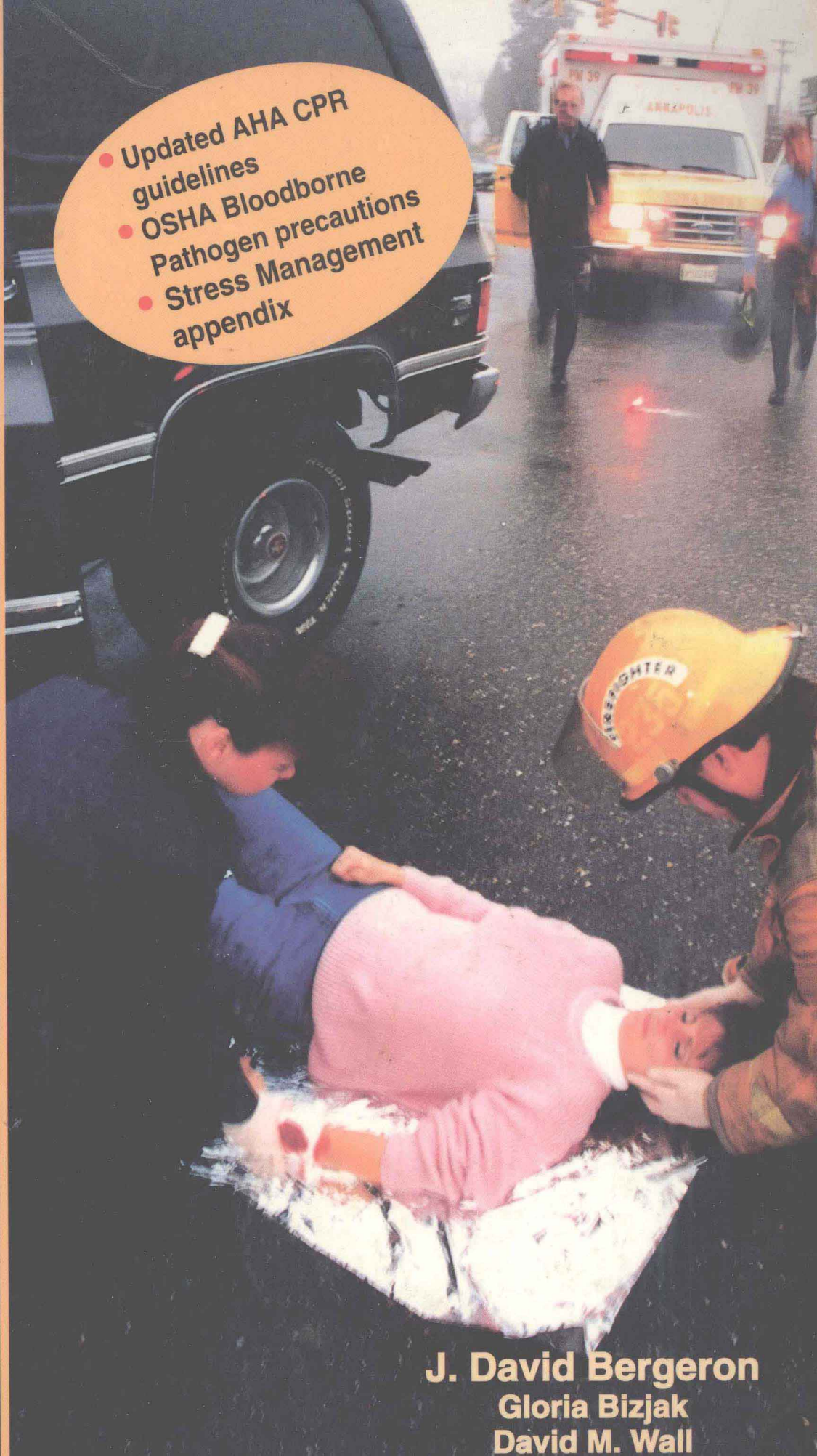


BRADY

Third Edition

First Responder Update

- Updated AHA CPR guidelines
- OSHA Bloodborne Pathogen precautions
- Stress Management appendix



