

**-SAMPLE-
Massage Therapy
Instructors' Guide
to**

Save Your Hands!
2nd Edition

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**An Approach to Teaching
Injury Prevention and Ergonomics
for Massage Therapists**

BODY of WORK BOOKS

Massage Therapy Instructors' Guide to Save Your Hands! The Complete Guide to Injury Prevention and Ergonomics for Manual Therapists, Second Edition

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Disclaimer: The purpose of this Instructors' Guide (the "Guide") and the book on which it is based, *Save Your Hands! 2nd Edition* (the "Book") is to provide basic information for manual therapists on the subject of occupation-related injury in order to increase their awareness of this issue. The Guide and the Book do not offer medical advice to the reader, and are not intended as a replacement or substitute for appropriate health care advice, diagnosis and treatment. Readers who experience any signs or symptoms of injury or any other medical condition should seek immediate professional medical advice and treatment.

The techniques and recommendations included in the Guide and the Book are meant as general suggestions. They are not to be construed as specific directions for any one reader, and may need to be adapted to take into account the individual's circumstances, including his or her physical condition, health status and working conditions. The reader should seek appropriate professional medical advice before beginning any diet or exercise regimen, and before taking any vitamins, dietary supplements or other medications. The reader is further encouraged to refer to other books on the subject for further edification; please see the bibliography for suggested additional reading.

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Introduction

Preventing injury is a concern all massage therapists share. As a result, your school has made a commitment to its students to provide comprehensive information on self-care and injury prevention to help them protect their investment in their training and prepare them for a long, healthy career in massage. We thank you for choosing to use *Save Your Hands! 2nd Edition* as the required textbook for these efforts.

We have designed *Save Your Hands! 2nd Edition* to provide the proven self-care, injury prevention and ergonomics strategies and tips your students need in one accessible, easy-to-read resource. We are committed to helping you teach this information effectively and easily, and to assisting you in finding ways to integrate it into your curriculum in a way that works for you. In this Instructors' Guide, you will find practical suggestions and a multitude of ideas and activities that you can use to present the information in a lively, dynamic manner. We are also happy to personally answer your questions and provide additional support to ensure your success in using *Save Your Hands! 2nd Edition* as your required self-care textbook.

Overview

This Instructors' Guide is designed to assist you in integrating the information presented in *Save Your Hands! 2nd Edition* into your existing curriculum. We believe that teaching injury prevention and ergonomics throughout a massage program, rather than as a special class, is the most effective way to help students become professionals for whom working safely is the only way to work.

Since massage school curricula can vary, we want to give instructors a flexible approach to presenting the information in the textbook. We have therefore organized the teaching goals and learning objectives for the information in two different ways. You can adopt either of these methods, or use elements of both, whatever works best within the structure and time constraints of your program. We hope to give you great flexibility by providing many options from which to choose in creating a self-care and injury prevention curriculum that works for you.

Save Your Hands! 2nd Edition is designed to be a comprehensive reference that students can use throughout their careers. We recognize that you may not be able to cover all of the material in the book in your curriculum. By making the textbook part of your curriculum, you are ensuring that students will own the textbook and can then read the remaining material on their own.

Please note: if program constraints do not allow you to incorporate the information in *Save Your Hands! 2nd Edition* throughout your school's curriculum, you can use this Instructors' Guide to present the material effectively in a single course that includes the topics of self-care and injury prevention.

Included in this Instructors' Guide are:

1. **Chapter-by-Chapter Guide:** the most important points to cover in each chapter, with goals, learning objectives, topics for discussion and activities;
2. **Curriculum Guide:** these suggestions are designed to help instructors find simple and easy ways to integrate the textbook's most important concepts into their existing curriculum by incorporating suggested readings and activities to illustrate the concepts. This guide points out key moments in a standard massage program when these concepts can be most effectively taught;
3. **Learning Activities:** classroom activities you can use to reinforce the concepts in the textbook for your students in a practical and kinesthetic manner (activities you will find in the textbook itself are also referred to in this Instructors' Guide).

How to Prepare

- Read *Save Your Hands! 2nd Edition*, including Recommendations for Massage Schools (textbook Appendix C).
- Review this Instructors' Guide.
- Look through the suggested learning activities in the textbook and in the Instructors' Guide and gather the necessary materials for the ones that you choose to incorporate into your teaching methods.
- If at any point you have questions about how to use these materials, contact the authors of *Save Your Hands!* at info@saveyourhands.com, or 877-424-0994.

