Acupuncture for Musculoskeletal Medicine

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Wolters Kluwer Health | Lippincott Williams & Wilkins

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Acquisitions Editor: Robert Hurley
Product Manager: Elise M. Paxson
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Marketing Manager: Lisa Lawrence
Senior Designer: Joan Wendt
Production Service: Spearhead Global, Inc.

530 Walnut Street
Philadelphia, PA 19106 USA
LWW.com

Printed in China

Library of Congress Cataloging-in-Publication Data
Cooper, Grant, M.D.
Medical acupuncture for musculoskeletal medicine / Grant Cooper, Stuart Kahn, Paul Zucker.
p. ; cm.
Includes bibliographical references.
ISBN-13: 978-0-7817-8198-5
ISBN-10: 0-7817-8198-1
1. Musculoskeletal system—Acupuncture—Case studies. I. Kahn, Stuart. II. Zucker, Paul. III. Title.
[DNLM: 1. Pain—therapy—Case Reports. 2. Acupuncture Therapy—Case Reports. WL 704 C776m 2010]
RC925.5.C663 2010
615.8′92—dc22
2009035437

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Grant Cooper: *For Ana and Mila*

Stuart Kahn: *To Antonio Urbina my long-term partner; to Lee Kahn and Alan Kahn, my parents, who give never-ending support.*

Paul Zucker: *For the patients…may this book contribute in some small way to your realization of health and well-being. For the acupuncture physicians…may this book inspire your healing energy.*

ACKNOWLEDGMENTS

Grant Cooper:
Thank you first to my two coauthors, Dr. Stuart Kahn and Paul Zucker. I could not ask for better colleagues and friends. Thank you also to our editor Robert Hurley and to Eileen Wolfberg for helping guide us through this project. Thank you to Dr. Joseph Helms and his mentoring during the Medical Acupuncture for Physicians course. And, last but not least, thank you to Dr. Kevin Barry for his mentoring and, most of all, his friendship.

Stuart Kahn:
It is with great respect and gratitude that I thank and honor both coauthors of this book Grant Cooper, MD and Paul Zucker, PT. In addition, my initial acupuncture professor and course director Joseph Helms, who presented acupuncture to his pupils as not only a treatment option but an exciting new world of energetics. Thanks also to my colleagues in my medical practice, Dr. Michael Neuwirth and Dr. Alexander Lee, from whom I have learned so much over the years.

Paul Zucker:
As with all accomplishments big or small, I owe a great deal of gratitude to my parents, wife, and daughter for their love and support. I would like to thank my coauthors Dr. Stuart Kahn and Dr. Grant Cooper who continue to inspire me. I owe profound thanks to my teachers, especially to Xiang Yi and Zhang Ke Jian who invited a young American to apprentice with them. Thanks to Li Yu Tang for teaching me the fundamentals of Chinese medicine. Thanks to Jeffrey Yuen, a generous scholar, and as erudite and engaging a lecturer as anyone could ever find. Lastly my most special thanks of all is reserved for Master Tzu Kuo Shih who for the past twenty years has taught me that a heart can be as big as the universe itself.

PREFACE

Chinese medicine has a long and treasured history of treating illness and preventing disease. Specifically, the modality of acupuncture has a particular benefit in treating conditions involving pain, which have been outlined in this book. It is my sincere wish that these methods be utilized and preserved so that Chinese medicine may add to the world's body of knowledge in the medical arts and sciences.

May acupuncture and Chinese medicine contribute to the health and longevity of the citizens of the world.

Tzu Kuo Shih
Guest Professor, Nanjing University of Chinese Medicine
Honorary Director, Qigong Association of Beijing