J. David Bergeron
Gloria Bizjak
David M. Wall

BRADY

FIRST RESPONDER

Third Edition Update

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Notice

It is the intent of the Authors and the Publisher that this textbook be used solely as part of a formal First Responder course taught by a qualified instructor in the field. The care procedures presented here represent accepted practices in the U.S.; however, they are not offered as a standard of care. It is difficult to ensure that all the information is accurate, and the possibility of error can never be entirely eliminated. The Authors and the Publisher disclaim any liability or responsibility for injury or damage to persons or property that is incurred as a consequence, directly or indirectly, of the use and application of any of the contents of this book. It is the reader's responsibility to know and follow local care protocol as provided by the medical advisors directing the system to which he or she belongs. Also, it is the reader's responsibility to stay informed of emergency care procedure changes.

Please note that many if not all of the photographs contained in this book are taken of actual emergency situations. As such, it is possible that they may not accurately depict current, appropriate, or advisable practices of emergency care. They have been included for the sole purpose of giving general insight into real-life emergency settings.



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■ New to the Third Edition Update:

- Latest American Heart Association CPR and BLS guidelines.
- New chapter on precautions against bloodborne pathogens, based on new OSHA guidelines.
- New appendix on stress management, including CISD (Critical Incident Stress Debriefing).
- Updated water rescue techniques for patients with neck or spine injuries.

■ Preface

The biggest change in First Responder-level care has developed due to concerns about rescuer safety. Specifically, these concerns have dealt with the need to better protect prehospital emergency care personnel from infectious diseases during the rendering of care. Even though the incidence of such infection is low, it is still a major concern. It is a concern that supports the first responsibility of a First Responder—personal safety.

More specifically, attention is now focused on the infectious diseases because of the HIV virus and AIDS. Avoidance of direct contact with patient blood and body fluids is now a standard procedure because of AIDS. This emphasis is a part of the Third Edition Update and its workbook. However, AIDS alone is not the reason. Other infectious diseases are considered and combined with all aspects of personal safety to reinforce the concept of a safe rescuer. To give First Responders a better idea of the dangers posed by infectious diseases and the precautions they should take, we have prepared a Special Update on infectious disease, which follows Chapter 3. In keeping with our interest in the overall well-being of First Responders, we have also included a new appendix on stress management, a concern of many individuals involved in prehospital emergency care.

Basic life support procedures remain essentially the same in this edition with the exception of changes in CPR procedure to follow the 1992 guidelines of the American Heart Association and the introduction of the pocket face mask with one-way valve as a standard piece of equipment for *all First Responders*. The mouth-to-mask method of rescue breathing is now considered the primary method used during pulmonary resuscitation and CPR. Again, it is the concern about infectious diseases that has led to this change.

There are other changes in First Responder-level care found in this text and the workbook. As predicted when First Responder training began, changes would be few from year to year. Most of the changes found in this edition are minor. Some are optional, such as blood pressure determination and oxygen therapy. In a few cases, care procedures have changed because methods that are easier to perform are beginning to replace old “tried and true” ones. The single splint method of caring for lower leg fractures is an example; however, the two-splint method is also included in the text. Water rescue techniques for patients with neck or spine injuries have also been updated.

There are some subtle instructional changes found in this edition; however, the major changes are obvious. Color photographs and art add a new dimension to learning, being part of a new design that improves both readability and study mechanics. Note, too, the additional attention given to glossary terms and their placement in the margins for more emphasis and easier access. Terminology, symptoms, signs, and care procedures receive emphasis with the new design.

The Learning Package

The textbook and workbook remain the major elements of the learning package. In addition, a revised Instructor's Manual provides ideas for instruction and enables the instructor to quickly focus on essential materials when preparing for class. The ideas are not limited to those of the author. The instructional information found in the Instructor's Manual is based on the ideas and concerns of First Responder instructors in EMS systems,

industrial training programs, and the military. Such sharing of information is essential for effective training.

