the environment, personal effectiveness, and general health.<sup>5,6</sup> A national task force recently described it as “a potentially devastating health condition if left untreated.”<sup>7</sup> It seems that those who choose to do nothing about hearing loss do so at their own peril.

But it’s not all doom and gloom. There’s good news too. Several years ago, the National Council on Aging commissioned a major study in which more than 2,000 people with hearing loss (some used hearing aids whereas others did not) and nearly 2,000 of their significant others (mostly spouses) were surveyed.<sup>8</sup> The study’s purpose was to examine the impact of hearing aids on quality of life; to date, it’s the largest study of its kind. The results were striking. The use of hearing aids was associated with improved social, emotional, psychological, and physical well-being, regardless of the degree of hearing loss. Those who used hearing aids had higher scores for interpersonal relationships (including greater intimacy), emotional stability, sense of control, cognitive function, and health status. They were also more likely to interact with other people and to participate in organized social activities. Both hearing aid users and family members indicated significant improvement in nearly every area measured: relationships at home, feelings about self, social life, mental health, physical health, etc. Notably, *family members* reported greater benefits related to the use of hearing aids than the hearing aid users themselves.

If that’s not enough, another important study has shown that working Americans with hearing loss earn far less than people with normal hearing—for those with the most severe hearing loss, up to \$12,000 less per year.<sup>9</sup> However, for people who wear hearing aids, that difference is (on average) cut in half. Study results indicated that for each 10 percent increase in the severity of hearing loss, the decrease in average annual household income was \$2,250 for people who did not wear hearing aids, but only \$1,130 for those who did. These figures show that the financial benefit of wearing hearing aids far exceeds their cost.

Untreated hearing loss finds its way into virtually every aspect of our lives. Routine trips to the market, the drugstore, or the post office can become embarrassing experiences that create a sense of dread. Activities that once brought joy—like interacting at family gatherings, eating in restaurants, going to movies, or traveling—can become frustrating and unsatisfying. Interactions with loved ones can become stressful, making a family member with hearing loss feel tense and irritable, and then guilty and ashamed. Functioning in the workplace may require additional effort. It may be more difficult to hear on the telephone or in meetings, and communicating with coworkers, customers, clients, students, patients, or parishioners may become a challenge. The ever-present fear of missing something may create a constant sense of anxiety. The need to devote one’s full attention to listening may make multitasking impossible. Feelings of inadequacy may overwhelm feelings of competence, and career advancement may seem hopeless.



Untreated hearing loss can lead to feelings of loneliness, isolation, or worse. Think about how much of what we know about the world comes from merely observing and overhearing. As “distance” senses, hearing and vision allow us to receive information not specifically directed to us. But hearing loss takes away the ability to hear from a distance—and the ability to overhear. This can make people with hearing loss feel confused or out of step with everyone else. They may feel anxious about not knowing what everyone else knows. Even worse, being unable to hear what other people are talking about can lead to feelings of distrust, alienation, and even paranoia. It’s human nature to assume occasionally that conversations we cannot hear are about us.

All in all, it’s not surprising that some people react to hearing loss with anger or resentment, that some feel anxious or fearful about their personal safety, or that some lose their self-confidence and sense of identity. In fact, it’s not hard to understand why some who lose their hearing mourn its loss and wrestle with the stages of grief that Elizabeth Kübler-Ross first associated with the death of a loved one: denial, anger, bargaining, depression, and acceptance.<sup>10</sup>

Coping with hearing loss is made more difficult by a lack of understanding about its nature. Friends and family members often express frustration about what appears to be inconsistent hearing ability (the *he-hears-when-he-wants-to* problem). Inconsistent responses can be interpreted as disinterest, willfulness, even laziness. However, learning just a few things about the nature of hearing loss makes it easier to understand that inconsistencies in the ability to hear are very real. For example

- Hearing loss is not an all-or-nothing business. The continuum ranges from slight hearing loss to total deafness (although total deafness is very uncommon, which means that most people hear *some* things but not *all* things).
- Hearing loss rarely affects all pitches equally. This means most people *hear* speech, but with some of the information filtered out—and typically it’s the most critical information that’s missing. It’s this “filter effect” that makes speech hard to understand. For example, instead of actually *hearing* the difference between “sat,” “fat,” “pat,” and “that,” people with hearing loss are likely to hear only /a/, /a/, /a/, and /a/. The important high-pitched consonant information has been filtered out, leaving only the low-pitched vowel sounds. Imagine trying to read this page with all of the consonants erased. The loss of the consonants makes it difficult to tell one word from another using hearing alone. The listener must fill in what’s missing by watching speakers’ faces and using contextual cues. People with hearing loss must constantly combine fragments of information from hearing, vision, and context to make sense of what’s being said.
- Listeners with certain types of hearing loss also experience distortion. This means they can hear people talking, but they have difficulty understanding what’s being said. Speech sounds mumbled or garbled, and speaking louder doesn’t make it clearer. This highlights the difference between *audibility* (the ability to hear someone talking) and *intelligibility* (the ability to distinguish one

word from another). Think about listening to someone speak a foreign language. You can *hear* the words, but you can't decipher them, and asking the speaker to talk louder doesn't solve the problem.

- For a person with hearing loss, the ability to understand speech varies with the listening conditions. Someone who does well in quiet, one-to-one conversations may have a terrible time understanding when the speaker is far away, there's background noise, or the room acoustics are poor. If the effort required to understand is too great, the listener may "tune out" or avoid such situations altogether.