Suggested Equipment for the Activities

- A variety of massage tools (T- and L-bars, "Bongers", other trigger point and muscle stripping tools)
- Bathroom scale
- A 2-3 pound free weight
- A piece of plexiglass
- Pocket ergometer or similar EMG feedback unit
- Grip and pinch dynamometers
- Bowling ball "head" (see Instructors' Guide Learning Activity 1)

Quick Guide to the Central Concepts of *Save Your Hands! 2nd Edition*

- MSD symptoms are common, and are a signal that something needs to be done
- Early, effective treatment of symptoms is key to reducing the possibility of symptoms leading to injury
- Injuries are also common, but preventable

- Injuries have varied and numerous causes; for this reason, a holistic, multifaceted approach to prevention is most effective
- Using good body mechanics is important as part of this holistic approach, but good body mechanics alone does not prevent injury
- If injury occurs despite your best efforts, effective treatments are available that can get you back to health, most often with minimal interruption to your career.

Teaching Tips

- Encourage open discussion of symptoms or discomfort. This avoids feelings of shame or fear that can keep students from seeking assistance from you to adapt techniques or figure out what is causing the symptoms, and from seeking appropriate treatment of symptoms, both of which can eventually lead to injury.
- Help students feel empowered and optimistic about their ability to prevent injury. *Save Your Hands! 2nd Edition* takes a positive approach: injury is preventable, and if it does occur despite your best efforts, with early, effective treatment, most people get back to work with minimal interruption to their work schedule.
- Use small group coaching to encourage sharing between students of alternative techniques, tips for working more comfortably, etc. When assigning massage exchanges, suggest mutual observation, videotaping if possible, to identify problems with body mechanics, postures and positioning.
- Before starting hands-on work in class, do 5 minutes of warming up/stretches to get students into the habit of warming up before they begin to work. See Chapter 11 for guidelines and suggested exercises.
- Take advantage of class breaks (including academic classes) to lead students in some stretches and simple exercises from Chapter 11. Numerous studies have shown that short exercise breaks restore energy and improve focus and cognition, particularly after lunch when energy naturally wanes. This practice will also encourage students to get in the habit of exercising and stretching during breaks, a habit they can continue as professionals during their workday break times.
- During school, students are primarily intent on learning how to treat clients; as a result, they can be resistant to taking the time to learn about self-care. You can help overcome this resistance by pointing out that nearly everything they learn about protecting themselves from work-related injury can be applied to their future work with clients. The symptoms clients present to their massage therapist are likely to be at least in part caused by the work they do or their work environment. Whenever possible, try to correlate the injury prevention information you present to situations that students will encounter with clients, to help students make this connection and stay engaged with the subject.
- Share your own experiences with students, how you have dealt with symptoms and/or injury, and what you do to prevent injury in your own work.

Chapter-by-Chapter Guide

Save Your Hands! 2nd Edition

Chapter 1: Raising Your Awareness of Injury Risk

Teaching Goals:

- Make students aware that the physical demands of massage work can lead to injury, but that injury is not inevitable.
- Help students understand that if they do experience symptoms of injury, they are not alone: symptoms are a common occurrence among manual therapists.
- Discuss the importance of reporting symptoms early, and provide students with a procedure to follow if they do experience symptoms.
- Encourage students to speak openly about any concerns they have related to symptoms of injury.
- Encourage students to check in periodically with each other, instructors and school administrators on how they are handling the demands of school.

Learning Objectives:

- List the 5 parts of the body most frequently injured among massage therapists.
- List the types of injuries that occur most often, and the massage-related activities that can lead to these injuries.
- Identify their own concerns about injury and voice them in class.

Reading Assignments:

Pages 3 through 9 (entire chapter)

Topics for Discussion:

- What are your concerns about the potential for injury in massage work?
- Has anyone ever worked in at another job where musculoskeletal injuries occurred? How were symptoms or injuries dealt with there?

Activities:

- Ask students to break into groups of 3 (or 4, if class is large). Each group will have 10 minutes to discuss injury concerns and create a list of at least 4 aspects of symptoms or the possibility of injury that they are concerned about. Afterward, ask a representative of each group to report to the class their 4 concerns, for discussion.

Chapter 2: Weak Links in the Body

Teaching Goals:

- Explain why certain parts of the body are injured more often than others.
- Help students understand the inherent vulnerability of these body structures.
- Build a foundation for later discussions of risk factors and the importance of good ergonomics and body mechanics.

