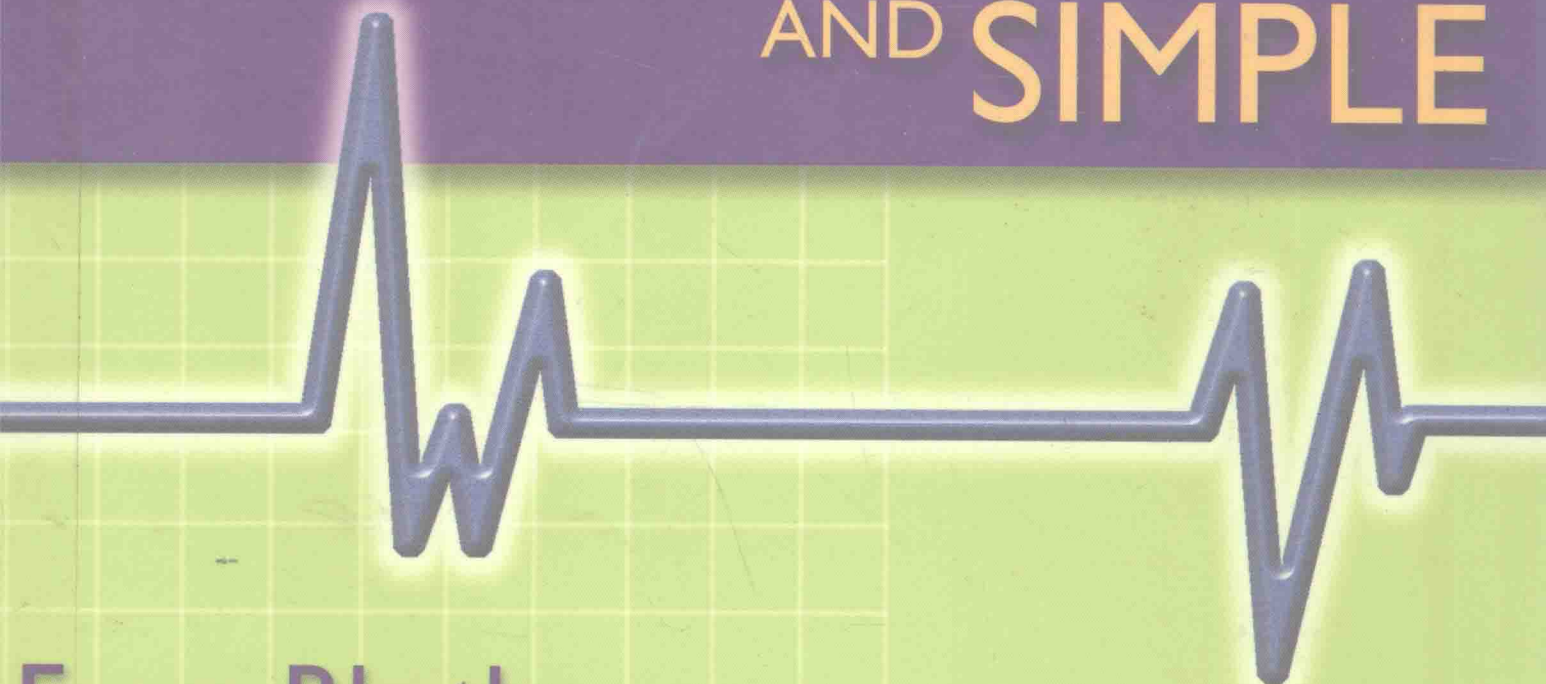


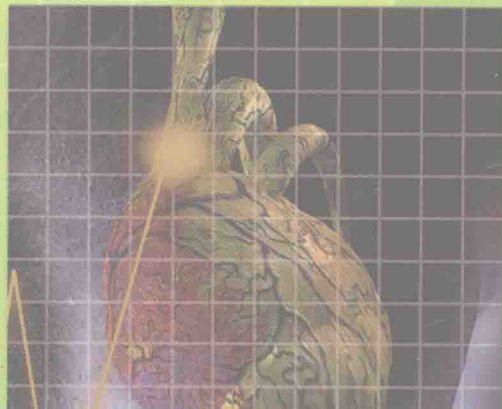
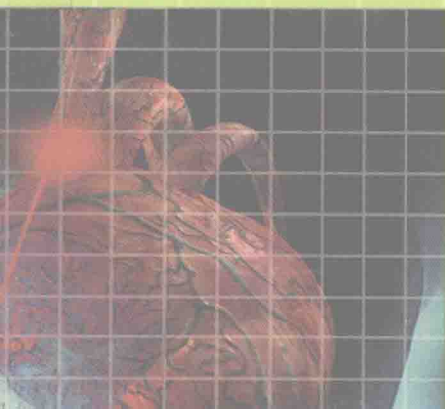
# EKG

## PLAIN AND SIMPLE



From Rhythm  
Strips to 12-Leads

Karen M. Ellis



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# **EKG Plain and Simple**

## **From Rhythm Strips to 12-Leads**



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Library of Congress Cataloging-in-Publication Data

Ellis, Karen.

EKG plain and simple : from rhythm strips to 12-leads / Karen Ellis.

p. ; cm.

Includes index.

ISBN 0-13-019745-9

1. Electrocardiography. I. Title.

[DNLN: 1. Electrocardiography. WG 140 E465e 2002]

RC683.5.E5 E442 2002

616.1'207547--dc21

2001036200

**Publisher:** Julie Alexander

**Executive Assistant & Supervisor:** Regina Bruno

**Acquisitions Editor:** Mark Cohen

**Editorial Assistant:** Melissa Kerian

**Managing Editor:** Patrick Walsh

**Production Management/Composition**

**Electronic Art Creation:** North Market Street Graphics

**Production Editor:** Christine Furry

**Interior Design:** North Market Street Graphics

**Director of Manufacturing and Production:** Bruce Johnson

**Manufacturing Buyer:** Ilene Sanford

**Creative Director:** Cheryl Asherman

**Design Coordinator:** Maria Guglielmo

**Marketing Manager:** David Hough

**Printer/Binder:** Banta Company, Harrisonburg, VA

**Cover Design:** Joseph DePinho

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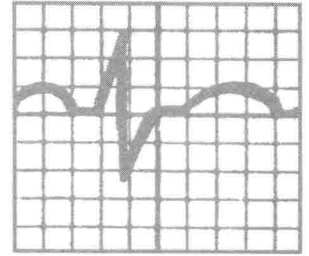
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10 9 8 7 6 5 4 3 2 1  
ISBN 0-13-019745-9

# Introduction



Don't you just groan at the thought of buying yet another cold, formal textbook, the kind that imparts important information, but in such a tedious way that you're lucky if you can stay awake long enough to learn anything? Well, this isn't one of those books. This text is very informal. It's written in a conversational style so that you feel you're sitting with a favorite instructor who's teaching you one-on-one. Before you know it, you've learned concepts and skills and haven't snored even once. You may have even chuckled a time or two, as there is occasional humor in this text. Humor? In a textbook? Sure. Think about your favorite instructors. Chances are they're your favorite because they knew how and when to use humor to illustrate a point. And I'll bet you still remember what they taught you. If something makes you laugh, you'll remember it. That being said, however, do not get the impression that this is not a serious textbook on electrocardiography. It is.

This text assumes no prior knowledge about electrocardiography or about the heart in general. It takes the student from square one and builds knowledge from the bottom up, pyramid style. At the base of the pyramid is cardiac anatomy and physiology—not enough to be intimidating, but just enough so that the concepts about electrocardiography have a solid foundation. Cardiac anatomy and physiology are covered in Part I of the text.

