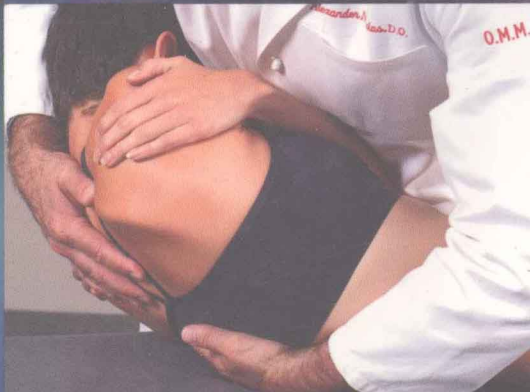


Atlas of Osteopathic Techniques

Second Edition

Alexander S. Nicholas
Evan A. Nicholas



Wolters Kluwer | Lippincott
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ATLAS OF

Osteopathic Techniques

SECOND EDITION

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Dedication

“Dr. Nick”

In 1974, the authors' father, Nicholas S. Nicholas, DO, FAAO, chairman of the Osteopathic Principles and Practice Department at Philadelphia College of Osteopathic Medicine (PCOM) published the first edition of *Atlas of Osteopathic Techniques*. His goal was to put into print a number of the commonly used osteopathic manipulative techniques of that time. They were to be used by medical students to reference the techniques being taught in the classroom and to standardize the techniques so that in the oral examination, the evaluation of their work could be more objectively evaluated.

Nicholas S. Nicholas, DO, a 1939 graduate of Kirksville College of Osteopathy, was a general practitioner who also specialized in industrial and sports medicine. He used osteopathic techniques routinely in his practice, and because of the clinical results, he was very excited to teach these techniques to medical students. Affectionately known as Dr. Nick to his students, he began teaching at PCOM in 1946 and in 1974 became the chairman of the Osteopathic Principles and Practice Department. In 1974, he enlisted PCOM faculty members to develop a list of techniques to include in the original edition of his atlas. These faculty members

included David Heilig, DO, FAAO; Robert England, DO, FAAO; Marvin Blumberg, DO, FAAO; Jerome Sulman, DO; and Katherine England, DO.

The students benefited, and their attempts to learn the techniques were improved, as was seen during PCOM examinations. As word of this text spread, PCOM alumni and other osteopathic physicians also saw a need for this text as a review and/or reference of standard techniques for their practices. Because of illness, Dr. Nick was able to produce only two editions of his work.

Over the years, the atlas gave way to videotape demonstrations of techniques and further edited and expanded versions of the written techniques. From the time of the inception of the atlas, the number of named styles of osteopathic techniques being taught in osteopathic medical schools has grown from approximately three to twelve distinctly named styles. Many of the styles have similarities that can lead to confusion, which is why we have decided to expand the original version and update it to the present level of practice.

We dedicate this book to our father, who would most likely have wanted to dedicate it to all of his former students and to all the future osteopathic physicians he thought would appreciate a comprehensive work on osteopathic manipulative techniques.

Preface to the First Edition

Osteopathic medicine as taught and practiced in the United States at the end of the 19th century through the beginning of the 21st century has undergone many changes. The evolution of scientific findings and understanding of biologic processes by which the body functions and attempts to maintain health has had a direct effect on the way osteopathic medical curricula are developed.

During our osteopathic medical school matriculation, we were taught only three or four separate styles of osteopathic technique. Since that time, many new diagnostic and therapeutic procedures have been added to the armamentarium of osteopathic treatment, and there are now over a dozen individual styles. Some of these styles are very similar, and as described in the chapters of this atlas, they have developed by nuance into distinct, individually named categories of technique.

Because of these additions and changes, both osteopathic medical students and practitioners have had a much more difficult time trying to learn and remember these techniques, and practitioners have faced an increasingly complex process in deciding which technique is clinically indicated for a particular patient. To aid the study and practice, we have gradually developed a compilation of techniques that are commonly used by osteopathic physicians and that are clinically effective. The result of this effort is the *Atlas of Osteopathic Techniques*.