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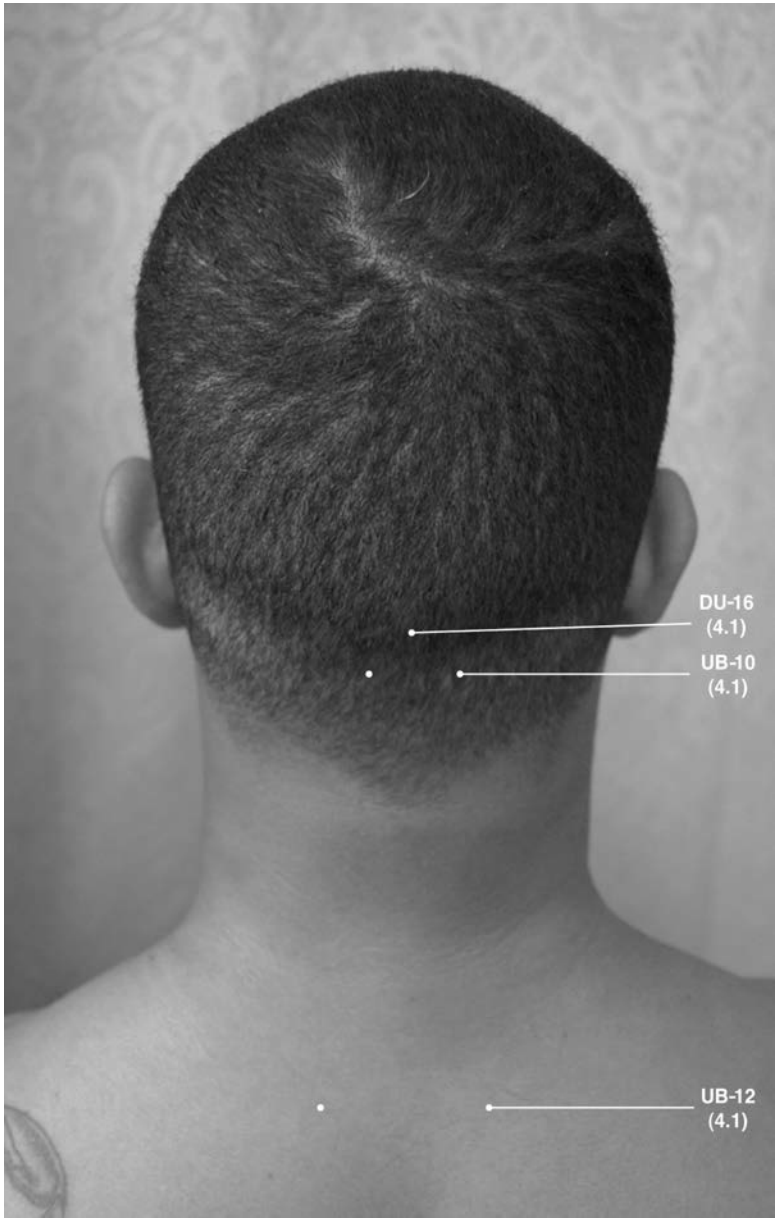
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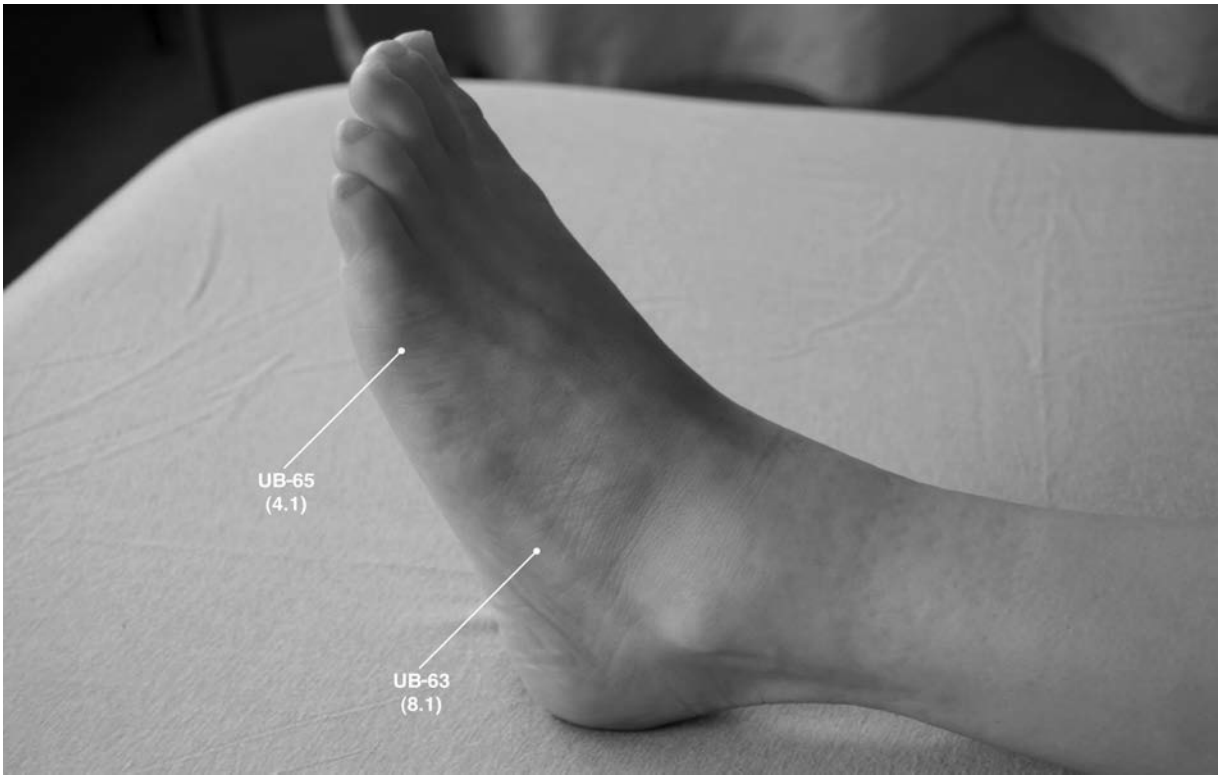
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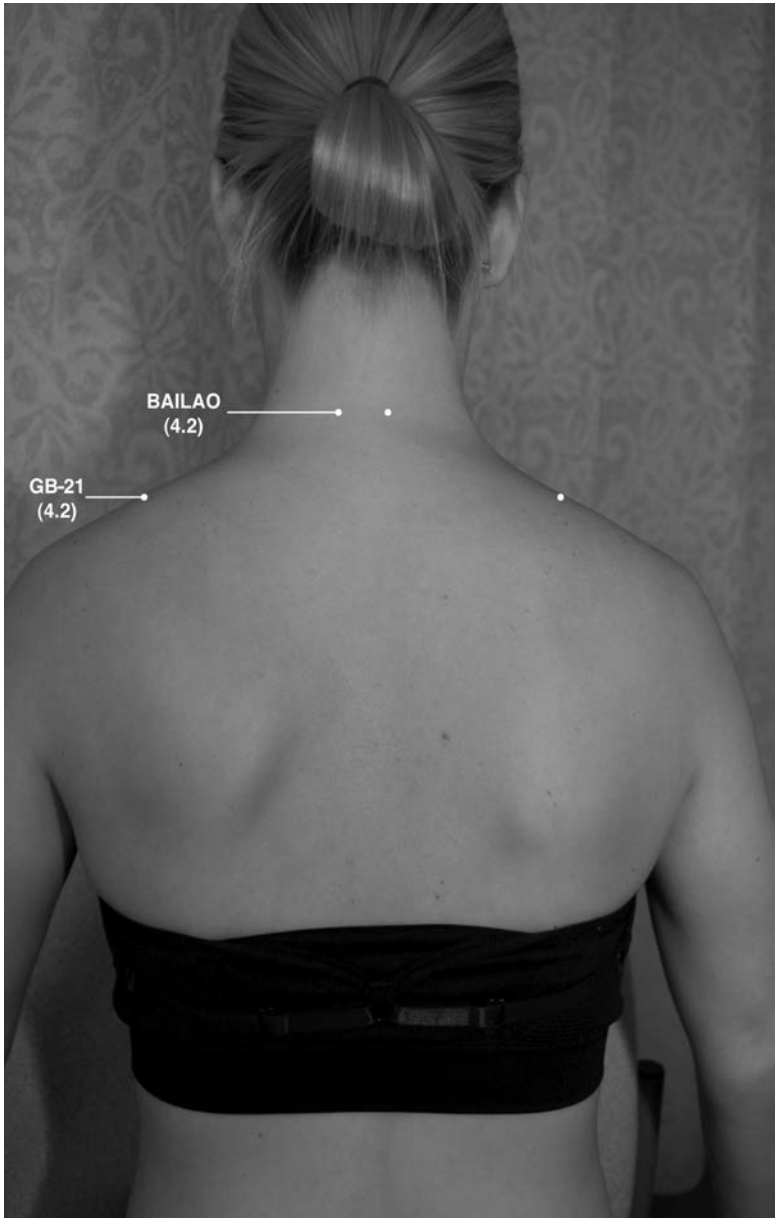
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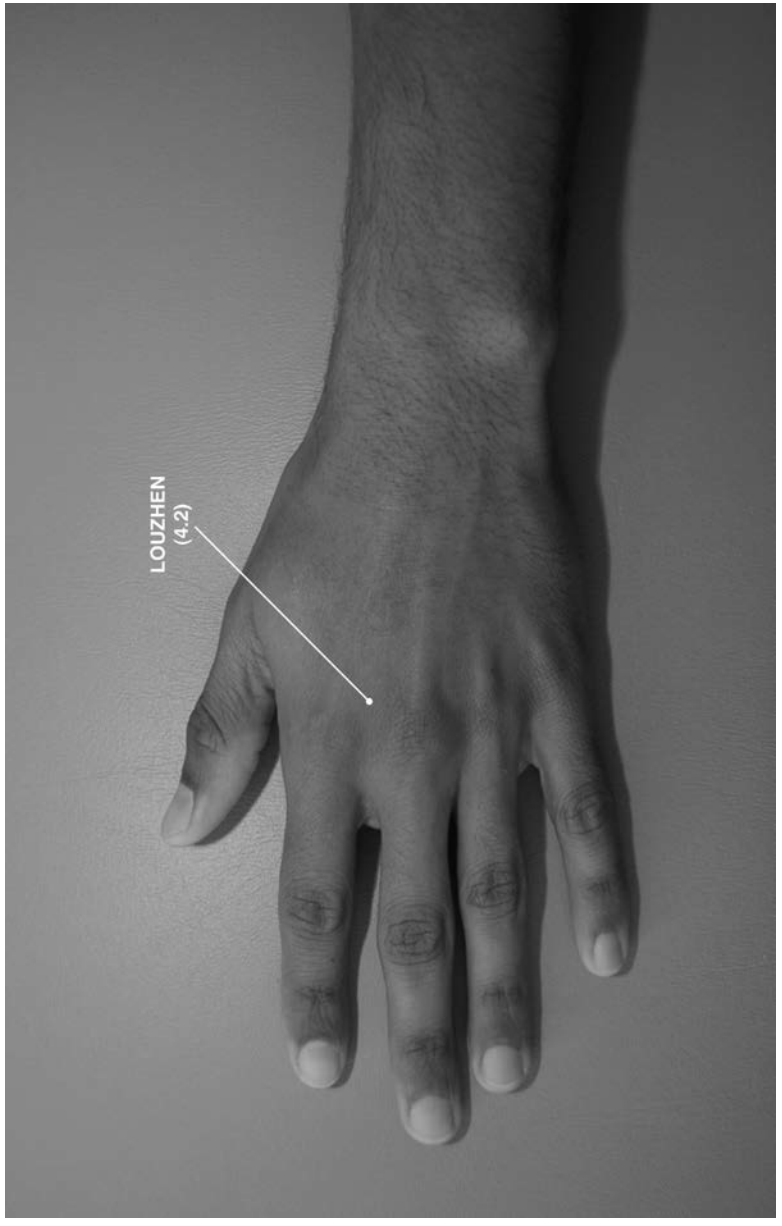
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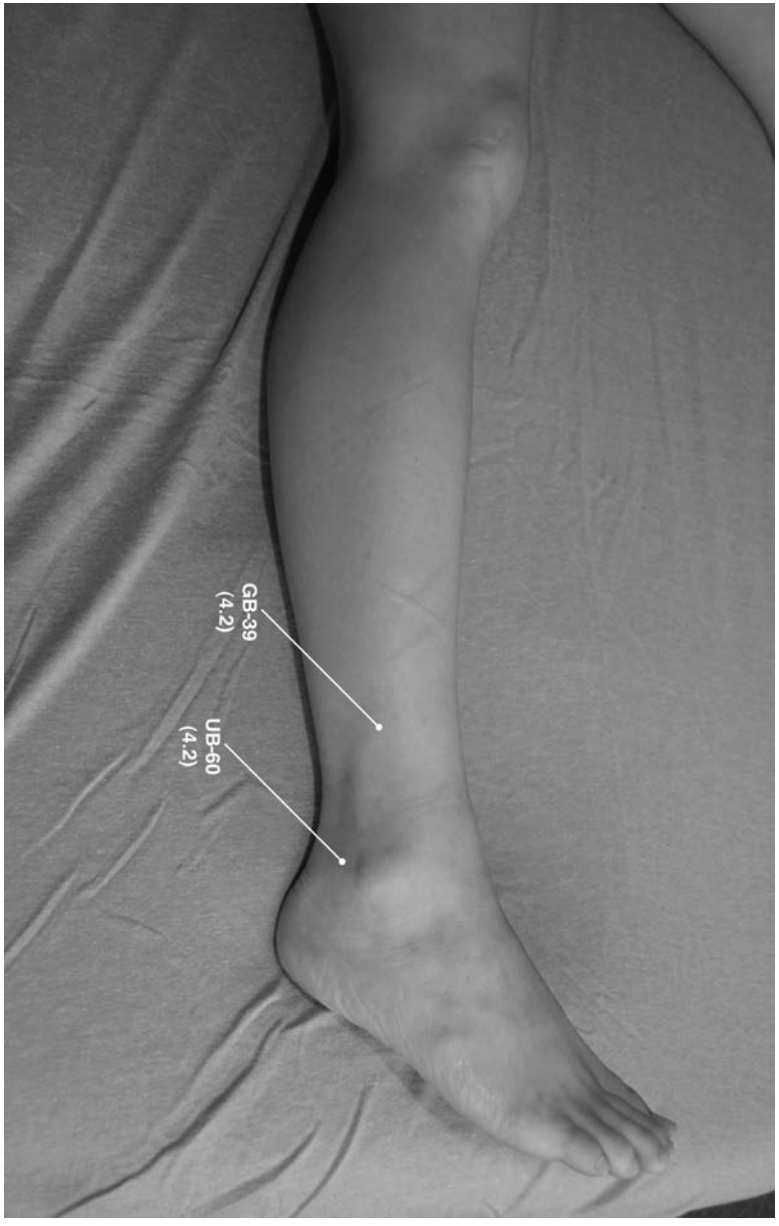
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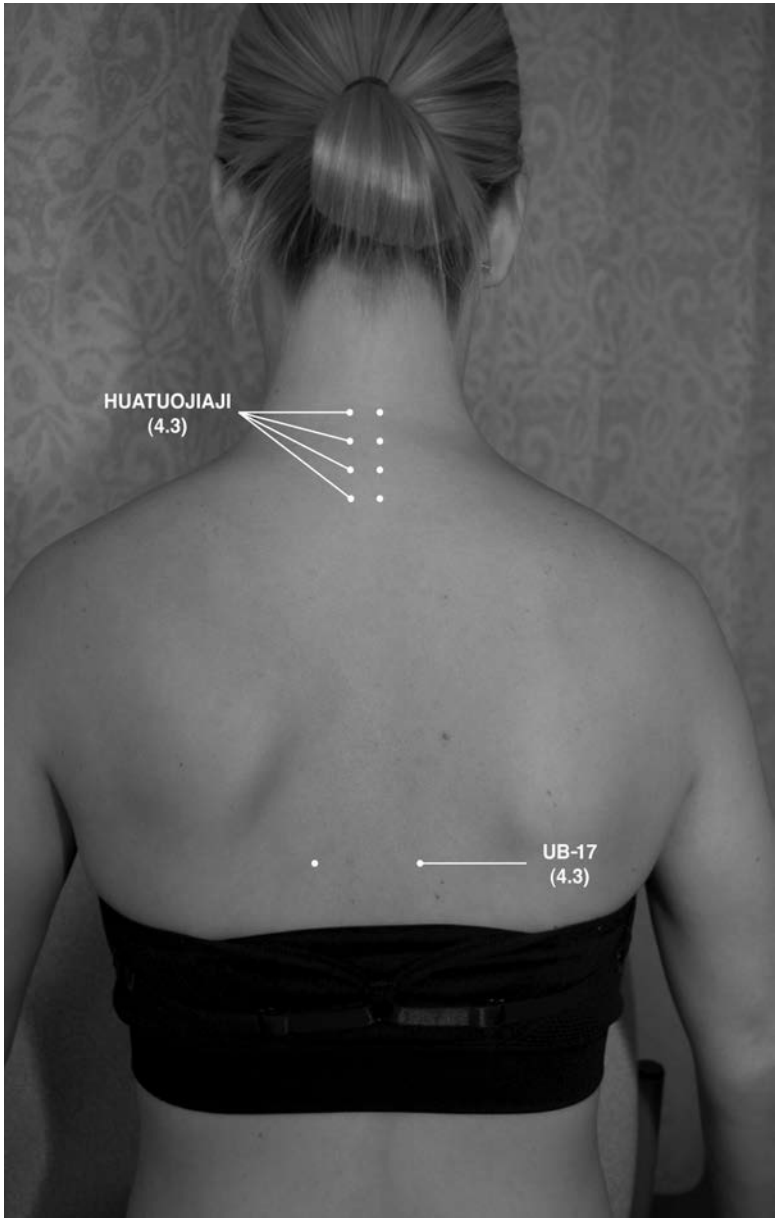