Learning Objectives:

- Describe, in general terms, what makes certain parts of the body more vulnerable than others.
- Discuss the interaction between overuse or misuse and vulnerabilities, and how this leads to injury.

Reading Assignments:

Pages 10 to 17 (entire chapter)

Topics for Discussion:

- Think about all of the things that you use your thumbs for. How hard would it be to do everyday things if your thumbs were injured? How about your hands, shoulders, neck or low back?
- We may be able to reduce the vulnerability of some parts of the body with physical conditioning, including stretching and strengthening the muscles around a joint, but we can't change the basic structure that makes them vulnerable. What can we change to reduce our risk of injury?

Activities:

- “Bowling ball head” (Instructors’ Guide Learning Activity 1) to help students understand forces acting on the neck musculature.
- Wrist bending and grip strength (Instructors’ Guide Learning Activity 2) to explain the impact of wrist structure on tendons.
- Effect on the back muscles of bending, twisting, lifting and pulling (Instructors’ Guide Learning Activity 3d)

(Chapters 3-17 to follow)

Curriculum Guide

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First Day of Class

The beginning of class is the ideal time to make an impression on students, when they are enthusiastic and open to new ideas. It is also the best time to prepare them for the physical demands of massage work. Even students who are already in good physical condition may require some massage-specific conditioning. Introduce students to the conditioning exercises in Chapter 11 early in the curriculum, or even before classes begin if possible.

Have the students focus on the following exercises:

- Upper extremity strengthening and flexibility
- Lower extremity flexibility
- Core strengthening

In addition to the exercises in the textbook, students may find it helpful to do additional exercises to build strength and endurance in their hands and arms before hands-on classes start. For example, students can do grip strengthening exercises using therapy putty, or by kneading bread dough or making pizza crust.

Point out to students the importance of continuing to work on their physical conditioning throughout the program and throughout their career. Students may be under the impression that massage work alone provides enough of a workout to keep them in shape, particularly because it can be fatiguing. It is important to let them know early on that performing massage can overuse some muscles, but underuse others, and flexibility and stability around joints can suffer as a result. The most effective exercise regimen for students is a combination of overall physical conditioning along with gradually increasing massage work to help build activity-specific endurance.

Students may also be eager to buy their first massage table. Providing them with information on features to consider when purchasing a massage table can help them to buy one that fits them well. Refer to textbook pages 49-54 for suggestions on the following table features:

- Weight
- Width
- Height adjustment range
- Accessories, e.g., cart, carrying case

During Anatomy, Physiology and Kinesiology Classes

Anatomy, Physiology and Kinesiology classes provide an excellent opportunity to explore functional anatomy and the interaction between body systems as it relates to the causes and treatment of injury. As you teach this material, you can also cover the information on injury physiology and common musculoskeletal disorders (MSDs) presented in the textbook in a way that will not alarm massage students. The following sections will be useful for these purposes:

- The chapter on weak links (Chapter 2) can be used to introduce biomechanics concepts, and to talk about some of the vulnerabilities in the musculoskeletal system. The information can easily be related to massage work, and to injuries that massage clients may have.
- The chapter on injury physiology (Chapter 13) discusses inflammation, the formation of scar tissue, and other injury processes that can be discussed in terms of understanding these reactions if the students themselves become injured, and when their clients experience injury.

Use the following Learning Activities from the textbook and the last part of this Instructors' Guide to bring some of these concepts to life, helping to explain the roles that anatomy and physiology play in creating strengths and vulnerabilities in the human body. Activities that can be used during anatomy, physiology and kinesiology classes include:

- “Bowling ball head” when covering neck musculature (see Instructors' Guide Learning Activity 1)
- Grip strength comparisons when covering hand, wrist and forearm anatomy (see textbook page 115 and Instructors' Guide Learning Activity 2)
- EMG on forearm extensors and flexors to show wrist stabilization and co-contraction (see Instructors' Guide Learning Activity 3a)
- Scapular stabilization, with EMG unit on rhomboids, if possible (see Instructors' Guide Learning Activity 3b and textbook Chapter 5, p. 97)
- Effects of working with the shoulders elevated, with EMG on the trapezius (Instructors' Guide Learning Activity 3c)
- Effect on the back muscles of bending, twisting, lifting and pulling (Instructors' Guide Learning Activity 3d)
- Static loading muscle tension and blood flow – effect on muscular endurance (see Instructors' Guide Learning Activity 4)
- Fingertip pressure and blood flow – effect of circulation on nerves (see Instructors' Guide Learning Activity 5)