Using impaired hearing and other bits of incomplete information to understand speech is exhausting. It's similar to putting together a complex puzzle by trial and error; you try something that might fit, decide it doesn't, reject it, and try another. Unlike a puzzle, however, the stream of speech rushes on, and topics change constantly. That kind of effort is enough to tucker anybody out. Fortunately, a major benefit of using hearing aids, assistive listening technology, and other hearing rehabilitation strategies is that listening becomes easier and less tiring.

### **My Dad**

My dad has always been gregarious, the life of the party; however, before he got his hearing aids I would see him "tuning out." Instead of watching, listening, and trying to make sense of fragments (which can be exhausting), I would see him staring into space and thinking about something else. Even with his hearing aids, he has to work to hear. I'm so happy to have him back in the conversation—I really missed him.

Finally, when a listener is older, inconsistent responses can be misinterpreted in a different way. When conversation is directed to an older person and she doesn't respond—or the response doesn't make sense—a hearing problem can be confused with senility. Unfortunately, hearing loss actually *can* contribute to cognitive decline. Untreated, it can cause a person to withdraw from conversations and social interactions. With less communication, the person becomes increasingly isolated. With less stimulation, the assumption of mental decline can become a reality.

### **Poor Etiquette for Communicating with Someone with a Hearing Loss**

When talking with someone who has a hearing loss, *never*

- Respond with annoyance when asked to repeat (or say things like, "Turn up your hearing aids!" or "Never mind, it wasn't important.")

- Begin talking without getting her attention first
- Talk without face-to-face contact
- Ridicule him for misunderstanding or giving inappropriate responses
- Talk to others under your breath or with your face turned away
- Talk about her as if she isn't there
- Treat him like a child
- Leave her out of conversations or activities because communication is too much work
- Accuse him of hearing only what he wants to hear
- Take over "hearing" without being asked

## THE TROUBLE WITH LIVING WITH SOMEONE WHO HAS A HEARING LOSS

Hearing loss never affects just one person; it affects virtually everyone with whom a deaf or hard-of-hearing person communicates, and especially those with whom he communicates most. It probably comes as no surprise to hear that it places special stress on a marriage (or similar relationship). If one of you has a hearing problem, *both* of you have a hearing problem. And if you're really committed to minimizing the negative impact of hearing loss and maximizing the quality of your lives, *both* of you will have to work at it. *Both* of you will have to make adjustments, and *each* of you has a role.

If your partner has an untreated hearing loss, you already know that easy, spontaneous communication can become labored and difficult. Sweet nothings and comfortable small talk can all but disappear, leaving nothing but the exchange of essential information. You may find that sharing personal thoughts and feelings is a challenge—subtle (and not-so-subtle) nuances may be missed and what's been missed may be difficult to explain. There may be times when your partner is too tired to talk or to listen, making you feel rejected.

Over time, your partner may withdraw from social situations and want less interaction with other people. You may go out less as a couple because it's difficult to have private conversations in public places. Of course, this also changes *your* life. In fact, research suggests that it's the better-hearing spouse who's likely to feel greater disappointment about a shrinking social life. You may find that your partner is also less communicative at home. In other words, you may be staying home more and enjoying it less. It may feel like your partner is withdrawing from your social life *and* you at the same time. To make matters worse, your partner may be experiencing difficult emotions and struggling to hang on to her sense of self. She may be unable or unwilling to talk about these painful feelings or the changes that the two of you are experiencing. You may feel shut out.

If your partner has *not* withdrawn from social situations, he may be trying to compensate in ways that aren't helpful. For example, some people pretend they're not paying attention so they don't have to admit they can't hear. Many people bluff or pretend to understand when they really don't. Of course, it's only a matter of time until that house of cards collapses. Other people monopolize conversations—after all, there's no need to hear anyone else if you never give up the floor.

Blaming others is another inappropriate coping strategy. Spouses are often blamed for speaking while turned away, from too far away, from behind a newspaper, or with the water running. And it's probably true; you probably do all of those things on occasion, and you'll definitely need to develop communication habits that improve understanding if you want your relationship to work (see Chapter 10). However, you cannot accept responsibility for your partner's untreated hearing loss, nor should you be expected to make all of the accommodations. Your partner must be willing to take responsibility for the hearing problem and do everything possible to help himself. Seeking help for hearing loss is a sign of love and respect. Your spouse must understand that choosing to do nothing (when help is available) is a selfish choice.

If your spouse relies on inappropriate coping strategies, it may embarrass you. More likely, you find it painful to watch the person you love feel humiliated, vulnerable, or left out. In an effort to help, you may try to "hear" for your partner, or maybe your partner gives you that responsibility. Either way, you may find yourself constantly explaining things that were missed—during conversations with friends, at meetings, at the movies, in stores, or at restaurants. In other words, you may become your partner's interpreter. You may find yourself handling all of the telephone calls and taking responsibility for all of the business transactions. At best, this can make shared activities less enjoyable; at worst, it can change the relationship dynamic and cause resentment. In any case, it's not a long-term solution for hearing loss.

Untreated hearing loss can also affect romance. It can cause feelings of inadequacy, low self-esteem, and diminished self-worth—and these feelings can affect intimacy and sexuality. Although getting help for hearing loss is the very thing that will turn these feelings around, it's also the very thing people resist. People fear that acknowledging hearing loss will mean getting hearing aids, and that hearing aids will make them less feminine, less masculine, less sexy. To be sure, our society places tremendous value on attractiveness that's unattainable and youth that's unsustainable. Women are expected to be beautiful and alluring. Men are expected to be strong and virile. Sexy means young, and hearing aids say *old*. Any expert will tell you, however, that a healthy sex life is actually built on intimacy, and intimacy is based on communication. Instead of inhibiting romance, hearing aids can actually encourage it. Sergei Kochkin, President of the Better Hearing Institute, put it this way: "The best aphrodisiac in the world is