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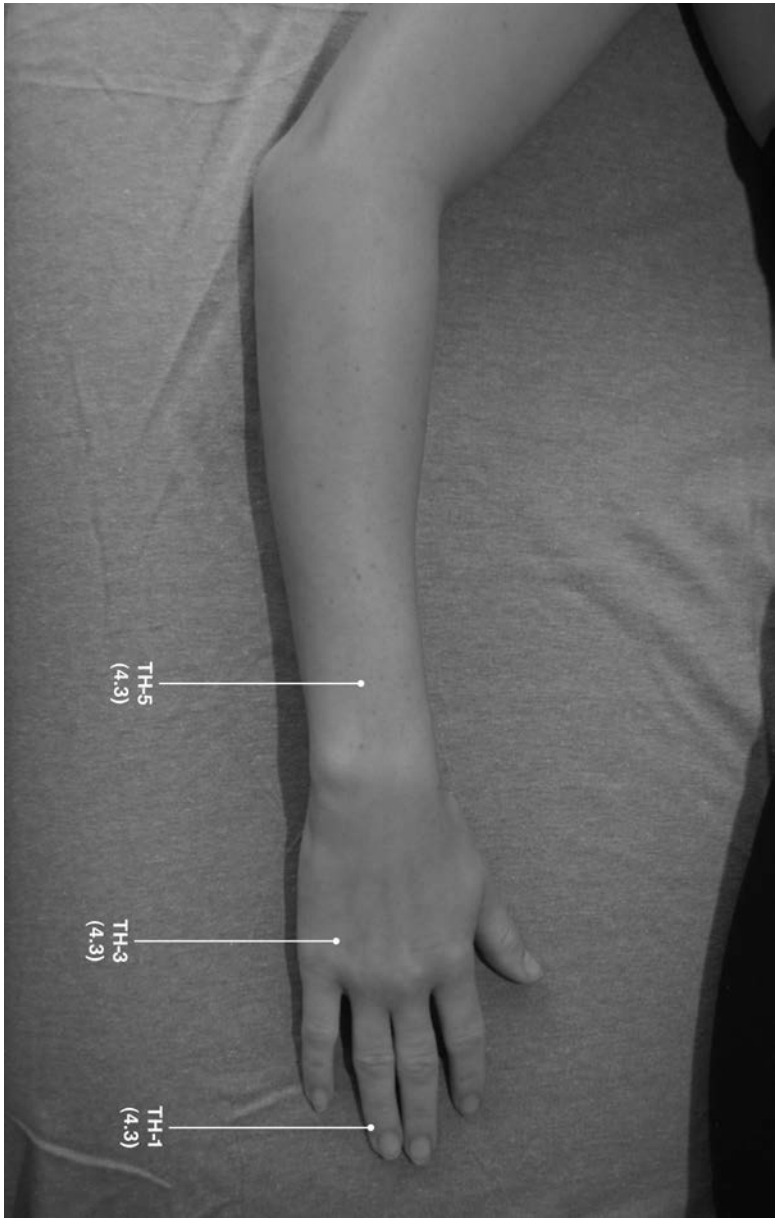
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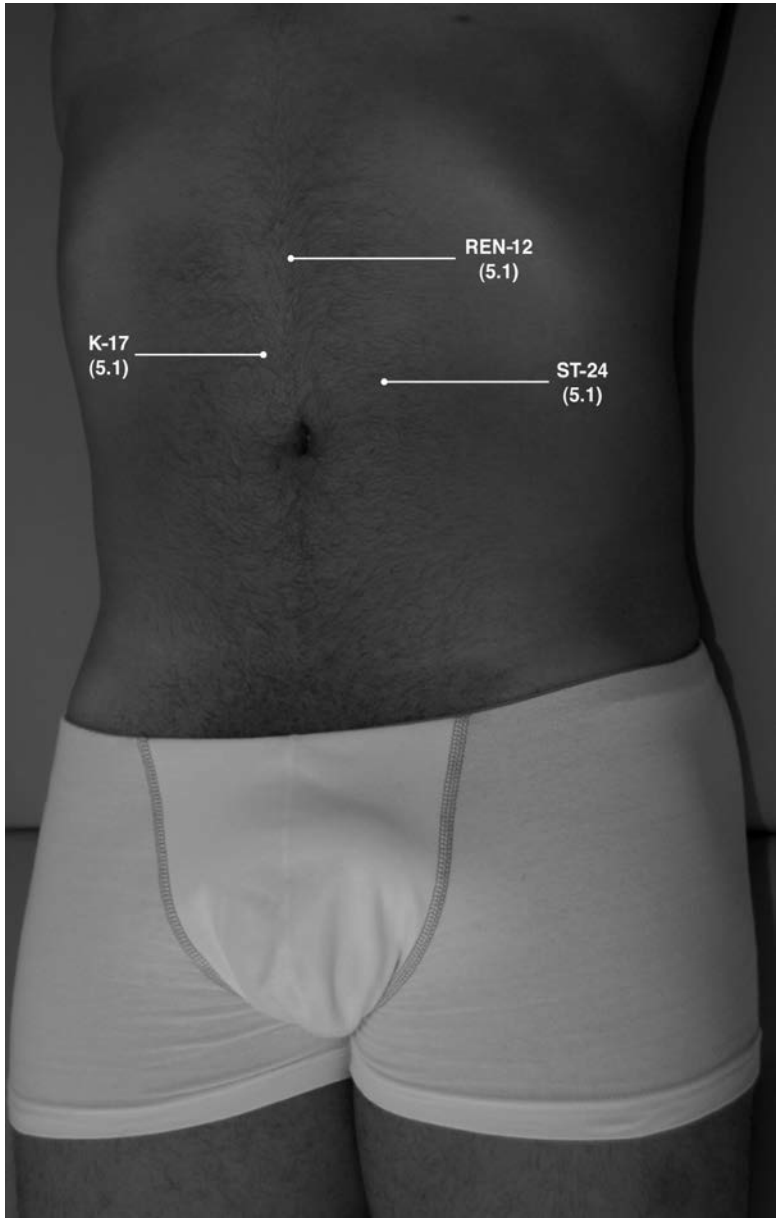
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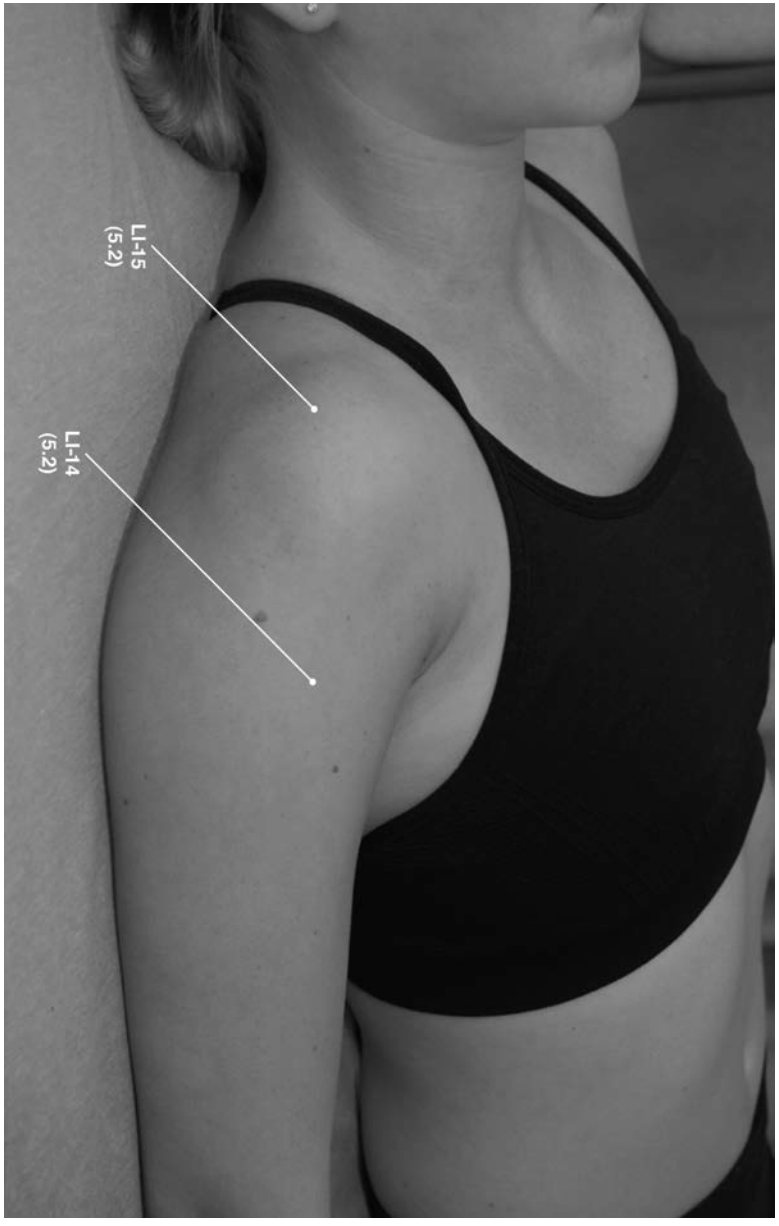
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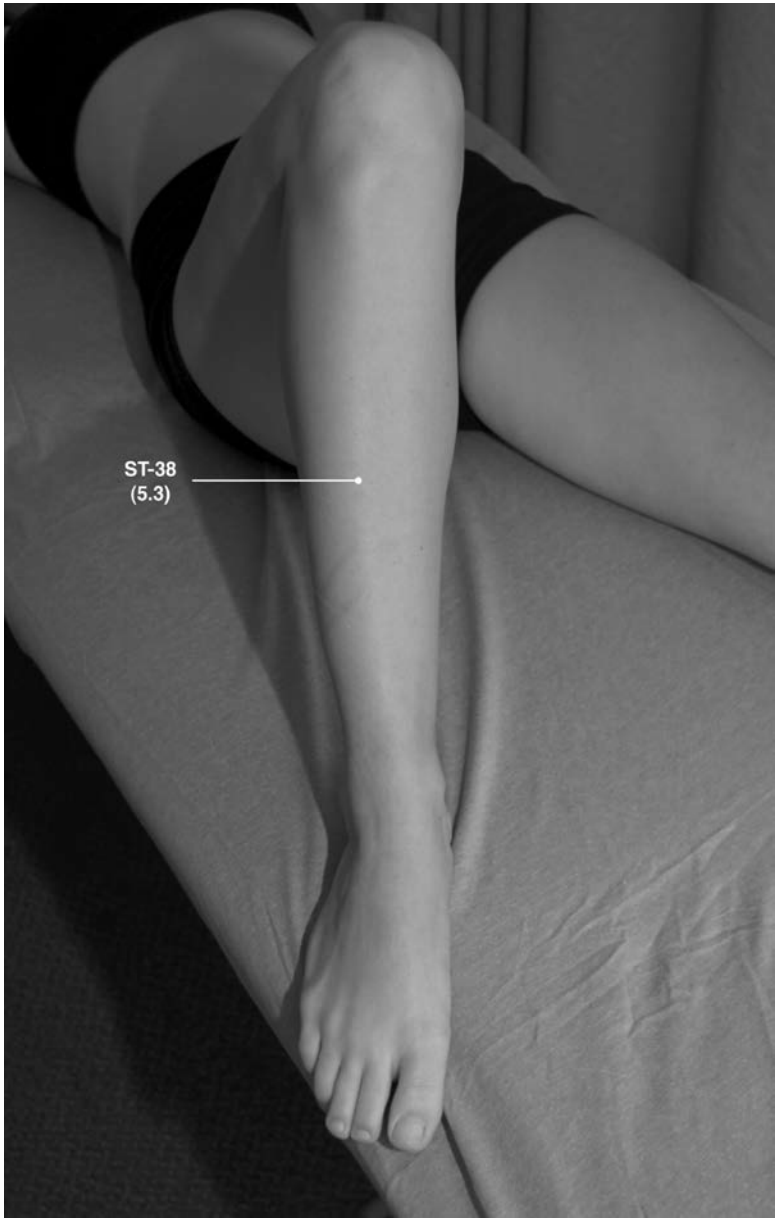
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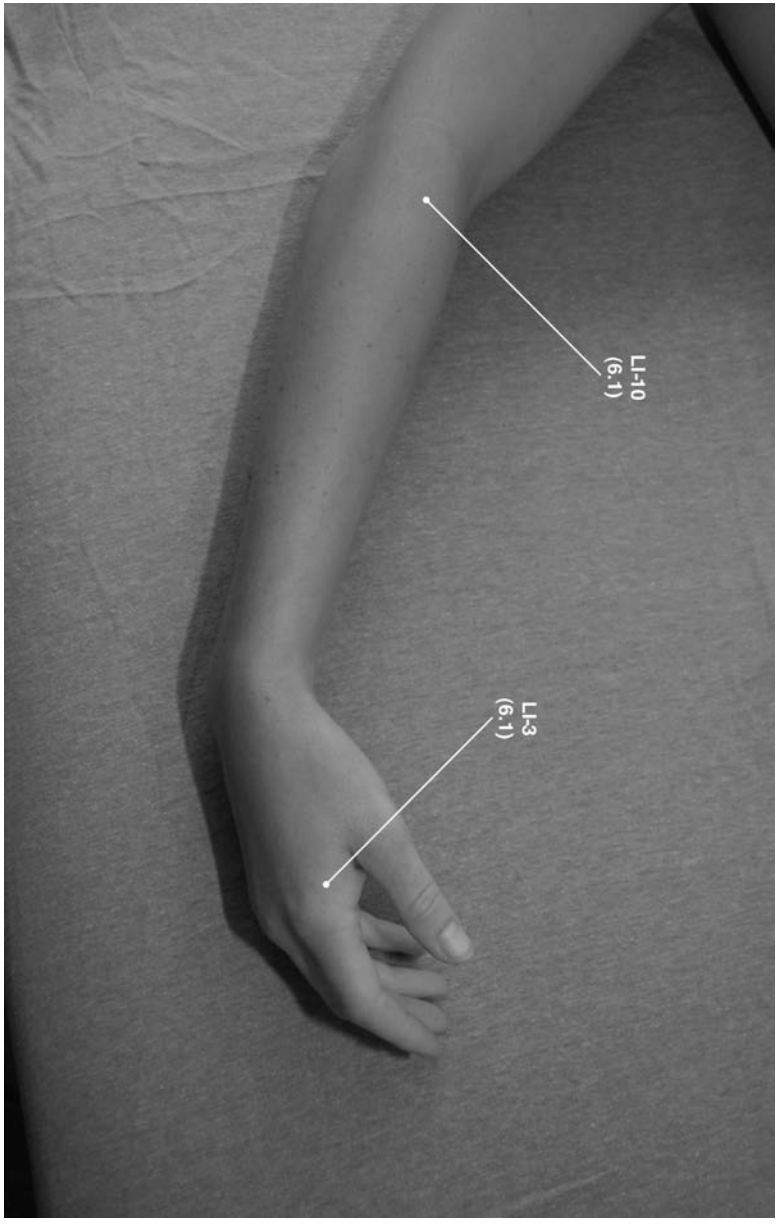
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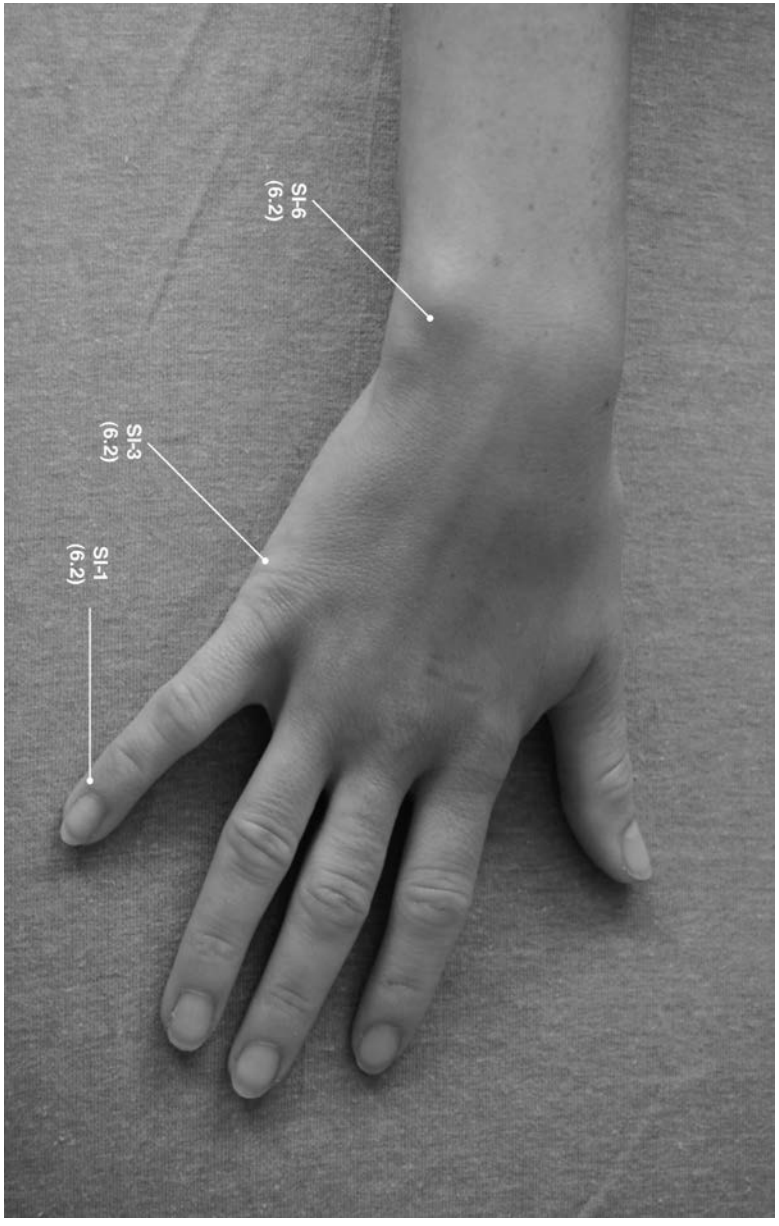
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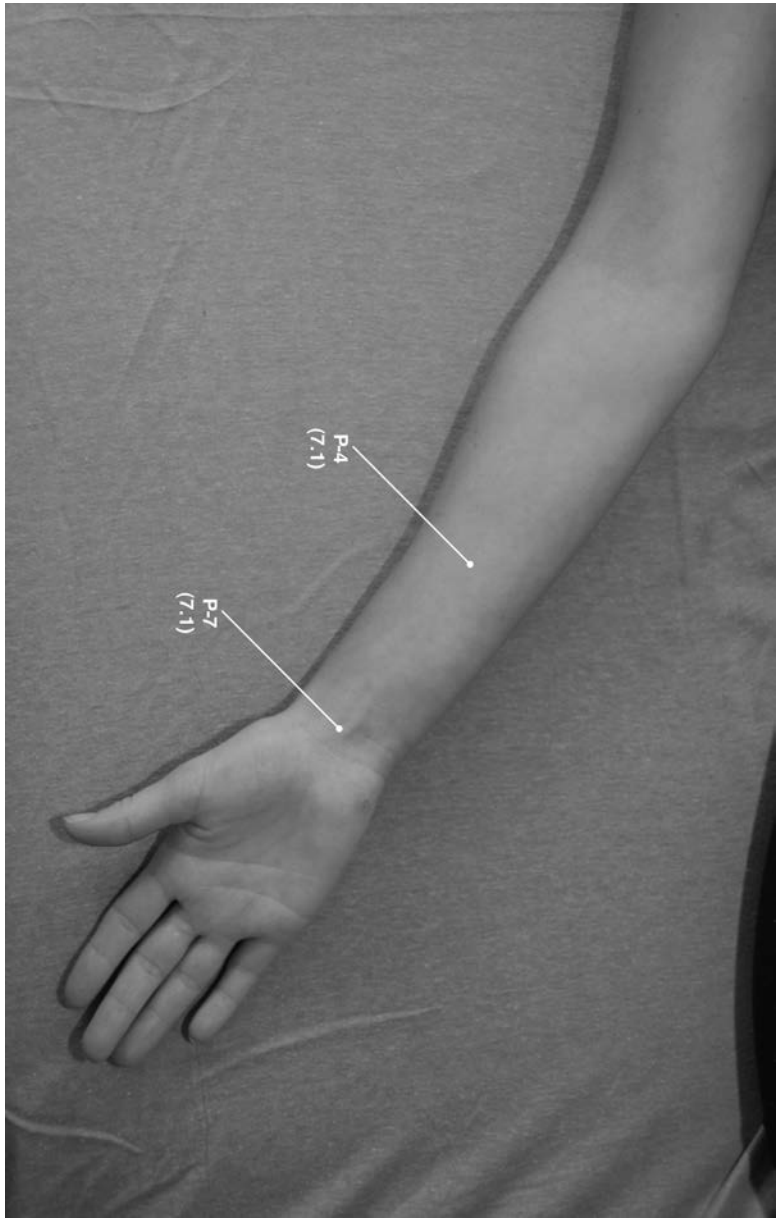
