

# TENDON AND LIGAMENT HEALING

A New Approach  
Through  
Manual Therapy



WILLIAM  
WEINTRAUB

*Prefaces by Fritz Frederick Smith, M.D.  
and Jean-Pierre Barral, D.O.*

# **TENDON AND LIGAMENT HEALING**

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Through  
Manual Therapy**

William Weintraub



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*Tendon and Ligament Healing: A New Approach through Manual Therapy*

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## Preface

**B**ill Weintraub, M.A. is at the same time an excellent therapist and a researcher who has produced a very valuable, highly interesting work in the area of tendon and ligament treatment. This book is clear and comprehensive. It is a great pleasure for me to write this preface because it is due to people like him that manual therapy gains increased acceptance in the medical world.

A therapist who is effective in relieving people's suffering deserves our encouragement and gratitude for providing help to other practitioners in the areas of treatment and research; it's so important to share our experience with others.

Modern physiology teaches us that the finest and most sensitive proprioceptors are located in tendons and ligaments. Relieving stress on the mechanoreceptors located in these structures produces specific effects through local feedback systems, permitting the release of joint and muscle problems. These nerve receptors are also part of a larger feedback loop which can provide a general benefit to the body through spinal, cerebellar, and brain stimulation. Weintraub's thorough, precise treatment methods for the tendon or ligament stimulate neural input which emanates from that local structure, and is received centrally by the organism; this causes a favorable reciprocal effect on the localized injury area from the Central Nervous System.

The structural and neural activity described above also allows beneficial repatterning of larger body functions such as orchestration of complex movements, permitting the patient to feel better in his or her life. In these ways the health of tendons and ligaments plays a role in

both physical and emotional homeostasis. The soundly-based treatment options presented in this book for recovery from chronic injury bring benefits on multiple levels.

Effective treatment of these injuries is a crucial and challenging area of health care, welcoming Bill Weintraub's promising new approach here. This is why his work with osteopathic and related therapies is such an important contribution in this field.

Jean-Pierre Barral, D.O.

## Preface

**I**t gives me pleasure to write this preface to *Tendon and Ligament Healing* by Bill Weintraub. I believe this is an important publication because of the skills, light, and optimism it brings to the problem of chronic tendon/ligament injuries. The book will be helpful to anyone engaged in therapy of joints and soft tissue, especially of the tendon and ligament variety—or anyone who has sustained this type of injury and has not made satisfactory recovery. It will hold strong interest for the person who is drawn to a health care model based on the self-corrective powers of the body.

Weintraub crafted his own professional training instead of following the traditional and highly organized schools of medicine or physiotherapy, where treatment modalities are quite standardized. He escaped a certain pessimism so often inherent in the standard treatment of chronic tendon and ligament injuries. The underpinnings of his training were experiential in nature involving sports, yoga and dance. He had already embodied a sense of optimum form and function within his own body before he began his more formal study of anatomy and pathology. As he entered into the healing arts he studied with people who themselves came from personal experience and nontraditional sources. He was influenced by acupressure and Chinese theory of wholeness, and studied at length with innovative osteopaths who were continuing to expand possibilities based on deeper understanding of anatomy and touch.

With this training and background Weintraub was not limited to the traditional teachings of chronic tissue injury. He experientially

learned the micro-anatomy of ligaments and tendons through touch; and he has developed a creative approach, using in-depth manual skills to aid chronic injury and dysfunction. The method is firmly grounded in osteopathic tradition. In addition, realizing the importance of the whole person, he went full circle to involve the patient in their own healing process. This book is full of useful suggestions. His combined approach has been successful and has led to an optimistic attitude for a person's recovery, which itself aids the process.

The personal application of his own methods and beliefs help validate what he presents in this book. When Weintraub sustained a chronic tendon injury from excessive weight lifting, he applied his methodology to his own injury and recovered, despite a negative prognosis given by several orthopedists. He actualized the famous axiom 'physician heal thyself.'

Bill Weintraub is to be congratulated for his insights, optimism and a fresh approach to chronic tendon and ligament problems. His understanding of how to specifically benefit the micro-anatomy through touch and his inclusion of the whole person in healing offer new possibilities for therapists and patients alike when dealing with these difficult problems. This is a timely book.