During Beginning Massage Class (e.g., Swedish 1)

The habits that students develop as they begin hands-on massage work are likely to stay with them through at least the first few years of their careers. Inexperienced therapists are *(Continued . . .)*

Discussion Questions:

- What types of massage techniques do you do that have you bending over the client on the table? Are there alternatives that you can think of to reduce this bending?
- What happened to the EMG activity when the student bent all of the way over (assuming that there was very little activity)? Why do you think this happened? [muscles lengthened too far to effectively contract, not enough overlap between muscle fibers] If the muscles are not active in this position, what part of the body do you think is holding up the weight of the upper body? [ligaments and other connective tissues]
- Why did muscle activity increase when the weight was held away from the body, even though overall posture did not change? [review the biomechanics and lifting information on pages 34 and 36 of the textbook.]
- Was the muscle activity when tractioning the leg about the same as when lifting it? [it might be, depending on technique] What role do the back muscles play in helping us generate pulling force?

Learning Activity 4: Effects of Static Loading

When our muscles contract for more than a few seconds at a time, the pressure generated by the contraction can prevent more blood from flowing into the muscle. This can occur with even a moderate level of effort. Without good blood flow, muscles fatigue, metabolites aren't flushed out, and trigger points develop.

Have a volunteer hold a light weight (1 to 3-pounds, or 0.5 to 1.4 KG) in each hand, with shoulders flexed to 90°. Raise one arm straight out in front of you to shoulder level and hold it there. Raise the other arm to shoulder level, then lower it back to your side. Repeat, SLOWLY flexing and extending the arm in a steady motion. See which arm feels the most tired after a few minutes, the one holding the weight up, or the one that is moving the weight up and down. Ask the student if it was the arm they expected. Let other students try this.

Discussion Questions:

- Which massage techniques or body positions result in static loading? [sustained compression, tractioning, bending forward at the waist, tipping the head down]
- What are some possible strategies for minimizing the effects of static loading on your body? [limit duration, change positions often, use larger muscles so they don't need to contract as strongly, use a tool to apply compression]

Learning Activity 5: Fingertip Pressure and Blood Flow

Hold a piece of Plexiglas up vertically, and ask a volunteer to apply a typical amount of pressure on it with their fingertips while facing the rest of the class. The other students should see that the volunteer's fingertips are paler as the blood has left them.

Discussion Questions:

- If the pressure on the fingertips is higher than blood pressure in the capillaries, what is happening to the tissues in the fingertips? [ischemia, lack of nourishment to the nerves and tissues, loss of sensitivity]
- Since nerves are sensitive to a loss of blood flow (more sensitive than muscles), what might be happening to the sense of touch in the fingertips when pressure is applied?
- How critical is sensitivity in the fingertips to the skills of a massage therapist?

Applying pressure through the tips of the fingers also increases fluid pressure in the carpal tunnel in the wrist, which can in turn compress the median nerve, further reducing feeling in the hand and fingers. The muscular contraction needed to stabilize the fingers and wrist (“you are keeping your wrists straight, aren’t you?”) while applying pressure can also stress the forearm flexors and extensors.

Mention also that massage therapists tend to overuse their thumbs (refer back to the discussion of most injured parts of the body in Chapter 2). Explain that every pound of pressure applied by the tip of the thumb creates 10 to 12 pounds of force in the CMC joint at the base of the thumb (see textbook page 109, risky, vs. page 108, good).

Learning Activity 6: Engaging the Lower Body

Demonstrate a good stance for engaging the hips and legs when initiating movement and powering the strokes. After you have demonstrated once, have the students go through the activity with you.

Stand with feet at shoulder width, with your hips and shoulders parallel to the side of the table. Have your knees and hips slightly flexed. Demonstrate initiating the movement for a stroke by pushing with your feet, transferring the motion up through your hip and shoulder to power a stroke with the hand on that side. Alternate several times between the two sides of your body, showing the rhythm that can be developed.

Then place one foot well behind the other. Show that the foot you choose to put behind you depends on where you work at the table. At the head or foot of the table, either foot can go back, but at the sides of the table, it will be the inside foot that goes behind you, in order to keep the hips close to the table while avoiding excessive twisting at the waist. Demonstrate rocking back onto your back foot and then forward onto your front foot in order to generate motion through the hips and shoulders and into your hands. Have the