

# Chapter 1

## The Big Role of a Little Gland

---

### *In This Chapter*

- ▶ Crunching numbers: The incidence of thyroid disease
  - ▶ Recognizing signs, symptoms, and risk factors
  - ▶ Appreciating your thyroid's hard work
  - ▶ Giving a sick thyroid some TLC
  - ▶ Pinpointing times of life that pose special risks
- 

**T**he thyroid is a little like Rodney Dangerfield: It doesn't get the respect it deserves. Anyone who watches those primetime TV news shows knows about the importance of other body parts — the heart and lungs sure get a lot of press time. But unless you come face to face with a thyroid problem, chances are that you don't hear much about what this little gland does and how important it is to your good health.

The fact that you're reading these words tells me that you've encountered a thyroid problem personally. (I suppose you could have just picked this book up off the shelf out of curiosity — or because you belong to the Dr. Rubin fan club — but I'm betting that a thyroid problem is the more likely impetus.) Maybe you've recently been diagnosed with a thyroid condition. Or maybe your husband, wife, mother, or friend is receiving treatment for a thyroid problem. You've probably found out at least a little about this mysterious gland. Now you're looking for answers to the questions that keep popping up in your mind:

- ✓ What causes this thyroid condition?
- ✓ What types of symptoms are related to this thyroid problem?
- ✓ How is this thyroid condition treated?
- ✓ What are the consequences of leaving it untreated?
- ✓ Does treatment end the problem forever?
- ✓ What can I (or my husband, wife, mother, or friend) do to help get back to optimal health?

I can't promise that this book will give you every possible answer to your questions. After all, doctors and researchers are constantly discovering new things about the thyroid — the information here is only as complete as our current knowledge. But if you're looking for concrete information about how the thyroid functions, what makes it malfunction, and what to do when a problem occurs, you're holding the right book.

## *Discovering the Extent of the Problem*

Thyroid disease may be one of the most common diseases in the world. Research indicates that thyroid disease affects more than 200 million people worldwide. Table 1-1 shows the approximate incidence, or number of new cases a year, in 2004 of various types of thyroid disease in the United States, which has a population of more than 275 million.

<b>Table 1-1                      Incidence of Thyroid Disorders in the U.S.</b>	
Hypothyroidism (low thyroid function)	1.5 million
Hyperthyroidism (excessive thyroid function)	375,000
Thyroid cancer	37,500
Death due to thyroid cancer	2,250

The incidence of thyroid disease becomes even higher when you factor in careful autopsies done on people who didn't die of a thyroid condition. As many as 60 percent of these people show growths on the thyroid, and 17 percent have small areas of cancer that weren't detected during life.

These numbers are statistics, but thyroid disease affects individuals. Realizing that many people in the public eye have gone on to great accomplishments after receiving successful treatment for thyroid conditions may help you. Some of the people you may recognize include the following:

- ✓ Model Kim Alexis had hypothyroidism.
- ✓ Author Isaac Asimov had thyroid cancer.
- ✓ Golfers Pat Bradley and Ben Crenshaw both had hyperthyroidism.
- ✓ Former President George Bush, former first lady Barbara Bush, and even their dog Millie had hyperthyroidism.
- ✓ Runner Gail Devers had hyperthyroidism, while runner Carl Lewis had hypothyroidism.
- ✓ Supreme Court Chief Justice William Renquist had the very rare and most aggressive form of thyroid cancer.

- ✓ Roger Ebert, the movie critic, had thyroid cancer.
- ✓ Former second lady Tipper Gore received treatment for a thyroid growth, as did singer Rod Stewart.

I particularly enjoy the story of Isaac Asimov. He had thyroid cancer at age 52, and he died of unrelated causes at age 72. After his cancer surgery, he wrote about how he'd paid \$1,500 for the surgery and then wrote an article about the experience, for which he received \$2,000. Asimov said that he had the last laugh on the medical profession and was glad that he didn't finish medical school.

This list is far from exhaustive, but it should help drive home the point that if diagnosed and treated, thyroid conditions don't need to put a damper on your lifestyle, except in very rare cases.