Fritz Frederick Smith, M.D.



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# **TENDON AND LIGAMENT HEALING**



## Overview

**T**his book responds to a major challenge in the health care field. A high incidence of serious, chronic tendon and ligament injury causes substantial disability. Frequently there are unsuccessful results from the most widely used treatment. Tendons and ligaments when seriously damaged are not among the body parts more amenable to healing. I have made it a strong priority to find an effective method for reversing these injuries. The standard medical view is that nonsurgical treatment has almost no chance of success once the injury has become chronic. Surgery is in many cases only partially satisfactory or (in the long term) not so at all.

In twenty-five years of practicing structural/osteopathic manual therapy I have done considerable work with seriously damaged tendons and ligaments with some beneficial results that would be considered highly improbable by conventional medicine. I have developed a therapeutic model for treating these injuries. People in chronic cases who have exhausted the standard physiotherapy and are facing surgery can have a viable option for recovery, which is thoroughly described in this book.

Through a view of my innovative treatment approach and recent scientific research findings the book explores the active function and treatment of an often overlooked area (tendons and ligaments). This brings to light a basic bodily healing response, which can be important for strong self-maintenance and tissue healing of any part of the body. The story of the dancer Julia L., on the next page, is a capsule

picture of strategy to promote this process. The research points to primary yet little-known properties of tendons/ligaments that have highly favorable implications for their recovery potential.

The book's focus on manual therapy for ligament and tendon injury illustrates possibilities beyond the standard medical model for a creative approach to health care based on the body as a dynamic, responsive organism. Adaptability of the body is one of the essential principles, emerging from my clinical work and long-term exploration of health and physical awareness.

Clear, active perception is a key skill I use as a clinician. My therapy model combines this with well-trained technical/anatomical precision to apply its manual techniques for the body structure. Two in-depth case accounts and ten capsule case reports in Chapter 4 directly illustrate this approach, along with the following brief account featuring the obstacles and therapy process of a chronic tendon injury.

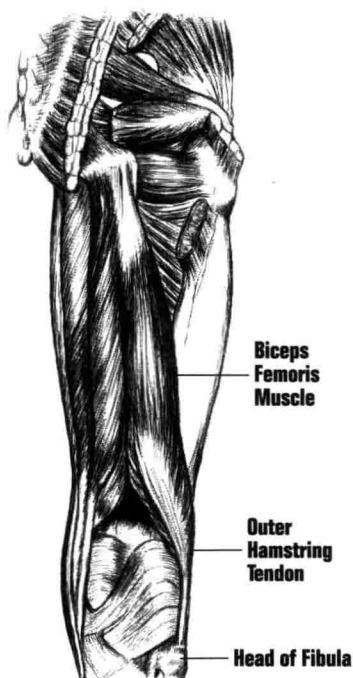
Julia L. is a lifelong dancer who was very discouraged when she initially consulted me for a persistent problem with her right knee. A tall woman of forty-two and now cochair of a university dance department, she had stopped her workouts and was unable to demonstrate for her classes. Fifteen months earlier, when starting to dance after prolonged sitting on the floor of a cold studio, she noticed pain and stiffness of her posterior, lateral knee that became a constant ache and burning sensation. This had continued and worsened despite various medications, physiotherapy, chiropractic, and periods of rest. She was unable to bend her knee with any weight-bearing without weakness and a lot of pain. She was quite disconsolate as she had been forced to reduce her teaching schedule and worried about her future in the profession to which she was very devoted.

An MRI scan revealed a substantial tear of the biceps femoris (lateral hamstring) tendon behind the knee joint. Four months after the initial injury two orthopedic surgeons felt there was no longer a realistic hope of recovery with conservative care. They proposed surgical repair of the tendon, which Julia was reluctant to undergo.

Julia agreed to my initial suggestion of three weekly treatments to see if the structural/osteopathic therapy I practice could help her injury. I found significant swelling of her posterior knee, along with adhesion, weakness, “stringiness,” and a twisted alignment pattern of the tendon fibers as well as a palpable divot in the tendon where it had been torn. I used gentle techniques to specifically free, align, and tone the tendon fibers, as well as free restrictions of her lower spine and lower abdominal viscera. Julia was cooperative in maintaining reduced activity levels and a moderate exercise program. We both noticed that gradually her range and ease of knee joint mobility was increasing, swelling and inflammation was reduced, and pain was subsiding.