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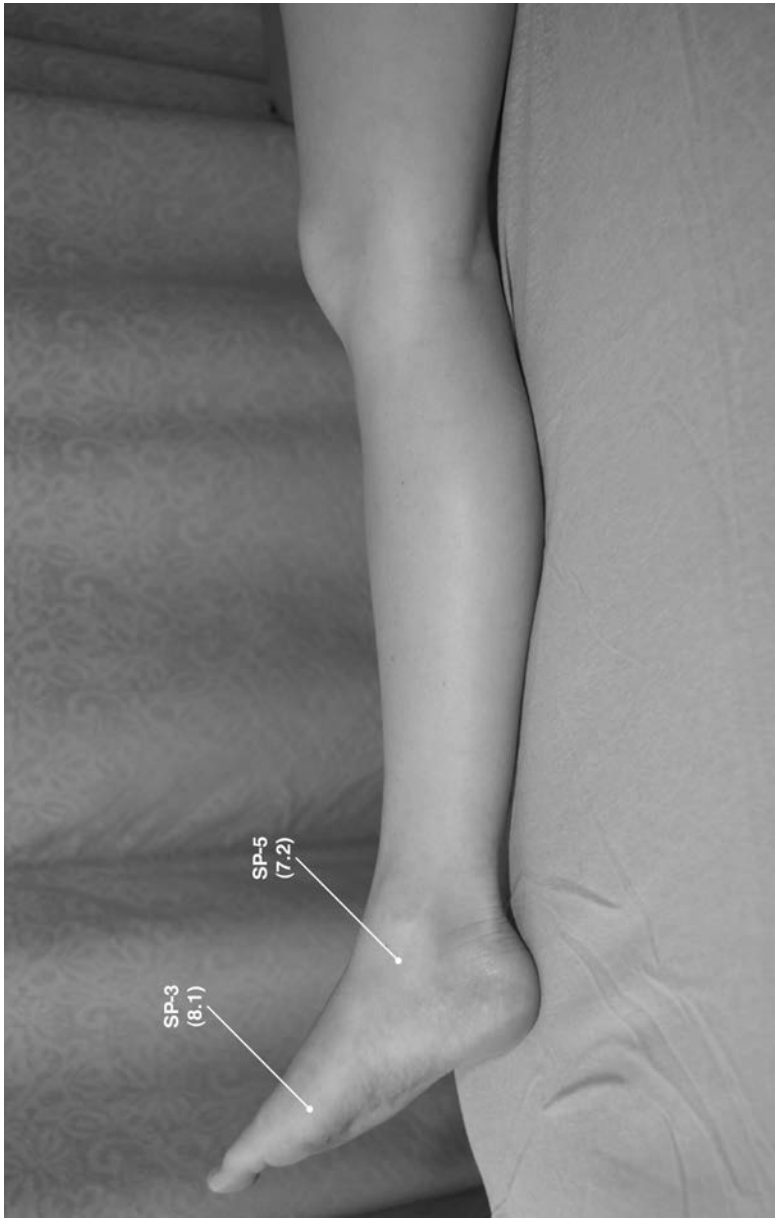
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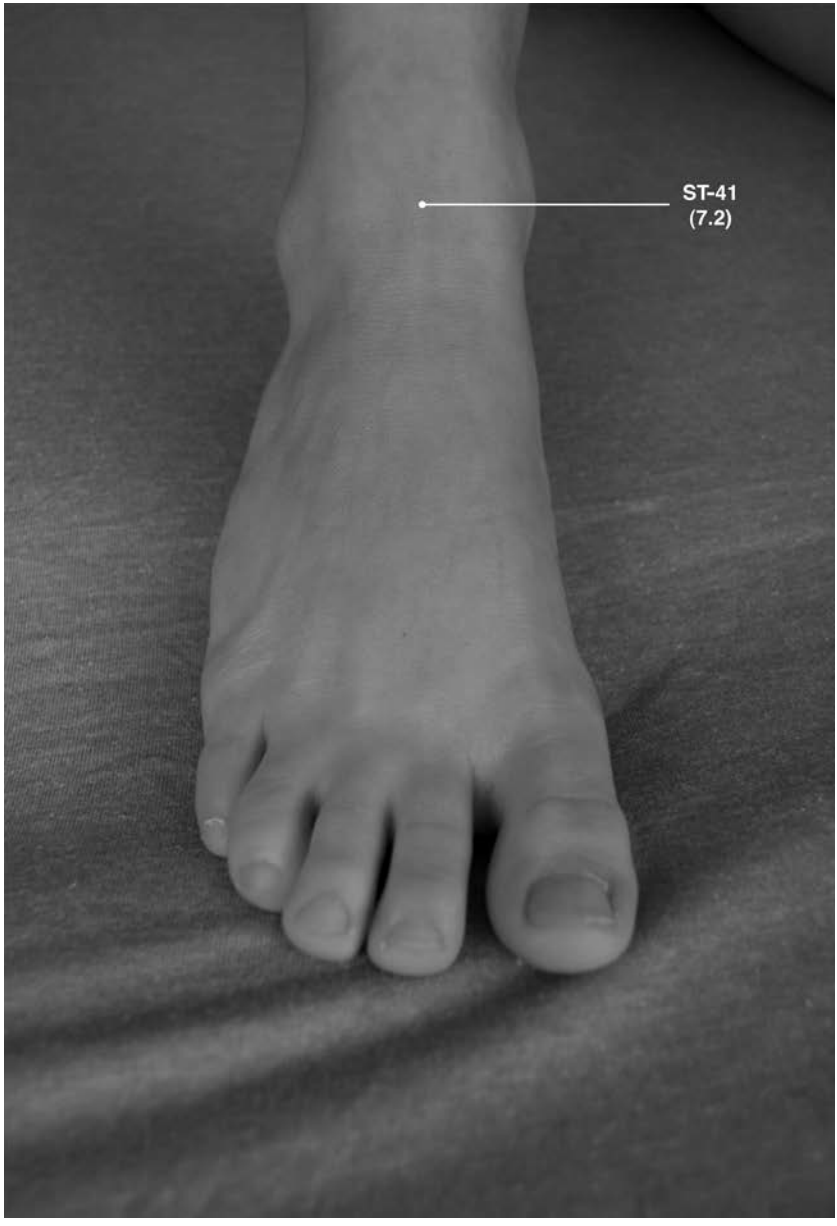
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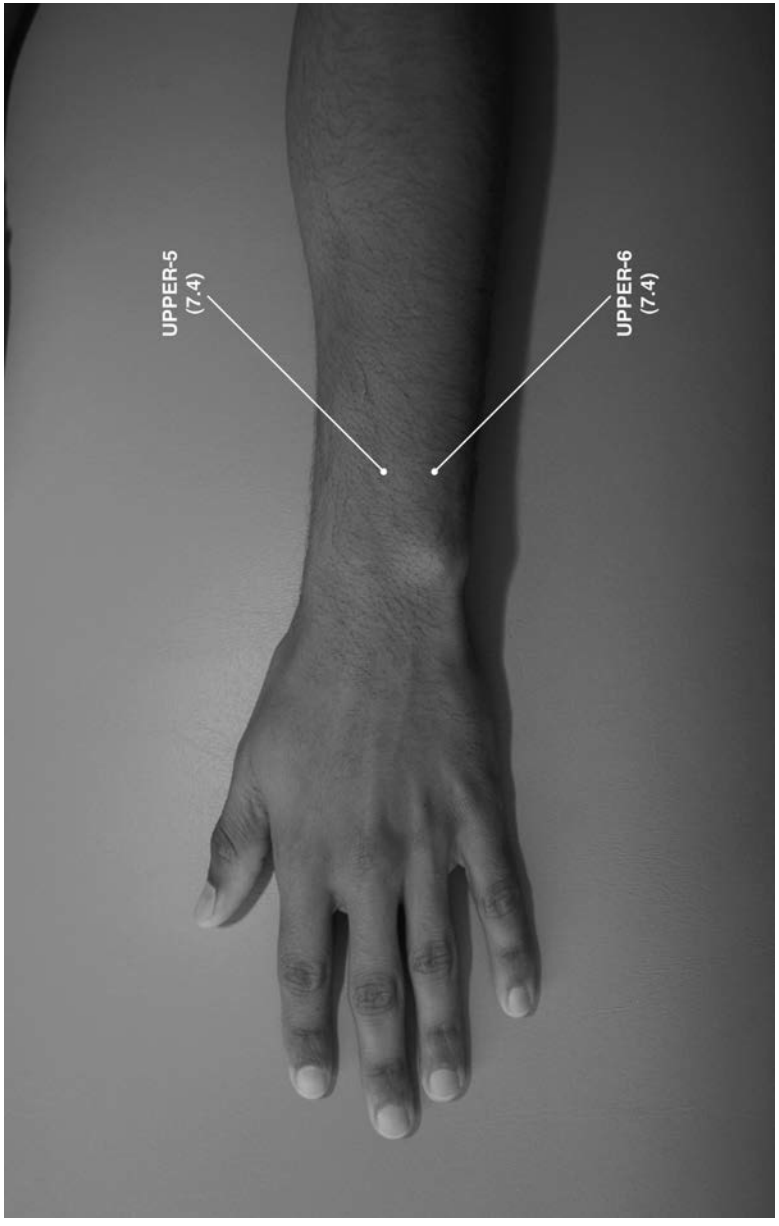
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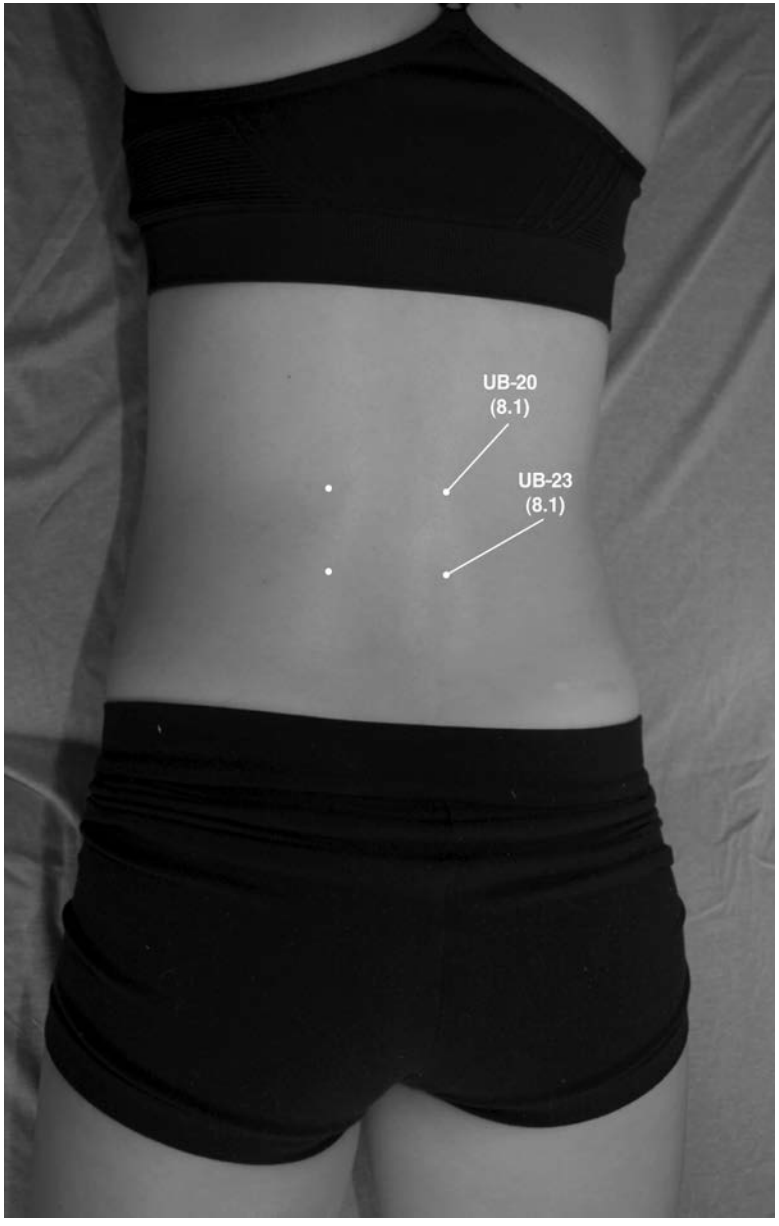
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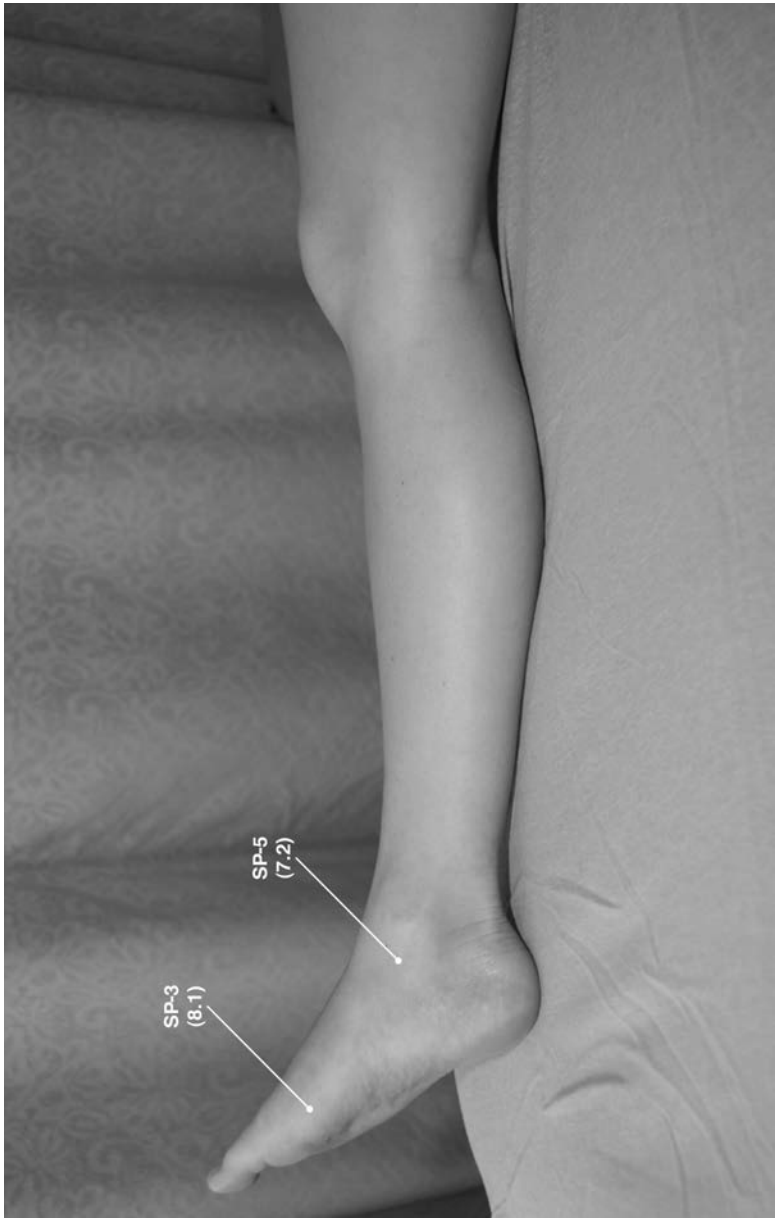
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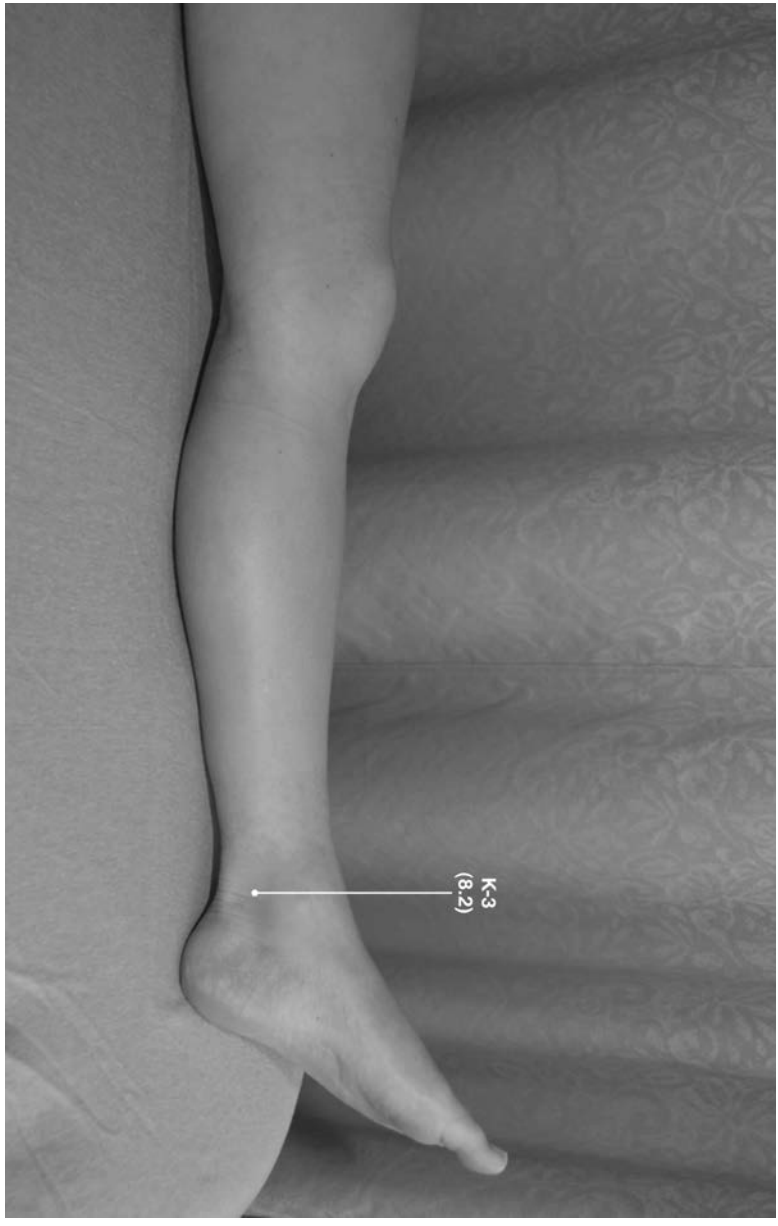