## Identifying an Unhappy Thyroid



Let's tackle some basics: Where is the thyroid, and how do you know when it needs some tender loving care? Chapter 2 gives you a detailed explanation of how to locate your thyroid, but for now, suffice it to say that it's just below your Adam's apple, at the front of your neck. If your thyroid becomes visible in your neck, if that area of your neck is tender, or if you have some trouble swallowing or breathing, consider visiting your doctor so that he or she can examine your thyroid. Any change in the size or shape of your thyroid can indicate that it's not functioning correctly or that you have growths on your thyroid, called *nodules*, which should be tested to rule out cancer (see Chapter 7). Soreness or tenderness in the area of your thyroid may indicate that you have an infection or inflammation, which I discuss in Chapter 11.

In addition to changes in the size and shape of the gland, some very common problems occur when your thyroid malfunctions. If your thyroid function is low, meaning that you aren't producing enough thyroid hormone, (you have *hypothyroidism*), you feel cold, tired, and maybe even a little depressed. I know that description doesn't sound very specific — those symptoms could indicate any number of other physical problems. But low thyroid function is so prevalent that asking your doctor to check it out is worth it if you experience such symptoms, especially if you're over age 35. Chapter 5 gives you the specifics about the causes and symptoms of hypothyroidism.

When your thyroid function is too high, meaning that you're producing too much thyroid hormone, (you have *hyperthyroidism*), you feel hyper and warm, and your heart races. You may have trouble sitting still, and your emotions may change very rapidly for no clear reason. These symptoms are a little more specific than those for low thyroid function, but again, they could easily result from some cause unrelated to your thyroid. The best way to determine whether a thyroid problem exists is to ask your doctor to check your thyroid function. Chapter 6 offers a detailed look at hyperthyroidism.

## *Recognizing Who's at Risk*

A few key facts help doctors determine whether thyroid disease is a strong probability:

- ✓ Women experience thyroid problems much more frequently than men, as much as 10 to 15 times as often, depending on the condition.
- ✓ Thyroid conditions tend to run in families.
- ✓ Thyroid problems often arise after the age of 30.

These facts don't mean that a 20-year-old man with no family history of thyroid problems can't develop a thyroid condition. They simply mean that a 35-year-old woman whose mother was diagnosed with low thyroid function 20 years ago is at greater risk of having a thyroid problem than the young man. With this in mind, the young woman should be sure to tell her doctor about her family history. And she should definitely be tested periodically to make sure her thyroid function is normal.



About half (perhaps even more) of all the people with thyroid disorders are undiagnosed. The American Thyroid Association and other experts recommend that thyroid testing begin at age 35 and continue every five years thereafter. Women with family histories of thyroid disease may benefit from even more frequent testing.

## *Realizing the Importance of a Healthy Thyroid*

Your thyroid gland influences almost every cell and organ in your body, because its general function is to control your metabolism. If your thyroid is functioning correctly, your metabolism should be normal. If your thyroid is working too hard (making too much hormone), your metabolism is too high. The result can be anything from an increased body temperature to an elevated heart rate. When your thyroid function drops below normal and you make too little hormone, so does your metabolism — you may gain weight, feel tired, and experience digestive problems.

Chapter 2 details how your thyroid affects various parts of your body, including your muscles, heart, lungs, stomach, intestines, skin, hair, nails, brain, bones, and sexual organs. (That's quite a list!)

## Treating What Ails You



Depending on the specific thyroid problem, treatment options can range from taking a daily pill to having surgery to remove part or all of the thyroid. I discuss the details of treatment options and offer my opinions about which options are generally best throughout Part II of this book. But keep in mind that no matter what you read here (or anywhere else), you should always discuss your specific situation with your doctor. This book can help you have a more productive conversation with your doctor by explaining the pros and cons of each type of treatment and by suggesting questions to ask your doctor if a treatment doesn't seem to be working for you. It can't, however, act as a substitute for your doctor, because I don't know the ins and outs of your particular case.