After four weeks the frequency of treatments was reduced to two- and then three-week intervals. I continued to treat restrictions of her calf muscles and fascias, damage to the neighboring popliteal tendon, and a stubborn fixation of the ankle joint and cuboid bone in her right foot. After ten weeks she could climb a flight of stairs without pain and comfortably walk one mile with moderate hills. She was optimistic enough to be choreographing a piece in which she hoped to dance. With continued manual therapy techniques the tendon fibers had been realigned, their tone strengthened, adhesions almost eliminated, and the defect in the tendon was filling in well.

At sessions three and then five months from starting therapy Julia could extend her knee completely and flex it to 110 degrees and then 135 degrees comfortably with weight-bearing (within 5 degrees of



**FIGURE 1**  
Posterior view of right biceps femoris (lateral hamstring) muscle and its tendon at the knee.

normal). She was demonstrating for her classes with progressive ease and increasing her workouts. I found that the torn part of the tendon was very close to being intact and that the texture of the whole tendon was more resilient, “bouncy,” with almost no laxity. Treatments went to one-month intervals, and after four of these Julia received two orthopedic evaluations of her knee as being normal. At that time she was very relieved and happy to resume a full teaching and workout schedule. She continued to feel quite well the following year.

Julia’s story is very hopeful considering the extent and duration of her tendon injury. Hers was one of the high proportion of seriously damaged tendons and ligaments that become chronic. She had availed herself of the standard medical (and some nonmedical) treatments with the exception of surgery, about which she was hesitant in part because of uncertainty about its outcome. Julia had no major health problems preventing recovery and was quite cooperative through the course of treatment; these are important factors for the success of my therapy in the case of a stubborn condition.

This account portrays strategies that reflect basic principles of structural health care, which have become clear through years in this field. These include the importance of precise anatomical focus and capacity to work with subtle changes of structure. Another essential principle is illustrated by my combining detailed, specific treatment of the small fibers and tissues of the local injury area with an overall approach to improving larger body patterns and tensions. Therapeutic techniques for Julia’s spine, muscles, fascias, visceral structures, and other joints helped to normalize the forces connected to the injury zone and promote its recovery. Progression of her case emphasizes the basic principle of responsiveness and self-corrective capacity of body tissues when given proper conditions. Focus on this capacity will allow insight into various elements of body function.

Including its elements that are instructional for therapists, the book’s primary theme is an informational source and guide that is both useful and provocative. This can shed light on the role of the therapist, self-



help with injury, and sports/movement training. It addresses the question of what are realistic expectations for the function, health, and in-depth treatment of ligaments and tendons?

### **A Manual Therapy Model—A New Approach**

The primary techniques I used in Julia's case (and in all of my practice) are the osteopathic methods of Strain-Counterstrain, cranial and visceral osteopathy, and Fascial Release, as well as Body-Mind Centering. Also utilized are techniques from Zero Balancing, and from acupressure therapy, which was my initial training and licensing. All of these methods individually and sometimes in combination have valuable aspects for treatment of tendons/ligaments, which will be discussed in later sections. I first worked with large numbers of these injuries in the mid-1970s when much of my practice in New York City consisted of dancers. Since then it has been a full-time practice involving all the major areas of structural health. These include: lower back and other spinal problems in the cervical area, visceral restrictions, nerve impingements, the cranial area, and peripheral joints (shoulder, ankle, etc.).

What actual changes occur in the ligament or tendon tissue during the healing process? Some are seen in Julia's recovery (e.g. reduction of adhesions) and there are a number of others that will be illustrated. What is changed in the interaction of that tissue with surrounding structures, fluids, and neural function? There is not much available literature with well-woven description of structural and functional events that are vital in tendon/ligament recovery. The book relates these physical shifts of recovery to the therapy method(s) I use to promote the change.

The role of manual therapy in the conventional health care system is still very limited. In a system involving steep costs for highly technological and hospital-based interventions, incorporating the option of a noninvasive, effective treatment could be attractive.

My manual therapy model for treating these injuries consists of: