I’m not much of a sailor, but when our friends Bill and Christy get me on the Lone Star, my wife Carol enjoys the sea and I spend a lot of my time looking at the boats and wondering how and why they were named. The best I have ever seen was a beautiful sailboat, the Never Again 2.

After Harvard Ellman and I wrote Arthroscopic Shoulder Surgery and Related Procedures, I told Carol I would never write another textbook. Ten years later I wrote Shoulder Arthroscopy and promised her, never again.

Here we are at Shoulder Arthroscopy 2nd edition, the Never Again 2 of textbooks. Carol, you are the greatest. Thank you for your patience and love, again.

G.M.
Seventeen years have passed since the publication of *Arthroscopic Shoulder Surgery and Related Procedures*. Harvard Ellman and I co-authored that text in an attempt to bridge the gap between traditional open operations and newer arthroscopic approaches. Many today did not have the opportunity to know Dr. Ellman; he was a wonderful man and a true pioneer. He was the perfect person to introduce this fledgling field of shoulder arthroscopy to the world. The Ralph Bunche quote “If you want to get across an idea, wrap it up in a person” applied to Harvard.

The first edition of *Shoulder Arthroscopy* was published 6 years ago. The pace of progress and the rate at which we have accumulated knowledge has accelerated in shoulder arthroscopy, as it has in practically all other forms of human endeavor. It is for this reason that we have decided to publish the second edition of *Shoulder Arthroscopy*. Thermal capsulorrhaphy did not survive prolonged follow-up. Double-row rotator cuff repair is more common. Biceps lesions are treated more aggressively. The Latarjet procedure for shoulder instability has entered the United States, and the Bristow is making a comeback! Diagnostic ultrasound is more mainstream. Suprascapular nerve lesions can be treated arthroscopically. Many readers requested more information about rehabilitation, and I think Mike De la Flor’s video animations are superb. Use them to instruct your patients.

The purpose of this textbook is to present the current state of arthroscopic shoulder surgery as seen by one author. There are, of course, many different methods to treat shoulder lesions with arthroscopy, but I have chosen to present my own views and trust that the reader will also seek out the opinions of others.

My focus in this book is primarily on operative technique, and my goal is to present an approach to arthroscopic shoulder operations in enough detail so that the reader can manage both the routine and complex problems he or she encounters. This required that I exclude some important nonsurgical material.

There are a number of texts currently available that devote hundreds of pages to patient history, diagnosis, pathogenesis, physical examination, and imaging studies. Their bibliographies are complete and extensive.

So what kind of textbook is this? This is a book for orthopedic surgeons who want to perform reconstructive arthroscopic shoulder surgery. In order to do this, the surgeon must understand why certain procedures are performed and have them described in adequate detail. I have tried to take the reader through the operations in stepwise fashion; however, for complex procedures text is not sufficient. State-of-the-art communication in arthroscopy involves more than thoughts and words on a printed page. The accompanying DVD contains videos that illustrate the concepts and techniques that I describe in the text.

Since 1982 I have been privileged to instruct thousands of practicing orthopedic surgeons, residents, and fellows in shoulder arthroscopy. In this textbook I have adopted a tone that I hope captures the many conversations we have had. Imagine that you and I are in the operating room performing shoulder arthroscopy. You can ask all the questions you wish and I have all the time in the world to answer. Let’s begin!

Gary M. Gartsman, M.D.
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Surgeons who are considering making the transition from open shoulder surgery to arthroscopic shoulder surgery need to develop a plan or framework. There are two basic types of skills: technical and intellectual. At present, orthopedic surgeons learn the basic skills of shoulder arthroscopy during their residency or fellowship, but more advanced reconstructive surgical techniques require sufficient time with an experienced mentor. This experience varies widely among training programs.

**ARTHROSCOPY VERSUS OPEN REPAIR**

The fundamental decision is whether to perform shoulder arthroscopy or continue to use open repair techniques. Most surgeons are comfortable with open procedures. If they are satisfied with their patient outcomes, they may see no reason to change. However, surgeons have various reasons for deciding to acquire or advance their arthroscopic skills, for example, the belief that arthroscopic techniques produce better results, peer pressure, a desire to learn new concepts and techniques, and patient demand.

Various publications and presentations have documented equal or superior results with arthroscopic techniques compared with open techniques for the performance of subacromial decompression for stage 2 impingement, acromioclavicular joint resection for arthritis, and rotator cuff repair, as well as for the treatment of glenohumeral instability.

Orthopedic surgeons are subject to peer pressure. When they talk among themselves about various shoulder conditions and their treatment, surgeons who perform only open operations may feel that they are behind the times. Orthopedic surgeons are also conditioned to consider new approaches to patient care, and although many surgeons obtain good results with open repair, they are ready and willing to try something new.

