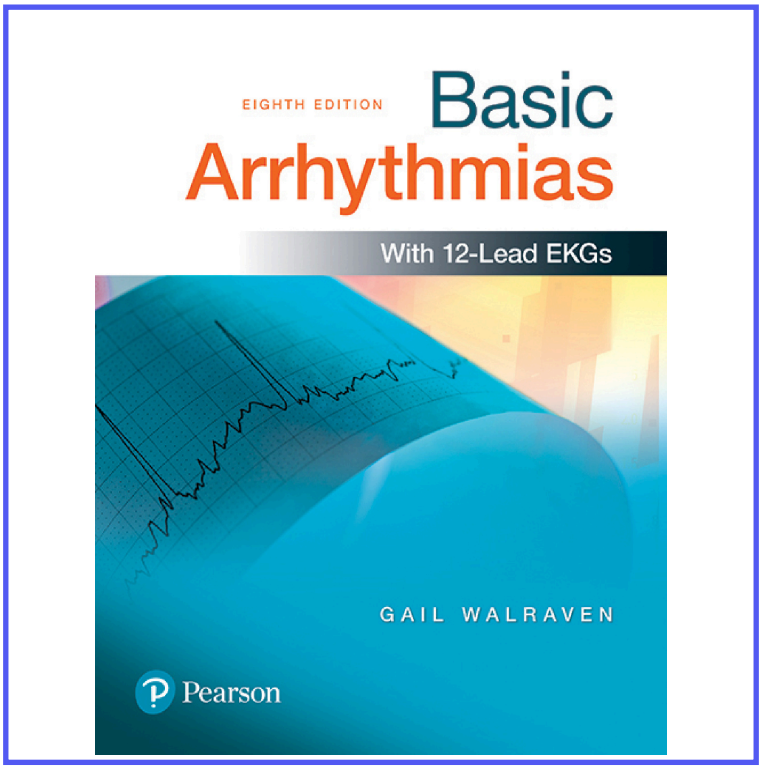


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or scan the QR code to access the digital study portal.

12-Lead EKGs

Level I: Ability to recognize a limited number of familiar patterns, usually the major life-threatening rhythms. No understanding of rules or mechanisms.

Level II: Basic understanding of the rules and mechanisms of common arrhythmias according to pacemaker sites. No familiarity with more sophisticated features that complicate basic arrhythmias.

Level IV: Familiarity with 12-lead EKGs (e.g., bundle branch block, infarction location, axis deviation).

Level V: Ability to distinguish subtle EKG findings (e.g., concealed conduction, reciprocal conduction, trifascicular block, His bundle recordings).

Levels I, II, and III are concerned with interpretation of patterns and use only single-lead EKG tracings. Levels IV and V are multiple leads used to examine both arrhythmias and the greater complexities of the 12-lead EKG.

It is usual for a student to proceed through these levels in a relatively logical progression from simple to complex. Unfortunately, it is also common for a potential student to be prevented from entering this fascinating field for lack of the initial training upon which to build more sophisticated understanding. *Basic Arrhythmias* is designed to provide a sound base of understanding for those interested individuals who have been unable to receive other forms of training. Its primary area of concentration is Level II, the area of basic understanding of the common, uncomplicated rhythms. It is hoped that *Basic Arrhythmias* will provide an

enjoyable and interesting way for people to develop the framework that will later support continued learning in the area of electrocardiography.

This self-instructional program is targeted toward several groups of people:

- Those who have previously approached EKGs with "pattern recognition"
- Those who have been unable to participate in more conventional EKG training
- Those who are involved in a formal EKG training program and will use this program concurrently to solidify their learning experience

Because the nature of the book is to provide a foundation for future learning, great care was taken to instill simple, basic concepts without giving the student any misconceptions or erroneous impressions. To this end, some information may have been eliminated or lightly passed over because it was considered to be more sophisticated than necessary, and thus might leave the reader confused and without immediate access to an instructor's help. It is hoped that *Basic Arrhythmias* will open the door for new learners and will provide instructors with more class time for the critical area of reinforcement and refinement.