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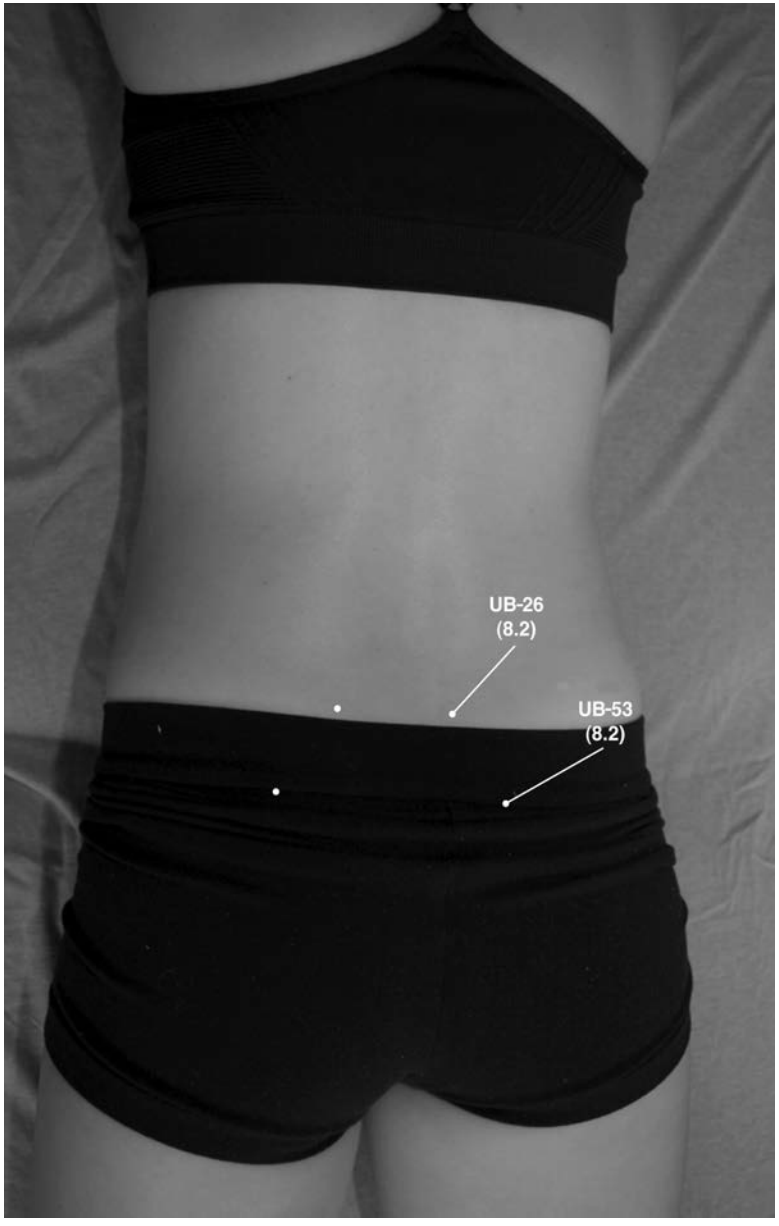
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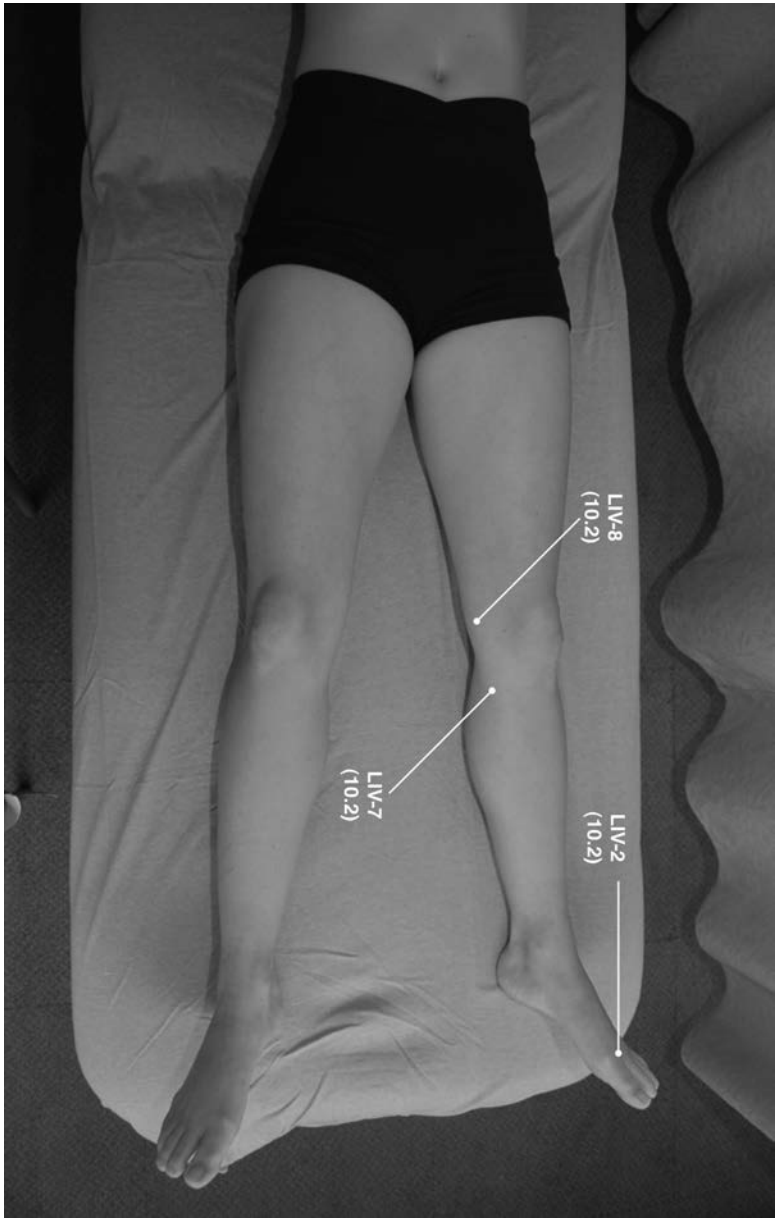
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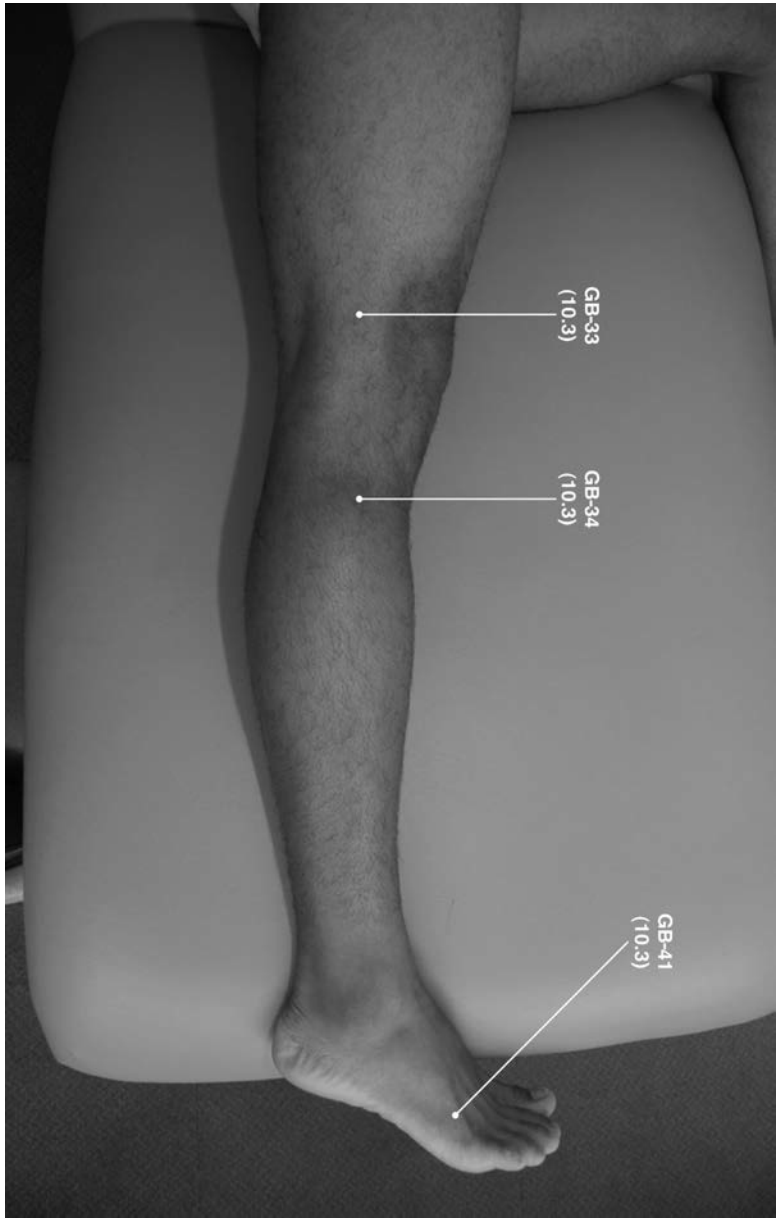
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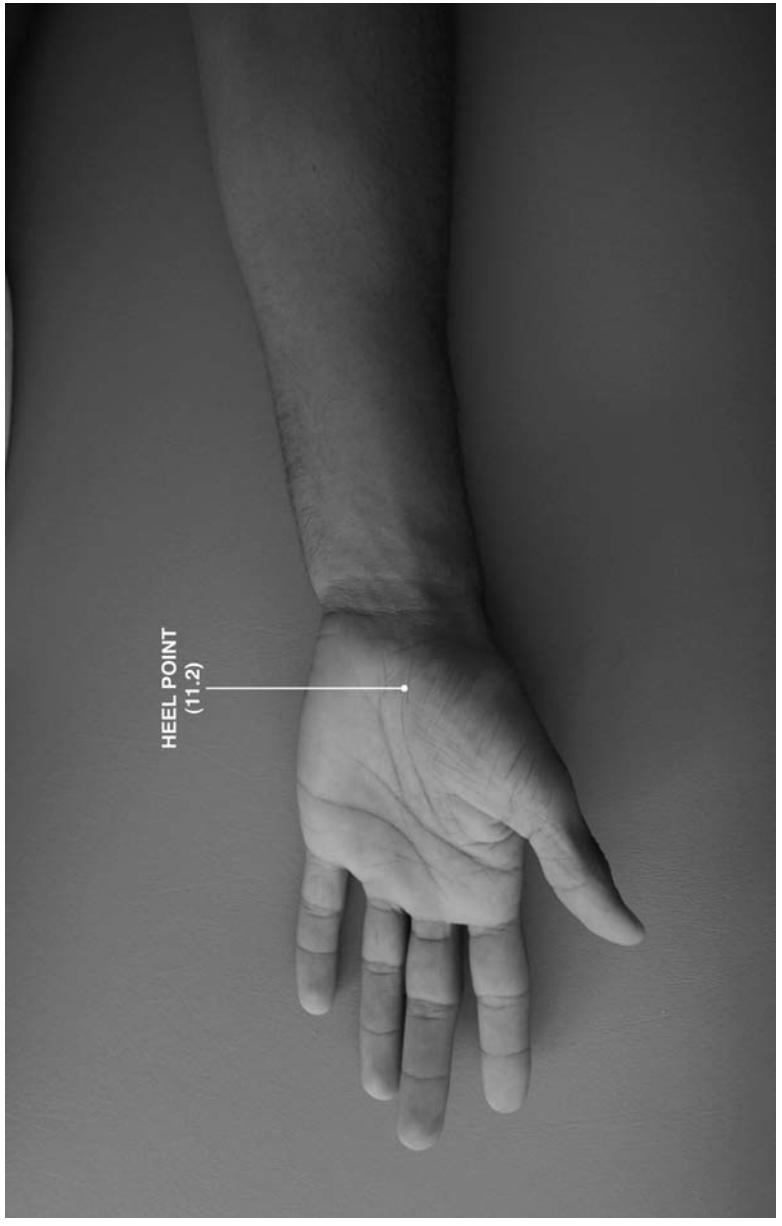
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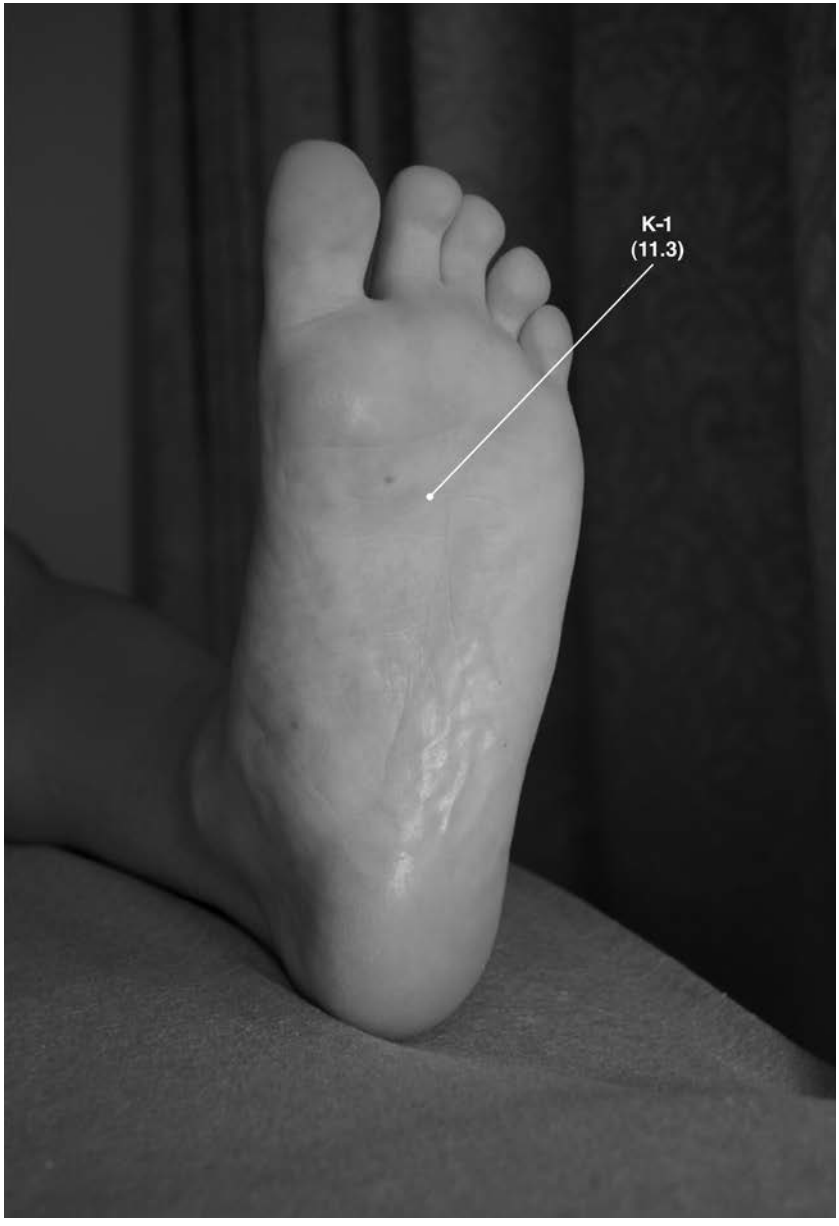
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Acupuncture for Musculoskeletal Medicine