Owing to the dramatic increase in available knowledge, many patients are aware of arthroscopic techniques and inquire whether the surgeon performs a certain procedure arthroscopically or with an open technique. Patients have the perception that arthroscopic procedures result in less pain, smaller scars, and more rapid rehabilitation, although strong arguments can be made to refute all these assertions. Nonetheless, patients are increasingly insistent on finding surgeons who will perform their operations arthroscopically, viewing the arthroscope as a magical tool capable of miraculous cures. Some surgeons see the arthroscope as a wonderful addition to the surgical tool box, whereas others, based on their experience, see only its negatives. It is the surgeon’s skill that achieves the proper balance (Figs. 1-1 through 1-4).

Before embarking on a mission to acquire arthroscopic skills, each orthopedic surgeon must evaluate his or her practice patterns and answer some questions: Do you perform a sufficient number of shoulder operations to justify learning a new skill? All orthopedic surgeons should be comfortable with diagnostic glenohumeral joint arthroscopy, but not everyone needs to learn more advanced techniques. If you perform fewer than 20 to 30 shoulder procedures a year and are comfortable with the open technique, I would not advise you to invest the time and effort required to perform these few
procedures arthroscopically. Do you have the emotional stability to handle the inevitable frustration when learning to perform procedures arthroscopically? Remember, you will be making a transition from the familiar and comfortable to the new and awkward. Do you have the necessary technical skills? If you cannot perform routine arthroscopic subacromial decompression in 30 minutes or less, you do not have the skills required to perform more complicated reconstructive arthroscopic procedures. Improve your basic skills and speed before taking on a bigger challenge. How do you acquire the necessary skills? Each surgeon must develop a learning plan that focuses on two central issues: technical skills and intellectual skills. In reality, it is hard to separate the two. Learning how to pass a suture through the anterior inferior glenohumeral ligament is of little use if you do not know when this step is necessary.

TECHNICAL SKILLS

Most orthopedic surgeons learn the basics of shoulder arthroscopy during residency or fellowship, but for those who did not, other resources are available. The Orthopaedic Learning Center, developed and administered by the American Academy of Orthopaedic Surgeons and the Arthroscopy Association of North America, hosts numerous courses that cover both basic and advanced shoulder arthroscopy. Didactic lectures, panel discussions, and video demonstrations are presented in state-of-the-art lecture halls. The center, located in Rosemont, Illinois, also houses a wet cadaveric laboratory with 48 workstations so that participants can practice with cadaver specimens and arthroscopic instruments.
The Orthopaedic Learning Center is a good resource for learning basic shoulder arthroscopy, but many surgeons find it inadequate for more complex procedures such as rotator cuff repair and glenohumeral reconstruction. Generally, the 2- to 3-day courses cover a broad range of topics. A typical course might include lectures and cadaver instruction on arthroscopic subacromial decompression, distal clavicle excision, open and arthroscopic rotator cuff repair, and open and arthroscopic glenohumeral reconstruction. There is insufficient time for participants to become comfortable with all procedures. Because of the breadth of topics, it is unusual for every instructor to have expertise in all the areas covered. Participants also demonstrate great disparity in arthroscopic skill; for instance, one surgeon interested in learning arthroscopic rotator cuff repair may be paired with a beginner who wants to focus on glenohumeral joint inspection.

Other programs are available. The Arthroscopy Association of North America offers more individualized instruction through its Masters Series, and several surgeons I know have found the program extremely worthwhile. James Esch has been active in shoulder arthroscopy education for years and annually organizes a superior course that combines lectures and cadaver work. Stephen Snyder has a wonderful facility in California that combines state-of-the-art video learning with an opportunity to watch a superb surgeon at work. My own approach to surgeon education has been to offer a small course limited to 12 registrants that focuses solely on one topic—either arthroscopic rotator cuff repair or arthroscopic glenohumeral joint instability. Enrollment is restricted to surgeons with advanced arthroscopic skills. Over a 2-day period, techniques using arthroscopic instruments and video arthroscopy are gradually introduced as participants perform repairs on anatomically detailed plastic shoulder models. This allows everyone ample opportunity to master the requisite intellectual and technical skills (Fig. 1-5).

You can also advance your arthroscopic skills by focusing on the details of your open repairs. First, take the opportunity to view arthroscopically all rotator cuff tears and unstable glenohumeral joints before performing the open repair or reconstruction.
Learn what the typical glenohumeral joint looks like in a 63-year-old with a full-thickness rotator cuff tear. From the glenohumeral joint, try to identify the tear. Move the arthroscope into the subacromial space, identify the rotator cuff tear, and estimate its size and shape. Ask the circulating nurse to write down these measurements. Next, open the shoulder and record the size and shape of the tear. With practice, you will find that you can accurately assess the size.
Figure 1-13  Shoulder arthroscopy model.

Figure 1-14  Elite suture punch needle.

Figure 1-15  Depress the handle bottom to load it.

Figure 1-16  Load the suture.

Figure 1-17  Suture is held in the instrument’s jaw.

Figure 1-18  Depress the handle top to advance the needle.