However, following are the general approaches for treating the most common thyroid conditions:

- ✓ **Hypothyroidism:** In general, if you experience hypothyroidism (low thyroid function), your doctor prescribes a daily pill to replace the thyroid hormone that your body is lacking. Many people take this type of pill for the rest of their lives, but some people are able to stop taking it after a few years if lab tests prove that the condition has righted itself. See Chapter 5 for a detailed discussion of treating hypothyroidism.
- ✓ **Hyperthyroidism:** Three types of treatment options exist for someone with hyperthyroidism (an overactive thyroid). A patient with this condition may be placed on antithyroid drugs, may be receive a dose of radioactive iodine in a pill in order to destroy part of the thyroid tissue, or may undergo surgery to remove some or all of the thyroid gland. In the United States, most doctors recommend the radioactive iodine treatment for this condition, but I've seen antithyroid drugs work very well for many patients. Doctors generally perform surgery only when a patient can't have one of the other two treatments. Chapter 6 goes into the specifics about each treatment and explains why your doctor may suggest one treatment over the others, depending on your specific situation.
- ✓ **Thyroid cancer:** For patients with thyroid cancer, surgery is often required. Doctors may also use radioactive iodine to destroy any thyroid tissue that remains after the surgery. Chapter 8 discusses the treatment of various types of thyroid cancer.
- ✓ **Nodules:** Someone whose thyroid has *nodules* (bumps) may need surgery, may not need treatment at all, or may need a type of treatment that falls between those extremes, such as thyroid hormone replacement or radioactive iodine. See Chapters 7 and 9 for all the details about how your doctor may deal with thyroid bumps and lumps.

Sometimes the complications surrounding your thyroid condition are too much for the general physician to handle. At that point, you need a specialist. But how do you go about finding one that you know is competent? To answer this question, I've inserted Chapter 3 into this edition of the book. It tells you what to look for in a thyroid specialist and how to go about finding one. As much as I'd love to personally take care of all of you, considerations of time require that I send you to some other physicians. I give you directions in Chapter 3 to find the best qualified doctor to help you.

Once you have your specialist, he or she can help you to understand the various tests that doctors run to determine the severity of your thyroid condition and to follow the condition as it improves. These tests range from blood tests to various ways of visualizing the thyroid to biopsies. Chapter 4 provides a basic introduction to these tests and which tests your doctor should order and when. Some old-fashioned doctors are still ordering old-fashioned tests, and I explain these tests in Chapter 4 so you know their meaning. Don't hesitate to tell your doctor that you think a newer test is more appropriate. Refer the doctor to this book if he or she disagrees.

And as you can see from the preceding list of treatments, in the course of treatment for thyroid ailments, many people undergo surgery of the thyroid. I want you to understand what to expect if you have surgery, which is why I conclude the chapters on thyroid disease and its treatment with a chapter on surgery of the thyroid, Chapter 13. The most important aspect of such surgery is finding a highly competent surgeon, and I tell you how to do this.

## ***Examining Additional Contributors to Thyroid Ailments***

Many drugs have an effect on the thyroid, and Chapter 10 explains the most important of these effects: whether they're increasing thyroid function or blocking thyroid hormone production. The drugs that can impact your thyroid have all sorts of primary actions, but they also change thyroid function. If you're already on thyroid hormone, you need to understand that these drugs can change your dosage. You may need more or less thyroid hormone. Understanding what you need to do to maintain normal thyroid function while you take a drug for some other reason is important. Make sure you ask your doctor if a new medication interferes with your thyroid medicine.

Viruses and bacteria can also invade the thyroid. You may have a mild condition with a little pain in your neck or a severe illness with high fever, severe weakness, chills, and so much neck pain that you need a strong painkiller. Chapter 11 explains viral or bacterial forms of "thyroiditis," which are very different from other forms of thyroiditis, which I explain in Chapters 5 and 11.

Because thyroid hormones contain a lot of iodine, situations where too little iodine is in your body or too much iodine is in your body also change your thyroid function. Outside the industrialized nations, iodine deficiency causes major disease and even death for millions of people. Theoretically, death from iodine deficiency could be overcome without a great deal of difficulty, but the practical considerations of race and politics have made this very hard to do. In more industrialized nations, too much iodine is a greater problem, and Chapter 12 explains the consequences of both of these situations.