Origins

In 1991, the body of a man named Otzi was discovered by two German tourists in Italy. At first, authorities believed that Otzi was a relatively recent corpse. Analysis, however, revealed that he had died almost five thousand years earlier, around 3300 B.C.E., making Otzi by far, the oldest excavated human corpse. On Otzi's body, more than fifty tattoos were discovered. Some were over acupuncture points that would today be used in the treatment of certain ailments, such as osteoarthrosis, which Otzi was known to have. Whether acupuncture was used five thousand years ago is not known, but the history of acupuncture remains illustrious to say the least.

The exact origins of acupuncture are difficult to trace. But we do know that in the second century before the Common Era the Yellow Emperor's *Classic of Internal Medicine* (*Huang Di Nei Jing*) appeared. This text was composed of two known books: *Plain Questions* (*Su Wen*) and the *Spiritual Axis* (*Ling Shu*). Together these books were the first to systematize the theories of Chinese medicine. In the second century C.E., the *Classic of Difficulties* (*Nan Jing*) followed and expounded on the theories of the *Nei Jing*. Then in the third century C.E., the *A-B*

1

INTRODUCTION

Classic of Acupuncture (*Jia Yi Jing*) by Huang Fu Mi appeared. This is generally considered the first and foremost complete text on acupuncture theory and practice.

It is safe to say that over the last two thousand years, acupuncture has continued to evolve. This evolution has been reflective of the times and also by the specific areas of the world where it is has been practiced. Classical Japanese acupuncture, for example, is different from Korean, which is different from Indian, which is different from Chinese, which is different from French, and so forth. Even within each country there are many traditions, lineages, and schools of thought.

In 1971, acupuncture made its public debut in the United States. In an attempt to open dialogue with China, President Nixon's Secretary of State Henry A. Kissinger made a visit. In Kissinger's party was a *New York Times* reporter, James Reston, who was stricken with appendicitis while on the trip. Following an appendectomy in a Chinese hospital, Mr. Reston received acupuncture. Impressed by the treatment and other observations of traditional Chinese medicine (TCM) used in the hospital, Reston reported on them in the *New York Times* on his return to the USA. Over the next three decades, acupuncture exploded in popularity.

What Is It?

There are many different ways to practice acupuncture. In all major schools, acupuncture involves the insertion of needles into various points on the body. Through the stimulation of these points, it is believed that various ailments can be healed. How acupuncture works, what is involved in actually performing acupuncture, and how the different schools vary in detail, forms the subject of subsequent chapters.

Where We Are Today

According to the National Center for Complementary and Alternative Medicine (NCCAM) and the National Center for Health Statistics (NCHS), part of the Centers for Disease Control and Prevention, the U.S. public spent approximately $40 billion in 1997 alone on Complementary Alternative Medicine (CAM). In 2002, according to the National Health Interview Survey, more than 8 million adults reported having used acupuncture in their lifetime, and more than 2 million adults had used acupuncture in the previous year.

When patients in the United States and Europe turn to acupuncture, they tend to use it for chronic conditions. Pain is one of the most common reasons (if not the most common reason) for patients to seek acupuncture treatment. Often, patients simultaneously seek assistance from medical doctors, but unless their doctor specifically asks, many patients do not report using acupuncture.

Why is there a reticence on behalf of patients to discuss their interest in acupuncture with their medical doctors? One reason is that acupuncture continues to be considered an alternative treatment. Nevertheless, acupuncture is clearly enjoying increasing popularity in the public arena. Given its increased use and overwhelming anecdotal evidence, it is worth considering whether acupuncture is actually efficacious. And, if so, for what is it effective?

In 1997, the National Institutes of Health convened a Consensus Development Program. Numerous experts in the field met and delivered a Consensus Development Conference Statement. They determined that there is “clear evidence that needle acupuncture is efficacious for adult postoperative and chemotherapy nausea and vomiting and probably nausea of pregnancy” and found “…evidence of efficacy for postoperative dental pain. There are reasonable studies…showing relief of pain with acupuncture on diverse pain conditions such as menstrual cramps, tennis elbow, and fibromyalgia.” However, the panel also pointed out that many of the studies were flawed, and many found no efficacy. Nevertheless, the NIH said: “Acupuncture should be a part of a comprehensive program for asthma, addiction, and smoking cessation. It has substantially lower inci-

dence of adverse effects than many drugs or accepted medical procedures used for the same conditions…," and "The data in support of acupuncture are as strong as those for many accepted Western medical therapies."

Since 1997, there has continued to be a flurry of research into acupuncture for painful musculoskeletal conditions. Much of the research continues to be methodologically flawed, and there are still many open questions as to acupuncture's efficacy for various conditions. But just because acupuncture may be foreign to us, does that mean we need to have a higher level of scrutiny when determining its value? It is not often that we say in the same breath, for example, that there are many open questions as to the evidence-based efficacy of more conventional treatments such as physical therapy and different injection procedures even though the literature is less than clear when it comes to some of these treatments as well.

Even though there is considerably less research on acupuncture that has been published in the English language, this book does present that research and does so without bias. Some of that research supports its use while some does not reach such a conclusive agreement. Nevertheless, the authors in their personal experience have found acupuncture to be highly effective in dealing with various musculoskeletal conditions, either as a first choice of treatment or as an adjunctive therapy to more conventional treatments. This book is an attempt to provide examples of acupuncture treatments for various painful musculoskeletal conditions.

The Aims of This Book

Specifically the aim of this text is to:

- present interesting acupuncture treatment strategies for painful musculoskeletal syndromes.
- present a refresher to those physicians who have taken an acupuncture training course, and expand on that training.
- present this information in a case study format so that the reader may have an easier time with the practical applications of acupuncture.
- provide guidance as to how acupuncture can reasonably be incorporated into a medical practice.
- provide a survey of acupuncture styles and traditions so the reader may become better aware of the diversity of treatment strategies available.
- provide examples of different acupuncture styles knowing that each practitioner may find one or more that particularly resonates with him or her, and can then either seek out further instruction or be inspired to practice that style in greater depth.
- bridge the gap between Western-trained physicians and the Chinese medical community in order to facilitate better communication and respect.

What follows in subsequent chapters are a series of individual case histories presented much as they would be in grand rounds. Following each case is an acupuncture point prescription. This consists of a group of principal points, along with explanations for the choice of each point. A group of supplemental points follows, which incorporates potential adjustments to the primary treatment plan based on slight differences in the patient's presentation. In certain cases, an alternative point prescription describing an entirely different treatment strategy is provided. Needling techniques are also considered. In addition, allopathic treatment protocols for the various painful musculoskeletal conditions are also discussed, as well as where acupuncture may best be incorporated with those treatment protocols.

At this point, it is important to mention that acupuncture and Chinese medicine are not intended to treat specific problems per se, but rather to treat individuals. As such, the treatments outlined in this book should not be considered as recipes to be followed as one might do when preparing a new dish for dinner. Instead they represent potential treatment options or better yet, illustrations of available treatment ideas.

Each acupuncture point prescription then is an example to be learned from and not definitive statements of the "best algorithms." Nevertheless, the authors do find the treatments presented in this text to be particularly effective.

But there still is another way this text can be utilized. The point prescriptions, if studied, can be applied to cases beyond those they are listed under. For example, the case on neck pain–chronic facet joint disease describes a woman whose symptoms are worse during times of stress. The accompanying acupuncture treatment addresses this common precursor to pain, and its strategy can be applied to patients regardless of where their pain may be.

Similarly, the case describing a man with anterior shoulder pain makes use of an acupuncture treatment strategy that is simple, effective, uses few needles, and in principle can be applied to most any syndrome involving pain. Therefore, the approach recommended for using this text is not just as a quick clinical reference alone. It is our humble aspiration that many clinical pearls be found inside these pages.

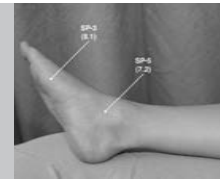
The reader may find in his or her clinical practice that a specific treatment approach lends itself to treating specific issues; for example, wrist and ankle acupuncture is particularly effective at treating acute pain distal to the knees and elbows. The reader may also naturally gravitate toward an approach that particularly resonates with him or her (e.g., a primary meridian approach or ear acupuncture). Whichever it is and wherever you find yourself is perfectly fine. Remain flexible, be open to the myriad possibilities, explore and allow for growth and change. And remember, it is not the absence of a muscle spasm that will determine our effectiveness, but rather the overall wellness of our patients.

Let us assume that we believe the research that says acupuncture is efficacious for certain conditions. Let us also assume that we believe our patients who will at times tell us that acupuncture helped them with a given ailment. If our assumptions are true, then at some point we must wonder how? How does acupuncture work?

When Western physicians introduced acupuncture to popular consumption in the United States, medical doctors and Western-trained scientists immediately set to work trying to explain what effects acupuncture was "actually having" on the body. They used various tools at their disposal. They measured laboratory values, checked imaging scans, and measured electrical currents. Their pursuit is ongoing, but there are a few things they have discovered.