Visual aids in the form of a set of presentation slides, Atlas of Injury slides, and anatomy acetate transparencies are available from the publisher. Each allows for improved instruction and enrichment. A new asset for both instructor and students is now possible with the addition of video tapes to the publisher's training package. A whole new approach to lecture time and skills practice is possible using these tapes and their lesson plans.

The learning package offers a great variety of choices to the instructor and his or her students. The traditional approach is possible, with many options for enrichment. Non-traditional approaches can be developed from the learning package to meet the needs of a specific student or group of students. In either case, a new adventure in learning is certain to be part of the outcome.

J. David Bergeron

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■ Introduction

Learning to Be a First Responder

First Responder programs were developed to provide highly trained individuals with the skills necessary to begin assessing and caring for patients at the scene of injury or illness. In many areas of the nation, First Responders now are able to reach patients in less than ten minutes from the onset of the emergency. This quick response and the quality care rendered save thousands of lives each year.

Even though the First Responder concept has been around for over a decade, the majority of programs in full operation are less than five years old. First Responder programs are growing in number and complexity each year. This commitment to the First Responder concept has allowed the First Responder to become an important part of emergency services in the United States. Other nations also are developing similar programs.

The first two editions of this textbook were used by several hundred thousand students as part of their training. This new edition has taken what was found to be successful in the first edition and adds some new topics and concepts that have recently become a part of most First Responder courses.

You are about to begin your training to become a First Responder. Most likely, your training will take place in a course that follows the guidelines set by your local emergency medical services system (EMS System). Your course might be a state- or company-designed course. The vast majority of these courses are based on the guidelines originally developed as the forty-hour First Responder Course by the U.S. Department of Transportation (DOT).

Who is the authority for your course? Your instructor. Things are always changing in emergency services. Year-old memoranda and even new textbooks may not be 100 percent up to date. Your instructor keeps informed of changes in procedures, requirements, and responsibilities. Should you have any questions about sources saying different things, ask your instructor. If this text takes one approach to an emergency situation and your instructor takes a different approach, follow your instructor. We ask you to do this, not to please your instructor, but because a textbook cannot be changed on a daily basis.

REMEMBER: As a First Responder, you are considered to be part of the EMS System. The care you provide must follow your state and local guidelines.

Objectives

At the beginning of each chapter, you will find a list of objectives. These objectives tell you what you should be able to do by the end of the chapter.

The objectives used in this text are called behavioral objectives (also called performance objectives). This means that the objectives state the things you should be able to do that can be measured by you and by others.

When you read the chapter objectives, note how they are worded. Terms such as list, define, label, and apply are used. The objectives will tell you very specifically what you need to be able to do. You will not be told to understand or to know. Instead, you will be told to be able to do something that will give you and your instructor a way of seeing if you really do know and understand the materials found in each chapter.

Using This Textbook

The first three chapters of this book are critical to becoming a First Responder. Chapter 1 will define the role of a First Responder. This chapter requires careful study since it will be difficult to know what you need to learn in the rest of the course without first knowing the skills and responsibilities of a First Responder. Chapter 2 and Chapter 3 help you to see the human body in terms of injuries and medical emergencies. Before you can help patients, you will need to develop a head-to-toe approach to the human body. Unless you take great care in learning these first three chapters, you will not be able to fill the role of a First Responder.

As you study each chapter in this book, you should:

1. Go over the list of objectives found at the beginning of the chapter.
2. Make sure that you understand all the objectives before reading the chapter.
3. Read the chapter, keeping the list of objectives in mind.
4. Give special consideration to any illustrations, charts, and lists emphasized in the text.
5. After reading the chapter, go back over the list of objectives and see if you can accomplish each objective in the list.
6. Go back over the sections of the chapter that deal with the objectives that you could not meet.

You will find that the list of objectives will act as self-tests for you when you finish your reading. You will know what questions you cannot answer for any given chapter.