## *Realizing the Consequences of Delaying Treatment*

Earlier in the chapter, I mention that at least half of all people with thyroid conditions are undiagnosed. Many people die of other causes without ever discovering their thyroid problem, which may lead you to wonder whether the diagnosis and treatment of thyroid problems is really necessary.

In some situations, a thyroid condition may be so benign that you don't even notice it. For example, many people with thyroid nodules never have any problems except for a little bump on the neck. In those cases, treatment may be unnecessary. Some patients have no symptoms at all, yet the laboratory tests of thyroid function indicate that they have low thyroid hormone production. Debate exists about whether such patients need treatment. I discuss this issue extensively in Chapter 5.

But for many other people, thyroid conditions are much more serious, having a significant impact on overall health and quality of life. The section "Realizing the Importance of a Healthy Thyroid," earlier in this chapter, gives you a sense of some of the consequences of delaying treatment. If you leave a low-functioning thyroid untreated, you could become so fatigued and depressed that you have trouble just doing your daily activities. With an overactive thyroid, you could experience heart trouble and extreme nervousness. A cancerous thyroid could be life threatening if untreated, depending on the type of cancer. And a thyroid with many nodules could become so enlarged or misshapen that it impacts your ability to swallow or breathe.

Unless your symptoms are already extreme, only lab tests can determine whether treatment for your thyroid condition is necessary. Given how important this little gland is to your health, both physical and mental, I can't imagine not asking your doctor to determine whether you need treatment.

## *Paying Attention to Special Groups and Considerations*

I believe that everyone should have thyroid tests periodically, especially after age 30, to ensure that their thyroids are working as they should. But certain groups of people need to pay special attention to their thyroid function. Pregnant women, children, and the elderly have even more at stake than other folks when it comes to monitoring thyroid function. For this reason, I devote much of Part III of this book to these three groups of people, as well as to some other important considerations that you need to know about.

Doctors first discover that many patients have a thyroid condition when they have a breakdown in their mental health. They may be depressed, or they may be thought to be manic, unable to sit still and complaining that their heart is racing — situations where medication and other treatments can cure a disease that appears to be mental in origin if the thyroid is at fault. Chapter 15 shows you how your thyroid affects your mind and how your mind can return to health through treating the underlying thyroid condition. If I accomplish just one thing with this book, I hope I can raise your awareness of the mental consequences of thyroid disease, which can have such devastating effects if left undiagnosed and untreated.

A lot is new in our understanding of the thyroid in health and disease, which is the main reason that you're now reading the second edition of this book. I explore the most important of these advances in Chapter 16, so don't miss it. Nevertheless, science keeps finding even more valuable information, so be sure to go to my Web site at [www.drrubin.com](http://www.drrubin.com) and click on "Thyroid" under the topic "Related Websites" to find the information that comes out even after this book is published, the stuff that will make it into the third edition.

Pregnancy can have a big impact on a woman's thyroid, whether she had a thyroid condition prior to the pregnancy or not. If she does have a known thyroid condition, her doctor monitors it closely during pregnancy, because her treatment may need altering. But if she doesn't have a thyroid condition, she and her doctor should watch carefully for signs and symptoms of thyroid problems, which the physiological changes she's experiencing can trigger.

Not only is a healthy thyroid crucial for the mother during pregnancy, but it's essential for the development of the fetus as well. For details about what to watch for during pregnancy and the types of problems a thyroid condition can create for mother and child, see Chapter 17. You also find information about the thyroid problems that can arise even after the pregnancy, which can be very devastating to the new mother.



Chapter 18 discusses the importance of thyroid screening after the baby is born. Screening is mandatory by law, because a healthy thyroid is necessary for proper mental and physical development. If you're a parent of an infant or young child, be sure to take a look at Chapter 18 so you understand what the screening is for, what risks children of parents with thyroid disease face, and how you and your doctor can reduce those risks.

