

**OSTEOPATHIC
MECHANICS:
A TEXT-BOOK**

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Osteopathic mechanics: a text-book by Edythe F. Ashmore

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A TEXT-BOOK

BY

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WITH 82 ILLUSTRATIONS
3 COLORED PLATES

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copy: Dr. Evelyn G. Ashmore, D.O. 8-10-53

ERRATA

Page 46, line 22, the words "lie pon" should read "lie upon."

Page 87, under fig. 35, "the dottled lines" should read "the curved lines."

Page 88, footnote 2, line 2, the word "right" should be inserted between "thus, a " and "rotation lesion."

Page 97, "Experimental palpation, E" should read "E²."

Page 104, line 12, the word "left" should replace the word "right."

Page 115,, "Experimental palpation, G" should read "G²".

Page 121, the footnotes should be numbered "2" and "3" to correspond with the exponent numbers above.

Page 197, line four, "outward flexion movement" should read "outward extension movement."

Page 199, line 16, should read "and the normal erect position" etc.

PREFACE

When Dr. Andrew Taylor Still gave to the world the philosophy of Osteopathy in the establishment of a college for its teaching, the science of Osteopathy was yet in its infancy, for like many of the great sciences, it began as an art in the brain of a master. Thus it is that genius gives to the world that which afterward requires years of careful research and study to confine within the regulations of principle and law. It is not strange, therefore, that in the third decade of the existence of the parent college the first textbook of the mechanics of osteopathy should appear.

The scope of this book is strictly that of a text-book and does not aim to be an exhaustive treatise upon the subject but rather a perspective placing before the mind of the student clearly and briefly certain definite facts with their relative values to the end that he by further study may more easily attain skill in osteopathic diagnosis and practice.

There has been no attempt made at literary brilliancy nor startling originality. I have kept in mind constantly the needs of the student as I have found them in my own college days of fifteen years ago and during the past year while teaching the Junior classes of the American School of Osteopathy. Other writers in our scientific journals have covered well the problems of technique and to them I am much indebted, especially to Drs. Carl P. McConnell and Harry Willis Forbes.

The plan of presentation in this book is distinctly my own for no other teacher to my knowledge has begun the subject of osteopathic mechanics with the study of spinal curvature. From observation I do not hesitate to claim that it has decided merits and in this connection I wish to acknowledge my indebtedness to Robert W. Lovett of Boston whose work "Lateral Spinal Curvature," has enlarged my understanding of the movements of the spine and in a way made possible much of the development of the subject of spinal subluxations.

In the matter of terminology, the larger part of this book was written before the adoption by the American Osteopathic Associa-

tion of the nomenclature and definitions prepared by a committee of the heads of the department of osteopathic mechanics in the several colleges. Wherever possible I have given both old and new terms.

In the matter of corrective movements, I have endeavored to select the very simplest, those illustrating the principles of correction most plainly. The height of the practitioner, his weight, and physical strength are factors that induce him to modify the leverages he uses in operating osteopathically upon patients who show as many variations from the average type as may the physician himself.

To my students who have helped in the construction of the illustrations of this work I am very grateful and I wish to express here my thanks to Drs. Frances Graves and Anna E. Northup, graduate osteopaths, to Drs. Clifford L. Baker, Oliver C. Foreman, and E. P. Malone of the class of January, 1916, to Miss Beatrice L. Jemmette and Mr. L. P. Ricmer of the class of June, 1916, and to Mr. Eugene D. Platt, photographer, of the January, 1917, class.

I desire to express my thanks, also, to the editors of the *Journal of Osteopathy* for permission to use illustrations that have appeared in their pages and to Dr. Frank P. Millard of Toronto for his kindness in lending me the zinc etchings of the illustrations drawn by himself.

To the Founder of Osteopathy, to whom each osteopath owes all honor and appreciation, I wish to acknowledge the greatest debt of all for the wonderful system of healing which has brought to me and to all others who have been privileged to employ it, the happiness that comes to him or to her who is conscious of having helped to alleviate the suffering of humanity.

EDYTHE F. ASHMORE, D. O.

Kirksville, Mo., July 25, 1915.

OSTEOPATHIC MECHANICS

CHAPTER I.

THE LESION

OSTEOPATHIC MECHANICS is a system of animal mechanics which, taking into consideration the anatomical parts of the human body, especially the bones, ligaments, and muscles, recognizes disturbances in their relations, in particular malalignments and subluxations of joints, and explains the principles by which may be secured the normal apposition and adjustment of part with part. It is embraced by the larger subject of the PRINCIPLES OF OSTEOPATHY, which based upon the sciences of anatomy, chemistry, and physiology, by the application of a distinctive, etiologic, fundamental truth, establishes an exact diagnosis, a clear pathology, and a rational system of therapy.

The central thought of the science of Osteopathy is the lesion, which has been defined as any structural perversion which produces or maintains functional disturbance. The word lesion has been derived from the Latin verb, *laedere*, to injure. A lesion, then, is any maladjustment which ultimately causes an injury to tissues, or it is an etiological factor in the production of disease and manifests pathological effects. A lesion is itself the result of injury and as such presents certain signs and symptoms. With the production of lesions, with their signs and symptoms, with their removal, are Osteopathic Mechanics concerned. The effects of lesion are covered by the subjects of Osteopathic Pathology and Practice.

The term lesion has been used in a restricted sense to mean any anatomical irregularity of a joint abnormal to the individual and the result of injury originating without the joint and intrinsic or extrinsic to the organism itself. The lesions which produce the most serious effects are those of the spinal articulations, the

occiput with the atlas, the sacrum with the fifth lumbar, and the innominates (*ossa coxae*) with the sacrum, for the reason that these joints are more intimately connected with the two nervous systems, the cranio-spinal and the sympathetic. Joint lesions have been called osseous lesions, for of first consideration in a joint are the articulating surfaces.

Lesions are the result of injury, direct or indirect: direct when acted upon by forces at variance with the usual function of the joint; indirect, when by disturbance in the function of the tissues which maintain the joint in balance, lost equilibrium results. These indirect causes have been termed muscular and ligamentous lesions and should not be confused with the effects manifest in tissues about the joint secondary to osseous maladjustment.

A muscular lesion is a contraction or contracture and is the result of direct violence to the muscle tissue itself or is caused indirectly by disturbance in the nervous mechanism controlling the action of the muscle, from

1. Irritative influences.
 - a. Atmospheric changes, heat, cold, etc.
 - b. Vaso-motor spasm.
 - c. Reflexes from viscera.
 - d. Toxins in the blood stream.
 - e. Fatigue.
2. Postural defects.
 - a. Kyphosis.
 - b. Lordosis.
 - c. Lateral curvature.
3. Pathological changes in nerve cells or neurons.

A strong contraction or contracture of a muscle brings its origin and insertion closer together and thus may be the first cause of a vertebral osseous lesion.

A ligamentous lesion is one in which there is a changed condition of one or more of the ligaments of the joint; it may be described as a thickening or thinning of the fibrous tissue; it is usually the result of congestion or inflammation and its effects are increased resistance or debility in the joint. Secondarily to ligamentous lesions are found impaction or relaxation osseous lesions.

An impaction lesion of a vertebral articulation is a lesion which is characterized by an approximation of all the bony parts,