Medical Terms and Pronunciation

As you read through this text, you will find two types of terms used. The first type will be common, everyday terms, such as chest. You will also see terms from medicine and anatomy, such as thoracic. When a medical term is used for the first time, a pronunciation guide will be given. Therefore, when you see the word thoracic used for the first time, you will see the following:

thoracic (tho-RAS-ik)

Capitalized letters indicate the portion of the word that is emphasized. Practice saying these words and try to use them in conversations with your instructor and fellow students.


Having a large vocabulary of medical terms is not very important for First Responders. In emergency situations, telling the emergency squad that the patient has chest pains is as meaningful as saying the patient has pains in the thorax. Telling an emergency medical technician (EMT) that the patient may have a fractured right thigh bone will have as much

meaning as saying a fractured right femur. There are some terms that you must learn and use. These will be noted in each chapter.

It is important that you can recognize and define many terms taken from medicine and anatomy, even though you will not use these terms in oral or written reports. Other members of the emergency care team may use these terms when conversing with you. As part of your continuing education as a First Responder, you will run into these terms in articles and reports. For these reasons, you should not ignore anatomical and medical terms.

Levels of Learning

All First Responders need the same knowledge and skills. However, while you are learning, it might be useful for you to know what is considered to be basic information and techniques. A **1st** has been placed next to all basic information and skills when they are presented in this text. Is this all you need to learn? No, see the objectives for each chapter.

After a given amount of material has been presented in a chapter, you will see a  inserted in the text. This means that you would do well to stop at that point and consider what you have just finished. If you did not understand a section or feel that you do not know the section very well, you should go back over that section before continuing with your reading.

In addition to the objectives, each chapter has a list of skills. Knowing the steps to a certain procedure will be part of the chapter. However, being able to do the procedure will not come from this text or your lecture sections. Laboratory practice sessions and field sessions will be needed to perfect these skills.

How to Study

Every person is unique. Since you are a little different from every other student, how you study will be a very personal thing. There are some standard recommendations that you might find helpful. First of all, you must follow the directions given by your instructor and the directions given in this text. If you take off on your own, you could spend too much time on minor points and not enough time on what is critical knowledge for a First Responder.

Be sure to take notes during your training. You should have class notes, reading notes, and notes from any practical situations that are part of your First Responder's course.

If possible, have your own place to study, removed from other activities. This will keep away distractions and help prevent some poor past habits of studying that waste time. Study by yourself until you are able to meet all the chapter objectives. Too often, students try to study together. Educational research has proven that this does not work.

If you do not understand something presented in class or in this text, see your instructor. Your fellow students may not understand any more than you do. They also lack the experience your instructor will have.

After you have studied and feel that you can meet all the objectives, then do meet with fellow students. Studies have shown that people remember things for a longer period of time if they have the opportunity to talk about their studies. If you have found that reading is not your best way of learning, then these meetings will be very important. You will soon see that being able to communicate with others is an important part of the task of a First Responder. Even if you have been trained in dealing with the public, you will still need practice in communicating the new information you will be using in this course.

When you study from this textbook, you should:

1. Takes notes on the statements that apply to the chapter objectives.
2. Keep a list of page numbers to go with objectives.
3. If you are allowed to keep your text, mark important items in your book.
4. After finishing your reading and before checking back on the list of objectives, be sure to go back over all illustrations, charts, and lists in the chapter.

Responsibility

It has been said that the responsibility for teaching is the teacher's and the responsibility for learning is that of the student. It is your responsibility to learn what your instructor teaches. As a First Responder, it will be your responsibility to know all local and state requirements and regulations as they deal with First Responders and the services that they perform.

In addition to the above responsibilities, as a First Responder you will be expected to stay up-to-date in both information and skills. After completing your training, it is recommended that you set aside 30 minutes to an hour each week to review part of a chapter in this text, some of your lecture notes, or some other source of First Responder information. Your local or state emergency services director will be able to tell you what you will need in terms of updated bulletins and continuing education.

It is doubtful that you would be taking this course unless you had the attitude of a professional, so nothing need be said about motivation and your responsibilities to those who are providing you with this First Responder's course. All that remains to be said in this introduction is good luck and enjoy your entry into the world of emergency care services.

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