The third group that should pay special attention to thyroid health is the elderly (for purposes of this discussion, people age 70 and over). The reason they're at such risk for thyroid disease is because the symptoms of a thyroid condition so often mirror symptoms of other ailments. If an elderly person is known to have a heart or blood pressure problem, a doctor may overlook a possible diagnosis of thyroid disease and attribute his or her symptoms to another condition. To confuse the issue even more, elderly people often experience symptoms that are *opposite* of what we expect to see with a certain thyroid condition. For example, an elderly person with a low-functioning thyroid may actually lose weight (instead of gaining weight, which would be expected), because he or she is depressed and loses interest in food. Chapter 19 helps you to understand how thyroid disease affects you if you're elderly or if you have an elderly relative.

## *Keeping the Rest of Your Body Healthy*

So you or a loved one has received a diagnosis of a thyroid problem — what next? You start taking a prescription, or you undergo another type of treatment, and you wonder what else you should be doing to help yourself along toward better health. Did you do something that led to this problem in the first place? Can you make some change in your lifestyle that will lead to a cure?

I wish I could just tell you that if you ate more lima beans and got eight hours of sleep each night, your thyroid would return to perfect health. I could stop writing right now if that were the case. Unfortunately, the line between lifestyle choices and thyroid health isn't quite so straight. Your lifestyle definitely plays a role in your thyroid health, but lifestyle doesn't seem to cause thyroid conditions in the first place. If you receive a diagnosis of a hyperactive thyroid, for example, you most likely have the condition because you inherited a certain gene (or group of genes), as I discuss in Chapter 14. But if your life is full of stress, if you sleep only five hours a night, and if you drink lots of caffeine to get through the day, you definitely aren't doing your thyroid any favors. You may be aggravating the symptoms of your thyroid condition through your lifestyle choices. If you make some positive changes to your eating, sleeping, and exercise habits, your thyroid will definitely benefit.

In Chapter 20, I suggest ways that you can take a proactive role in upgrading your thyroid health by improving your diet, reducing your stress, exercising on a regular basis, and keeping a close eye on other aspects of your lifestyle.

Your thyroid gland doesn't exist in a vacuum. Your diet, the exercise you do, and your lifestyle in general all affect it. Although I've said that poor lifestyle choices don't cause thyroid disease, a healthy lifestyle will help to make any thyroid treatment work to its greatest extent, which is why I go into the basics of achieving a healthy lifestyle in Chapter 20. Chapter 20 informs you how the thyroid affects your weight. You may be surprised.

Finally, in the traditional Part of Tens, I offer ten or more things you need to know about myths surrounding the thyroid (Chapter 21) and about maximizing thyroid health (Chapter 22). You also find a new chapter that you've helped me to write in a way. In Chapter 23, I try to answer the major questions that you've asked me over the past few years since the first edition of the book was published. I hope you keep writing to me at [thyroid@drrubin.com](mailto:thyroid@drrubin.com) so I can continue to address your concerns about the thyroid gland. Many aspects of the thyroid that I take for granted may be unclear to you. I need you to let me know about them. If I can't put them into the next edition of this book, I can at least reply to your questions immediately through e-mail.

My goal is to help you preserve and defend your thyroid by knowing what to look for no matter what stage of life you're in. The more you know about the signs and symptoms of thyroid disease, the earlier you're able to alert your doctor that thyroid function tests may be a good idea.

## *Staying Informed*

Doctors don't know everything. We do, however, tend to have an insatiable curiosity that drives us to always seek more information about the conditions we encounter. For this reason, new discoveries and treatment breakthroughs are popping up all the time. By the time this book is printed, doctors will have conducted hundreds of new studies that suggest or prove something new about thyroid diseases and their treatment.

I can't update this book every time I discover something new, but you can still stay on top of the latest discoveries thanks to the speed of the Internet. In Appendix B, I direct you to electronic resources that you can use to stay up to date on thyroid health. If you use only one of these resources, I hope that it's my own Web page, [www.drrubin.com](http://www.drrubin.com), which can link you to all the other sites I recommend, as I describe in the section "Paying Special Attention." And I promise a new edition of this book in a few years will gather together all the newest information so you can always be on the cutting edge of thyroid knowledge.