Also in Part I is information about the cardiac conduction system, leads, EKG waves and complexes, and lots of practice exercises to hone your newly learned skills. At the end of Part I is arrhythmia interpretation. Basic rhythms, their causes, clinical implications, and treatment are covered. Rhythm summary sheets and algorithms (flowcharts) help you learn rhythm interpretation, and quizzes at the end of chapters help you evaluate your comprehension of the material. There is an entire chapter of rhythm strips to interpret.

A word about the rhythm strips. Some strips have a dotted-line grid pattern in the background and others have a more solid-line grid. This is because different EKG machines print out differently. It's important to be able to interpret rhythm strips with all types of backgrounds. Also, unlike some EKG textbooks that use computer-generated rhythm strips and thus have picture-perfect strips, this text, with few exceptions, uses strips from real patients. Therefore, a few strips have nurses' writing on them or interpretive data from the EKG monitor. Also, a few strips may be a bit faded. Do not let this distract you. *Each one of these strips has something to teach you.*

Also in Part I is a brief chapter on coronary artery disease. Since electrocardiography deals with a population of individuals with cardiac problems, it makes sense not just to be adept at interpreting their rhythm strips and EKGs, but also to be knowledgeable about their disease process and symptoms. It's important to see the person beneath the EKG.

Part II is higher up the pyramid. It covers 12-lead EKG analysis, cardiac medications, intraventricular conduction defects (IVCDs), pacemakers, and diagnostic electrocardiography. There are algorithms to help in IVCD and MI recognition. You'll learn to recognize whether a patient is having a heart attack, which part of the heart is damaged, which blood vessel is involved, and which medications are used to treat it. There is an entire chapter of 12-lead EKGs to evaluate. At the end of Part II is a chapter of scenarios providing rhythm strips and/or 12-lead EKGs along with a clinical situation and asking pertinent questions to challenge you to assess the situation and decide on an intervention. This chapter helps to pull everything together. It's the apex of the pyramid.

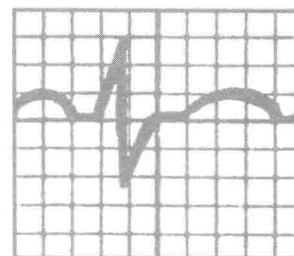
This text is a complete guide to electrocardiography, from the basics to the more advanced concepts. It's appropriate for allied health students, nurses or nursing students, medical students or residents, and emergency medical technicians and paramedics. Though intended for beginners, it's also an excellent reference for those experienced practitioners seeking a good review.

So enough talk already. Let's get started!

Karen Ellis

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# Acknowledgments



In the past year and a half, the following people have been instrumental in helping this project reach completion. I owe them all a debt of gratitude.

**To my husband Lee Ellis**, without whom this book would not have been published. A publisher's rep called to try to persuade Lee, who has a Ph.D. in biology, to write a book, and Lee casually mentioned that his wife had written an EKG book. Things took off from there. Lee almost single-handedly has done everything to keep our house running so I could concentrate on this effort, and on almost a daily basis he has saved my computer from being thrown down the stairs in my fits of frustration (I am personally convinced my computer hates me). He would smirk at me because he knew the computer was fine—I was screwing up. (I was *pretending* to mess up on the computer just so he could feel superior. Isn't it amazing what women will do for their husbands?) I love you, Lee, and truth be told, I married you because of your smirk. If that smirk goes, you're outta here, buddy. . . .

**To my sons Jason, Mark, and Matthew**, who knew that Mom could always be found in the computer room, and who didn't groan too loudly at the idea of frequent take-out dinners while I obsessed over this book. Jason and Mark were my comic relief, Jason because of his outfits that I swear were borrowed from a 1970s TV cop show, and Mark for folding his arms just so, showing off his *huge* biceps and grinning at me as I stare at this once scrawny kid who's now becoming a man. And my little guy Matthew is my solace. He lights the room, and my heart, with his smile. I love you, guys.