This text was originally designed to be entirely self-instructional with Chapters 1–8 designed in a programmed format to address basic electrophysiology, waves and measurements, rhythm analysis, and the five major groups of arrhythmias. Over the years, additional sections have been appended to add extra practice strips and to cover cardiac anatomy, clinical manifestations, 12-lead electrocardiography, and cardiac pacemakers. The result is that the first half of the book is self-instructional, while the appendices are generally more traditional

narrative text. Together, the two sections provide a good foundation for ongoing learning in the field of electrocardiography.

About the Eighth Edition

Basic Arrhythmias has been well received for many years and has been used successfully by hundreds of thousands of students as they begin to study electrocardiography. It is always a challenge to update and refresh it without detracting from what makes it such a success. With this edition, we've fixed a few bugs, switched out some troublesome EKG strips, added some new illustrations and upgraded some old ones, expanded some sections, and clarified a few ambiguous areas. But for the most part, the body of the text is not changed significantly. Please note that a compiled list of learning objectives is presented later in this front matter section. These objectives outline in depth what you can be expected to learn and do after completing each chapter.

In addition, we have expanded and improved the learning resources for the *Basic Arrhythmias* program. ***MyBradyLab***, an online site dedicated to *Basic Arrhythmias*, presents unique study resources and new learning tools to supplement basic text information.

I am very excited about this eighth edition of *Basic Arrhythmias* and hope you find it as enjoyable as I do. With all its upgrades and its fresh new look, it promises to continue the long tradition of helping students embark on their studies of electrocardiography.

What's New in the Eighth Edition

- More 12-leads for practice
- Transition from simplified tracings to more "real-world" 12-leads
- Updated content
- Addition of some new content for clarification
- Standardization of instructor support materials with new edition of text

Acknowledgments

It is impossible to fully acknowledge all the people who have contributed over the years to making *Basic Arrhythmias* what it is today. There have been literally hundreds of people over the years from all across the country who have offered ideas and suggestions, contributed strips, provided clinical reviews, and debated interpretation with me. Without that clinical help, this book would not have achieved the reputation for excellence that it enjoys today. For the eighth edition, I want to again thank Jerrold Glassman, MD, medical director of the Department of - Cardiology at Scripps Mercy Hospital, San Diego; he always makes himself available when I come up with a new question. For this edition I am also indebted to Elizabeth Ann Morrell, RN, MSN, NEA-BC, Senior Director, Patient Care, Scripps Mercy Hospitals, Chula Vista and San Diego. And for the tremendous help gathering new EKG strips, I especially want to thank James N. Phan, MBA/HCM, RDCS, RVT, FASE.

Coupled with the clinical excellence, the team at Brady Publishing has set the standard for excellence in the publication of such works. Going all the way back to the original Brady family, countless publishing professionals have added their mark to this book. Most recently, Pearson has moved us to new heights with its print and media expertise. It is always a joy to work with such professionals. Thank you.

GAIL WALRAVEN
La Jolla, California

Instructor Reviewers

The reviewers of *Basic Arrhythmias* provided excellent suggestions for improving the text. Their reviews were an important aid in the revision and updating of material, and their assistance is greatly appreciated.

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Navigating Through the Text

The first eight chapters of this text are structured as a self-instructional unit in a "programmed learning" format. As such, it is an entirely self-contained learning package; the only additional materials you will need are a pencil and a set of EKG calipers, which are available at most medical supply houses and medical bookstores. Everything else is provided here in a format designed to make this learning an enjoyable and worthwhile process. Before you start the program, you should know something about the format of these first eight chapters.

Most of the material has been organized into learning units of approximately similar time frames, so that you can pace yourself as you go along. The first three chapters prepare you with the basic principles of electrocardiography and explain many of the theories and concepts that are the foundation of arrhythmia interpretation. Starting with Chapter 4, you will begin systematically learning arrhythmias according to their site of origin within the heart. Finally, you will be given supplemental practice material to ensure retention of your learning and a self-test to validate your knowledge. The internal structure of each individual chapter is essentially as follows.