At Philadelphia College of Osteopathic Medicine, a tradition of technique atlas goes back to at least 1949 with the publication of *Osteopathic Techniques*, by Samuel Rubinstein, DO. It was dedicated to two highly respected physicians, Otterbein Dressler, DO, and John Eimerbrink, DO. In his preface, Dr. Rubinstein noted, "The necessity for this type of textbook has become increasingly apparent with time" because of the need to have a visual record of the various physician and patient positions and force vectors at play. Yet no other example was readily reproduced until N. S. Nicholas, DO, FAAO, published his *Atlas of Osteopathic Technique* in 1974.

Throughout our years of teaching, many practicing physicians have asked us why there were no new editions of the *Atlas of Osteopathic Technique*. Our initial answer was that other texts had been published. However, these reference textbooks focus on the philosophy and principles of osteopathic medical practice and include only a few useful techniques. The need for an updated, comprehensive atlas of techniques became increasingly clear, and we have responded with a textbook that includes a straightforward, highly organized, and easily navigable compendium of osteopathic techniques along with the philosophy and principles that support them. This material is intended to help students and practitioners understand the reasoning behind the procedures and the ramifications of their use in the clinical setting.

One of the major improvements in the *Atlas of Osteopathic Techniques* is the presentation of more than 1,000 color photos of every procedural step involved in each technique. The photos for each technique are placed together on the same or adjacent pages, along with descriptive text, to make the book easy to use in the clinical setting. The new photos were created specifically for this atlas under the direction of the authors and a professional photographer. Arrows and other annotations directly on the photos guide the reader through the techniques. The clarity of these photos and their annotations, combined with their organization into an easy-to-use format, make this atlas an extremely useful tool in both the laboratory and the clinic.

Also included in the atlas are the various diagnostic procedures common to osteopathic medicine. The descriptions for these include the musculoskeletal structural examination, regional range of motion assessment, layer-by-layer palpatory examination, and the intersegmental examination of the spinal and pelvic regions. Diagnosis is included so the reader can relate the specific treatment to the diagnostic criteria that govern its use. This is important, as the physician must understand the nature of the dysfunction and the technique best suited to treat it successfully.

We have organized this atlas into two sections: Part 1, Osteopathic Principles in Diagnosis, and Part 2, Osteopathic Manipulative Techniques. The order of Part 1 is similar to how we present the material to osteopathic medical students and is in keeping with what we believe is the most appropriate and safe method of performing the osteopathic musculoskeletal examination. We have arranged Part 2 in what we consider the classical format, by technique style, as the reader should first decide on a style and then proceed to the appropriate chapter and to the specific anatomic region within that chapter.

We hope that the reader will find this useful in all stages of osteopathic education: undergraduate, postgraduate residency, and continuing medical education. We hope use of this text will instill more confidence in performing these techniques and thereby help readers to better help patients. As physicians, we are trained to use our minds and hands, and as osteopathic physicians, we are frequently reminded that it is inherent to our practice to do so, as the seal of Philadelphia College of Osteopathic Medicine states, “Mens et Manus.”

A.S. Nicholas
E.A. Nicholas

Preface to the Second Edition

The second edition of the *Atlas of Osteopathic Techniques* continues in its attempt to describe both in text and in photographic illustration the most successful and safe application of osteopathic manipulative treatments. In this vain, we have included additional anatomical illustrations and clinical indications and contraindications where appropriate for specific techniques. Every attempt has been made to describe a technique with its illustrations on the same or adjacent page, as was done in the first edition.

In developing the second edition of the atlas, we retained the many classical and historically important techniques from the first edition, as well as including a number of additional techniques in various chapters.

This will especially be seen in the Counterstrain and Muscle Energy Technique chapters where many extremity oriented techniques have been included. We utilized the core curriculum recommendations of the Educational Council on Osteopathic Principles (ECOP) of the American Association of Colleges of Osteopathic Medicine (AACOM) in order that those using the atlas for undergraduate osteopathic medical education would have the most comprehensive reference for osteopathic manipulative techniques.