Acupuncture has certain definite measurable effects on the body. First, it stimulates the release of endogenous opioids. In addition, it may also stimulate the immune system as well as the hypothalamus and pituitary gland, which in turn stimulate the release of systemic hormones and trigger alterations in levels of certain neurotransmitters.

When acupuncture points are dissected under a microscope, they often contain an increased number of peripheral nerve endings compared



2

HOW ACUPUNCTURE WORKS

to ordinary numbers of nerve endings found elsewhere in the body. Some scientists have suggested that acupuncture channels (which will be discussed shortly) actually have lower electrical resistance than other pathways in the body.

Ultimately, modern medicine is able to identify specific reasons why acupuncture might help with pain relief. Primarily, this is through the release of endogenous opioids. Indeed, when patients are given naloxone (an opioid antagonist), the analgesic effects of acupuncture have been shown to be reversible.

Science has a harder time explaining how acupuncture might be helpful for conditions not necessarily associated with pain, such as smoking addiction or stroke rehabilitation. Consistent with that skepticism, there is less clinical evidence for the efficacy of acupuncture for these disorders. However, this may also simply be because not as much scientific attention has been given to acupuncture's effect on disorders other than for pain.

It is somewhere between difficult and impossible to have a discussion of how acupuncture works with a traditional acupuncturist while insisting on using the language of opioids and "stimulating the

hypothalamus." To a traditional acupuncturist, there is no mystery as to how acupuncture works. To a traditional acupuncturist, the body works roughly as follows:

Essentially, our physiology is a function of Qi (pronounced "chee"). Qi is a term that denotes both substance and function. It is the material that circulates throughout the body via a system of channels and collaterals called meridians (*Jing Luo*). As a functional descriptor, Qi maintains normal body temperature, controls body fluids, and protects the body from the invasion of external pathogens. Qi also promotes normal functioning of the internal organs. For example, respiration is a function of the lung's Qi whereas digestion is a function of the spleen and stomach's Qi.

In acupuncture, at the most basic level of understanding, all disease or pathology can be defined in terms of Qi. Qi may be in excess, deficiency, or its circulation may be obstructed, any of which may manifest as a physical or emotional disharmony. When Qi circulation is less than ideal as evidenced by physical or emotional dysfunction, acupuncture is used to stimulate points along the meridians in order to restore balance, harmony, and health.

Along the meridians are literally hundreds of acupuncture points. Acupuncture points are those locations along the meridian where the Qi can best be accessed. Some acupuncture points are considered more versatile than others are. These points are naturally used more frequently than others.

When a needle is inserted into an acupuncture point, it is believed to access the Qi when the patient feels a "tingling," "pulling," "sore," or "warm" sensation. In Chinese, this is called *De Qi*. The physician inserting the needle may feel the needle "pulled" into the skin.

Different acupuncturists may manipulate the needle in different ways. Needling techniques are performed depending on the desired effects. They are discussed in a later section of this text. When appropriate, others will use moxibustion to heat either the needle or specific points on the patient's body. Moxibustion involves the burning of an herb (which in English is called Artemisia or mugwort and in Chinese is called Ai Ye). The burning herb feels warm to the patient's body, but the disadvantage is that it smells like marijuana and so may not be appropriate for many offices. Some acupuncturists use a heating lamp and some use electrical current.

A detailed discussion of the different meridians and how the energy traveling in each one is believed to affect disease processes is beyond the focus of this book. For more on that, the reader is referred to other texts listed in Appendix A. Acupuncturists already appreciate how the meridians function. Nonacupuncturists need only appreciate the concept of energy moving through meridians, and that acupuncture aims to restore balance to that energy flow.

In addition to using traditional acupuncture points, there are other ways to restore balance to the meridians. Depending on the school of acupuncture, various somatotopic representations on different parts of the body are also used. The ear is one of the most common places for this type of acupuncture, but other schools of acupuncture have identified somatotopic representations in a variety of places, including palmar and dorsal surfaces of the hand, plantar and dorsal surfaces of the foot, scalp, nose, and abdomen. A somatotopic representation essentially means that a map of the entire body exists on that body part. By stimulating microsystems on these body parts, reflexes occur in the body and energy is restored to a balanced harmony.

In the language of acupuncture, different parts of the body are used to name meridians. This can create some confusion when an acupuncturist speaks to a nonacupuncturist physician. The acupuncturists may say that the patient has stagnation of Qi along the course of the Gall Bladder channel. The physician may suspect that the patient has a problem with his or her actual gallbladder. What the acupuncturist may mean, however, is that the patient is carrying a lot of chronic muscle tension in the lateral lower extremity or the temporal region of the head, and this energy needs to be recalibrated by placing needles in the gallbladder meridian.

To a traditional physician, the idea of energy channels flowing through the body may be hard to accept. The idea that complex medical problems may be solved by "unblocking" or redistributing someone's energy may seem as likely as saying magic words to heal the patient. After all, these energy channels cannot be seen or measured by the traditional instruments available. However, before dismissing the possibility that energy meridians are coursing through the body and that these meridians must be utilized to provide lasting relief, it is worth applying a little self-humility. An anecdote is instructive.

Ignaz Semmelweis was a Hungarian physician. In 1847, he was the head of the Vienna General Hospital's First Obstetrical Clinic. Dr. Semmelweis puzzled over the fact that when doctors delivered babies, there was a three times *higher* mortality rate than when midwives did the delivery. Why was this? True, the doctors often came straight from the morgue where they had been doing dissections in order to deliver the babies—but what could that have to do with anything? They rinsed their hands, after all. Nothing could be *seen* on their hands. So what was it? Microscopic organisms had been noted more than a century before by the Dutch scientist Thonius Philips van Leeuwenhoek. But could micro-organisms have anything to do with this higher mortality rate? The medical community certainly did not think so. Nevertheless, Ignaz Semmelweis instituted a policy whereby physicians had to wash their hands with "chlorinated lime solutions." Once this was instituted, infant mortality was reduced dramatically from approximately 12% to less than 3%.

Despite these findings and the subsequent statistical publications supporting the significant effects of hand washing, it would not be until decades later when Pasteur and others conducted experiments that clearly demonstrated the germ theory that most of Europe would come to accept Semmelweis's initial idea. Today, we know that bacteria and other pathogens cause infection. However, before there were instruments created that could see them (e.g., microscopes), why would anyone believe they even existed?

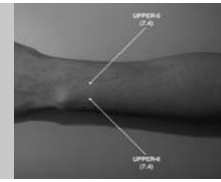
We do not currently have the technological ability to physically see acupuncture meridians, but does that mean they do not exist? Are we confident that just because we cannot measure them, they are not real?

However, let us not lose confidence in our scientific method either. We currently cannot satisfactorily explain why acupuncture works—but perhaps the answer lies in some combination of endogenous opioid release and placebo? The jury is still out, and it is likely to remain so for the foreseeable future. What we can do in the meantime is to attempt to identify which patients clinically benefit the most from acupuncture, what acupuncture treatment algorithms are appropriate for different ailments, and when acupuncture is not appropriate. In this book, we will focus on these questions in the context of musculoskeletal conditions. In Chapter 3, we will begin this process by discussing the basics of practical acupuncture.

Practical acupuncture, for our purposes, includes a basic understanding of acupuncture meridians. We briefly touched on acupuncture meridians in the previous chapter.

To provide a common language to readers and to offer a refresher to acupuncturists who may be a little rusty with their acupuncture point anatomy, the location of the acupuncture points used in this book will be given with mostly conventional medical descriptors (e.g., "2 cun anterior to the medial malleolus"). The medical acupuncture term *cun* is generally defined as the width of the patient's thumb. There are other definitive measurements noted between specific anatomical landmarks. For example, the distance between transverse cubital crease and the transverse wrist crease is 12 cun. These proportional measurements are listed in Chapter 14.

Ideally, the acupuncturist will have time to take a full acupuncture history as well as a full allopathic medical history, perform an acupuncture as well as allopathic medical exam, and design an *individualized* acupuncture treatment for the patient. The acupuncture treatments provided in this book are a starting point. For trained acupuncturists who



3

PRACTICAL ACUPUNCTURE

may have not recently used their acupuncture skills, they are a refresher as well as an opportunity to learn some techniques that he or she may not be as familiar with. For trained acupuncturists who may be less comfortable treating musculoskeletal ailments, these treatments are excellent starting points.

In general, acupuncture is very well tolerated. Reported side effects are few and far between. The most serious adverse events are potentially a pneumothorax or infection, both of which are very uncommon when performed by qualified and experienced acupuncturists using single-use sterile needles. If the acupuncturist is not comfortable doing so, he or she should not use the needle near the thorax. See Tables 1–8 for more practical acupuncture basics.

The Language of Chinese Medicine

When providing acupuncture treatment strategies, we have remained consistent with the paradigm of Chinese medicine. In other words, we have made use of some of the language of Chinese medicine.

Acupuncture Basics

TABLE 1

Relative contraindications

Anticoagulation, bleeding disorders

Pacemakers

Automatic implantable cardioverter defibrillators (AICD)

Pregnancy (Often, for medicolegal concerns, pregnancy is considered a full contraindication. Others believe that as long as there is no needling in the lower abdomen or no strong stimulation, acupuncture can be very useful during pregnancy in order to deal with morning sickness, back pain, and to prevent miscarriage. It is the recommendation of this book that, unless you have proper training and have a full discussion of the potential risks and benefits with your patients, you should consider pregnancy a full contraindication.)

TABLE 2

Risks

Infection

Bleeding

Pneumothorax

Worsening of symptoms

Some acupuncturists perform cupping and/or Gua Sha. Cupping leads to bruising of the skin. Gua Sha also leads to bruising.

TABLE 3

Number of sessions

Typically, an acupuncture protocol will involve 8 to 10 sessions. Patients may do 1–2 sessions per week. In general, acute cases may benefit from more frequent sessions, whereas chronic conditions can be addressed once each week. If not all goals have been met at the end of a treatment course, the need for further treatments is determined. If the symptoms have abated, sometimes patients will come back on a less frequent basis for additional treatments as necessary. Each individual will have different needs in terms of frequency and duration of full treatment. If,

after a few weeks there is no change in symptoms, the acupuncture approach should likely be altered. However, it is up to the acupuncturist based on his or her clinical experience to determine how long to stick with a particular treatment strategy in the absence of results. If after 8 weeks symptoms continue to be unchanged, the acupuncture strategy for the given condition may require changing or be discontinued altogether.

TABLE 4

Cost

Acupuncture typically costs from $100–$300 for an initial session and $70–$125 for follow-up sessions.

TABLE 5

Insurance

Some insurance companies do cover acupuncture claims for musculoskeletal problems.

TABLE 6

Instructions to patients

Prior to and following an acupuncture treatment, patients should be advised to:

- avoid strenuous physical activity.
- avoid drinking alcoholic beverages.
- avoid exposure to any extreme temperatures (e.g., no ice cream, no hot tubs, no sauna).
- avoid eating any hard-to-digest foods.

Patients should be informed that they might feel light-headed or woozy after acupuncture. They may have strange dreams the night following acupuncture. They may also experience an exacerbation of symptoms following a treatment. This exacerbation may or may not then slowly return to baseline and improve. Although very rare, the patient may feel agitated following acupuncture.

TABLE 7

Needling technique considerations based on the patient's overall health, age, and body type

Generally speaking, a needle technique that elicits a strong sensation should not be done on the following patients:

- the elderly or the adolescent
- someone who is prone to fainting
- someone who is fearful of needles
- someone who appears emaciated
- someone who is fasting
- someone who has a very thin body type
- someone who is extremely weak and exhibits low vitality (unless you are doing acupuncture to resuscitate from a loss of consciousness).

Additionally, do not use a thick needle (0.25 mm or larger) for these patients. Instead, use a smaller needle (e.g., 0.20 mm) with an even needling technique.

For those in relatively good health and with a more sturdy body type, it would be appropriate to use stronger stimulation if indicated. If your patient is large or overweight, consider using a thicker needle (e.g., 0.25 mm or larger).

TABLE 8

Needling techniques: Reinforcing and reducing needling techniques

After inserting an acupuncture needle, appropriate stimulation of that needle should be done taking into account the nature of the condition that is being treated. Reinforcing needle techniques are indicated when it is necessary to support or strengthen the body's resistance. For example, if a patient experiences lower back pain due to physical and mental exhaustion, use reinforcing methods. Reducing techniques are designed to disperse pathogenic factors and relieve Qi and blood stagnation. An example of when to use a reducing technique would be if an otherwise healthy patient complains of acute neck pain after catching a cold.

The following represent some of the more basic reinforcing and reducing techniques. They are grouped according to specific characteristics. Please note: When point prescriptions are provided throughout this text, they are followed by a symbol that indicates whether those points are to be reinforced (+), reduced (–), or neither, which is known as even technique (/).

1. Lifting and thrusting the needle:
   Reinforcing (+): Thrusting the needle heavily and with strength while lifting the needle gently and slowly.
   Reducing (−): Thrusting the needle gently and slowly, and lifting the needle quickly and with strength.
2. Rotating the needle:
   Reinforcing (+): Rotate the needle slowly and with small amplitude.
   Reducing (−): Rotate the needle quickly and with large amplitude.
3. According to the direction of the meridian:
   Reinforcing (+): While inserting the needle, point it along the direction of the needle.
   Reducing (−): When inserting the needle, point it against the natural flow of that meridian.
4. Keeping the needle hole open or closed:
   Reinforcing (+): On removing a needle, promptly press or "close" the hole.
   Reducing (−): Shake the needle as it is being withdrawn to enlarge the puncture hole.
5. According to the patient's respiration:
   Reinforcing (+): Insert the needle during the patient's inhalation and withdraw the needle during the patient's exhalation.
   Reducing (−): Insert the needle during the patient's exhalation and withdraw the needle during the patient's inhalation.

Terms such as *wind*, *damp*, *cold*, or *heat* may sound esoteric but in fact are very functional descriptors. It is therefore important to have a discussion of these relevant terms that Chinese medicine uses when describing pathophysiology.

Central to the philosophy of Chinese medicine is the relationship between people and their environment. As the environment goes through natural changes, the body's ability to adapt to those changes reflects health. If environmental conditions exceed the body's ability to adjust, disease results.

Chinese medicine commonly refers to six specific environmental conditions as being external causes of disease. These are *wind*, *cold*, *summer-heat*, *dampness*, *dryness*, and *fire*. Together they are known as the six exogenous pathogenic factors. For the purposes of our discussion we shall consider wind, damp, cold, and heat.