**To my sister Sandra Schraibman**, who, though she was positive I'd never finish this book until the *next* millenium (ha!), was cheering me on throughout this whole process. Sandra and I are all that's left of our original family, and over the past few years I've come to realize how lucky I am to have her. She has a way of cracking me up whenever I'm taking myself too seriously (that can be *very* annoying) and of galvanizing me into action when I become a slug (now that's *really* annoying). In other words, she's the best sister I could possibly have. So thank you, Sandra. Now get up off the floor. You can't be *that* shocked that I said nice stuff. . . .

**To my parents, Sybil and Edward Milner**, who have passed away, but whose pride in me was and still is the wind beneath my wings. I miss you.

**To my cousin Irene Milliman**, who didn't hear from me for prolonged stretches while I worked on this book. See, Irene, I really *was* writing a book. . . . Thank you for your patience.



**To Theresa Hollins**, telemetry technician extraordinaire at Touro Infirmary in New Orleans, for enthusiastically helping me out on my nightly “strip searches” by collecting hundreds of rhythm strips for me over the past several years. Theresa is always asking for my opinion on rhythm strips when she knows darn well she’s almost never wrong. Theresa, thank you, thank you, thank you. This absolutely could not have been done without your help.

**To Denis Lockler and Gilda Harrison**, my fellow supervisors at Touro, for juggling their schedules, often at the last minute, so I could have days off to meet my deadlines. I owe you both, big-time.

**To Jackie Hogan, Beverly Maxwell, Bobbie Clark, Pat Whitley, Anthony Whitfield, Sheila Francois, and all the nursing directors** for putting up with my mood swings as this project neared completion. Y’all have been wonderful. Thanks so much.

**To Irene Shute**, ER nurse at Touro Infirmary, who many a night has greeted me with, “You’ve *got* to see this,” as she whips out a cool EKG. I love it when Irene says, “So whaddaya think *this* is?” Thanks, Reenie.

**To Anita Go, Malou Ramos, Tom Corvers, and Julie Eichhorn**, who have provided me with many great rhythm strips and/or 12-lead EKGs. Thank you.

**To my EKG students** at Delgado Community College in New Orleans, for helping me learn how to teach and helping me keep a sense of humor. And for asking me questions I *never* would have thought of. Thanks, guys. Oh, by the way, you’re having a pop test tomorrow. . . .

**To my EKG buddy Nancy Williams**, RN, formerly of Touro Infirmary in New Orleans but now somewhere in Oklahoma, for inspiring me to learn more about EKGs. I was always envious of Nancy’s skill at reading EKGs. She and I used to have a good-natured competition going when we worked CCU together. Whenever we would disagree on an EKG or rhythm, we would both race to the textbooks to prove the other wrong. On those *extremely rare* occasions when Nancy was right, she would break out into an impromptu tap dance across CCU. I must now tell the truth. I *pretended* to be wrong those times just so she’d do the tap dance. Nancy, thank you for inspiring and challenging me.

**To all the other folks at Touro Infirmary** for keeping me on my toes by constantly presenting me with proof that there are exceptions to every rule in EKG interpretation. Just when you think you know something, someone shows you something that sends you back to the drawing board. . . .

**To Debbie Patterson, Barbara Krawiec, Mark Cohen, and Melissa Kerian at Prentice-Hall**, thank you for your faith and guidance, and for taking a chance on an unknown author.

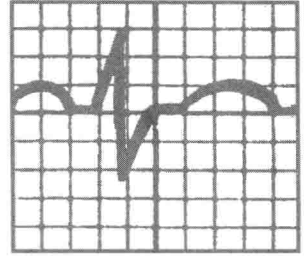
Thank you all.

Love,

Karen

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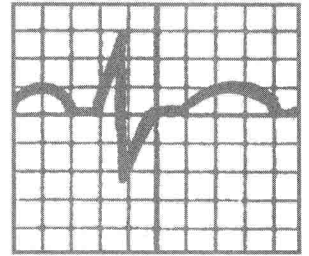
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