A.S. Nicholas
E.A. Nicholas

Acknowledgments to the First Edition

The *Atlas of Osteopathic Techniques* is our effort to maintain a historical continuum of the many variations of osteopathic manipulative techniques that have been used for over a century in the United States and now in many other countries. We obviously have not invented any techniques, nor have any been named after us. The many osteopathic physicians who have preceded us into this profession have taught us these techniques, and we hope that this may continue their legacy.

A few physicians must be particularly thanked. First, we must recognize our father, Nicholas S. Nicholas. Over many years of witnessing his patients' overwhelmingly positive feelings about the care they received at his hands, we could not choose any other form of occupation, as they just seemed minor compared to the work he did. Second, we must thank David Heilig. Our father many times stated that Heilig was the most able physician he had ever seen with osteopathic diagnosis and technique. We were lucky enough to know him as children and later to be taught by him. We then worked side-by-side for more than 25 years, sharing ideas and techniques. We were blessed to be his friends.

Walter Ehrenfeuchter, our friend and colleague for many years, must also be recognized, as he helped to develop the style of this atlas and put to pen many of the techniques in our original manuals at PCOM. His understanding of muscle energy technique was specifically used as a model in the development of that chapter, and his imprint can be found in other chapters as well.

We must thank others who have influenced us as role models, teachers, and practitioners—Beryl Arbuckle, Marvin Blumberg, Albert D'Alonzo, Henry D'Alonzo, Fairman Denlinger, Katherine England, Robert England, Wayne English, Robert Kappler, Anthony Leone, Paul T. Lloyd, Robert Meals, Ida Schmidt,

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We cannot forget the many undergraduate PCOM osteopathic manipulative medicine fellows who have been associated with this effort. Everyone associated with our department has had some effect on the outcome, but some should be singled out for their original ideas, editing, photo layouts, artwork, and graphics on the manuals that preceded and eventually culminated in this atlas: Sandra Ranieri-Costa, Daniel Csaszar, Todd Feathers, Troy Henning, Payce Handler-Haly, Thomas Haly, Sheryl Lynn Oleski, Concetta Oteri, Tara Heinz-Lawlor, David Glusko, David Keller, Lauren Noto-Bell, Francisco Laboy, Scott Peerenboom, Danielle Campbell, Richard Sloan, Eun Strawser, and Kelli Young. Special thanks to Kylie Johnston-Kanze for her work on the cranial chapter.

Thanks to our other PCOM students who put in time helping with this project: Nimi Patel and Nicholas Rossi (models); Kate Story, Ashley Palese, and Amanda Schompert (editing); Brad Taicher (computer skills); and Patrick Soto and Justin Snyder (medical illustration).

Appreciation to Donna Balado for bringing this possibility to Lippincott Williams & Wilkins and thanks to Keith Donnellan and Brett MacNaughton for their prodding, editing, and illustrating, which finally moved this project to completion, as well as helping to give it its distinctive look.

We also must thank our wives, Benita and Vicki, for their patience with us during this enterprise.

Acknowledgments to the Second Edition

The effort involved in developing this second edition included a number of others who should be thanked for their involvement in the successful completion of this work. We would like to thank our colleagues at Lippincott Williams & Wilkins whose efforts helped throughout this endeavor: Charley Mitchell for starting the process; Jenn Verbiar for taking the initial reigns and early editing stages; Catherine Noonan for taking it through to the final editing stages, as well as reminding us of our

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We would also like to thank Bruce Fairfield for his photographic expertise and patience during the photo sessions for the additional techniques. Thanks also to our new patient models, Brandon Eck, Petagaye English, and Julia Todd.

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PART 1

Osteopathic Principles in Diagnosis

Osteopathic diagnosis involves all classical methods of physical examination (e.g., observation, palpation, auscultation). In addition, some distinct techniques are most common to osteopathic medicine and are less commonly used in allopathic medicine. These techniques have to do with fine methods of tissue texture evaluation and epicritic intersegmental evaluation of the cardinal axes (x-, y-, and z-axes) of spinal motion. Evaluating the patient using both observation and palpation of specific landmarks in these axes to assess symmetry, asymmetry, and so on may be referred to as *three-plane motion* diagnosis in later chapters.