Originally, these were terms used to describe disease that primarily occurred during a particular season or followed a prolonged exposure to a specific environmental condition. For example, heat describes a group

of symptoms that can be observed during the summer season such as excessive sweating, headache, syncope, dark urine, thirst, and aversion to hot temperatures while desiring cold drinks. Dampness describes symptoms observed in individuals living in damp environments or who frequently work in wet conditions such as heavy pains in the legs, poor appetite, cloudy urine, congestion, fatigue, and poor concentration.

Wind may be considered the main exogenous pathogenic factor in the sense that other pathogenic factors attach themselves to wind when invading the body. Wind-cold, wind-heat, wind-damp, or even wind-damp-cold or wind-damp-heat are all common ways that Chinese medicine refers to a given patient's presentation.

In addition to being considered as exogenous pathogenic factors, wind, damp, cold, and heat can also be considered internal pathogenic factors that result from a disharmony in the body's normal physiology. Or in terms of Chinese medicine, they result from a disorder of the internal (*Zang-Fu*) organs or one of the body's humors. For example, hyperactivity of liver yang may cause internal wind and is characterized by distending headache, dizziness, hypertension, restlessness and nervousness, and numbness or tremors. Deficiency of blood may also produce internal wind and is characterized by pale complexion, dry skin and eyes, numbness, spasms, fatigue, light menstrual flow, or amenorrhea.

Excessive heat in the stomach may manifest as acid reflux, thirst with a preference for cold drinks, excessive appetite, halitosis, constipation, and bleeding of the gums. Damp heat in the spleen may be seen as distending abdominal pain, hot and loose stools, fatigue, a heavy sensation throughout the body, and vomiting. In addition, cold due to a deficiency of kidney yang can be described by such symptoms as a weak and sore lumbar region, cold limbs, impotence, or infertility.

These are but a few representative illustrations. They provide us with examples of symptoms that may be present in addition to a given pain syndrome for which our patients have sought out acupuncture treatments. Understanding some of these additional symptoms will help guide an acupuncture treatment strategy toward the root cause of pain.

Equally important to formulating an acupuncture treatment strategy is the consideration of the psychological profile of our patients. Our emotions or psychological states have a significant impact on how we experience pain. They may even influence to what degree a pain syndrome may remain chronic. Chinese medicine, in particular, places great importance on the role of emotional health, not only as it relates to pain but to all types of disease. When considering the pathogenic factors of wind, damp, cold, and heat, we can then describe them in terms of their physical attributes as well as their accompanying emotional attributes.

Wind is considered a yang pathogenic factor and is characterized by change. Thus, pain without a fixed location and that tends to migrate is

thought of as being related to wind. Examples of symptoms that are emblematic of wind are radiating pains, tremors, spasms, cramping, and intermittent paresthesias. Emotionally, wind may be experienced as fear, fright, or anxiety.

Dampness is a yin pathogenic factor characterized by heaviness, fatigue, soreness, symptoms that are worse with rest, and that tend to be chronic in nature. Emotionally, dampness is marked by indecisiveness, inaction, confusion, or uncertainty. For example, "I am not sure if my knee feels painful or just stiff" or "I just can't seem to motivate myself to do anything about my condition."

Cold is a yin pathogenic factor and describes pain that is localized and characterized by limited range of motion and stiffness. Consider a "frozen shoulder." Emotionally speaking, depression, grief, and limited expression are traits of cold.

Heat is a yang pathogenic factor. Inflammation, redness, warmth, ulcerations, neuropathy, and atrophy are all features of heat. Emotional expressions of heat include anger, irritability, restlessness, nervousness, and rage.

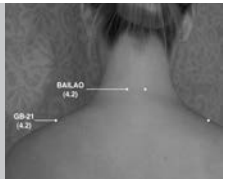
Chronic neck pain secondary to probable facet joint disease

CHIEF COMPLAINT: "My neck hurts."

HISTORY OF PRESENT ILLNESS

Ms. Johnson is a 63-year-old woman with a history of high blood pressure who presents complaining of posterior neck pain. She doesn't remember any inciting event prior to her pain. She says that her pain began gradually and is always present but is worse toward the end of the day and/or when she feels stressed. When asked how bad her pain is on a scale of 0–10 (where 0 = no pain, and 10 = excruciating unbearable pain), she says the pain is usually 4/10 but can be as bad as 7/10 at times. She denies any radiating pain into her scapulae or arms. She denies any numbness, tingling, or other paresthesias. She denies any headaches. She says her symptoms have not changed in the last few months.

Ms. Johnson cannot remember any trauma to her head or neck in the past, although she does recall being involved in a motor vehicle accident as a teenager. However, she was not injured in the accident. Ms. Johnson went to see her primary care doctor for her neck pain about a month ago. Her doctor told her she should take some Tylenol and try to relax. When her symptoms persisted, she was referred to this office.



4

NECK PAIN

Ms. Johnson spends most of her day doing housework and playing with her 3-year-old granddaughter. She does not spend long periods of time in front of a computer. She remains more or less active although she does not do any formal exercise.

Ms. Johnson has not had any imaging studies or other diagnostic tests. She has not done any physical therapy. All she has taken for her pain is an occasional Tylenol or Advil. Both of these medications only help her symptoms minimally. She says that hot showers sometimes make the pain a little better. She has never had this type of pain before.

Ms. Johnson's review of systems is negative. She takes a low-dose beta-blocker for her high blood pressure. She does not have any known allergies to medications. She says that she does not drink alcohol, smoke cigarettes, or use illegal drugs.

Physical Examination

Ms. Johnson is a well-developed, well-nourished woman who appears her stated age of 63 and presents in no acute distress. She has an erect posture although she does hold her neck slightly flexed. Her vital signs are stable. She has full range of motion of her upper extremities bilaterally. She has 5/5 strength and intact sensation in her upper extremities bilaterally. Her biceps, triceps, and brachioradialis reflexes are brisk and symmetric. She has a negative Hoffman sign bilaterally.

Her neck has slightly decreased range of motion in lateral flexion (ear to chin) and lateral rotation. Her cervical paraspinals are tender but with no palpable trigger points. She also has tenderness over the superomedial aspect of both scapulae bilaterally.

Differential Diagnosis

This patient is a 63-year-old woman in good general health with chronic neck pain in the absence of a clear inciting event. The most likely diagnosis is facet (zygapophysial) joint pain. Other potential causes include discogenic pain, muscle strain, and myofascial pain syndrome. In the absence of systemic symptoms, there is only a very small index of suspicion of a systemic process such as infection or malignancy. Chronic neck pain (defined as pain lasting >3 months) is most commonly caused by facet joint disease. This patient's age (>50) also makes facet joint disease more likely.

CLINICAL NOTE The fact that Ms. Johnson has a history of a motor vehicle accident (even though it is a remote injury) predisposes her to facet joint disease. Ms. Johnson's age also suggests facet joint disease. Discogenic pain is less common as a cause of chronic neck pain in general, and in particular is less common in this patient population. Muscle strain is certainly a common cause of acute neck pain, but it is unlikely to cause chronic neck pain. Myofascial pain, although a somewhat controversial diagnosis, is always a concern and could certainly be a contributing cause to Ms. Johnson's pain. She doesn't spend a long time in front of a computer and she does remains active, which makes myofascial pain less likely.

Diagnostic Studies

The index of suspicion for a malignancy is low. However, given her age and duration of symptoms, X-rays (AP, lateral, and oblique views) would be appropriate.

CLINICAL NOTE If she had been through an aggressive trial of conservative therapy (including physical therapy and/or acupuncture), an MRI may be indicated. The MRI would be obtained in order to rule out other potentially serious pathologies. Also, an MRI is a prerequisite to fluoroscopically guided injections to block the facet joints, which would be an appropriate next step if more conservative treatments were not successful.

Acupuncture Treatment

Principal Points

BL-10, BL-12

Both are local points indicated for posterior neck pain. BL-10 (/) also addresses occipital headache. BL-12 (–), in addition to treating posterior neck pain and stiffness, helps to release the exterior of wind and cold. Indeed, this patient prefers heat, which points to a cold syndrome.

DU-16

DU-16 (/) is a local point on the posterior midline at the nape of the neck that addresses posterior neck pain and stiffness. It has a particular effect of releasing wind from the exterior, and treats symptoms of headache and chills accompanied by sweating. It is important to note that DU-16 should not be needled deeply or in a superior oblique direction due to its location.

SI-12, SI-13, SI-14, TH-15

Each of these is a local point that can relieve pain of the superior medial scapula. Choose one or more points based on which is most tender to palpation and needle with a reducing technique.

BL-65

According to the theories of the five elements outlined in the Classic of Difficulties (*Nan Jing*), if there is excess of the mother element then reduce the child. The Bladder channel belongs to the element water. BL-65 is the wood point of the Bladder channel. Wood is the child of water. Reducing BL-65 can address posterior neck pain and stiffness, occipital headache, and aversion to wind and cold.

P-6

P-6 (/) is the Luo-Connecting point of the Pericardium channel, and as such, P-6 can support the Triple Heater channel, which crosses the lateral aspect of the neck. P-6 also calms the mind and is indicated for a wide variety of emotional disorders. It is particularly useful when emotional tension or nervousness is associated with neck pain, especially but not exclusively if that pain is along the lateral aspect of the neck. Lastly, if emotional tension or nervousness leads to palpitations or insomnia, P-6 will address that as well.

Supplemental Points

H-3

H-3 (/) can be added to the earlier prescription if the patient has excessive nervousness, and trembling, shaking, or numbness of the upper extremity.

DU-24

DU-24 (/) would be indicated for a pain syndrome that has caused feelings of depression or a tendency toward obsessing.

YINTANG

Yintang (/) is an extra point located on the anterior midline, at the midpoint between the two medial ends of the eyebrows. It helps calm the mind to relieve feelings of anxiety and frustration that are often associated with chronic pain.

Standard Medical Treatment

Ms. Johnson would benefit from physical therapy to work on postural biomechanics, scapular retraction exercises, range-of-motion and strengthening exercises.

If the physical therapy and acupuncture were not successful, fluoroscopically guided facet joint injections (either medial branch blocks or intra-articular) would be an appropriate next step. If the facets were confirmed as the source of pain, radiofrequency neurotomy to essentially sever the medial branches supplying the facet joints has a good rate of success in appropriately selected patients.

> ▶ Acupuncture is less invasive than fluoroscopically guided injections in the cervical spine. Ideally, acupuncture can be instituted early in conjunction with physical therapy.

Acute posterior neck pain

CHIEF COMPLAINT: "I think I pulled something in my neck."

HISTORY OF PRESENT ILLNESS

Mr. Bryant is a 27-year-old man in good general health who presents with 10 days of acute posterior neck pain. He woke up 10 days ago with a "twinge" in his neck. Mr. Bryant works as a financial analyst and spends a lot of time in front of a computer. He went to work the day the pain started and found that it worsened throughout the course of the day. That night he had trouble sleeping. Over the last 10 days, the pain has gotten progressively worse such that now he has trouble even turning his head from side to side. He has continued to work but has trouble focusing. The pain does interfere with his sleep.

He denies any pain radiating into his arms. He denies any numbness, tingling, or other paresthesias. When asked how bad his pain is on a scale of 0–10, he says the pain is an 8 or 9 all the time. He has been taking extra-strength Tylenol and Aleve but he says at best, they reduce the pain to a 7 or 8.

Mr. Bryant works 10–12 hours a day and goes to the gym 3–4 times per week, where he jogs and lifts weights. He also plays basketball with friends on the weekend. He has about four drinks of alcohol per week, does not smoke, and does not use illegal drugs. He has no medical problems and takes a multivitamin every day. He has never had neck pain before. His review of systems is negative.

Physical Examination

Mr. Bryant is an athletic-looking young man who appears his stated age. He does not appear in acute distress but is very guarded when moving his neck. He has full range of motion of his upper extremities bilaterally. He has 5/5 strength and intact sensation in his upper extremities bilaterally. His neck range of motion is markedly decreased in all directions to both passive and active ranging. Pain is the limiting factor. He has brisk brachioradialis, biceps, and triceps reflexes bilaterally. He has a negative Hoffman sign bilaterally. Mr. Bryant's cervical paraspinals are exquisitely tender bilaterally.

Differential Diagnosis

The patient is a 27-year-old man with acute neck pain secondary to either a cervical disc irritation or muscle strain. In a young person with no history of neck trauma, facet joint disease is less likely. Myofascial pain does not generally present so acutely and is not as severe as the pain described here. Discitis or other infectious process is always a concern but is very unlikely.

Diagnostic Studies

Given the intensity of this patient's pain, an MRI is reasonable.

Acupuncture Treatment

Principal Points

LUOZHEN

Luozhen is an extra point that does not lie along the course of any specific primary meridian. It is located on the dorsum of the hand just proximal to the second and third metacarpo phalangeal joints. If only one side of the neck is stiff or in pain, choose the ipsilateral point. If, as in this case, the entire neck is painful then choose the right Luozhen point for women and the left for men. Needle with a reducing technique. It is advisable to elicit a strong Qi sensation. While manipulating the needle, have the patient try to slowly turn his head from side to side. The needle should be manipulated at regular intervals throughout the treatment session.

SI-3

SI-3 (–) is the Confluent point of the Governor Vessel (*Du Mai*) and thus has a particular relation to the posterior aspect of the neck and the spine as a whole. The Taiyang meridian of the hand to which SI-3 belongs, as well as its partner the Taiyang meridian of the foot (the Bladder meridian), together traverse the occipital region, the cervical paraspinal muscles, and the scapular region. SI-3 is thus an important distal point to treat both acute and chronic neck pain. This point is sensitive to needling and often strong stimulation is not necessary in order to achieve a sensation of Qi. While manipulating the needle, have the patient slowly flex and extend his head.

BL-60

BL-60 (–) is one of the main distal points on the Bladder meridian that treats syndromes involving the neck. The Bladder meridian passes through the posterior aspect of the neck, and BL-60 has the ability to relieve pain along the entire length of its channel. It is often combined with SI-3 for the treatment of posterior neck pain, occipital headache, and lumbar pain.

GB-39

GB-39 (–) is the main distal point on the Gall Bladder meridian to treat syndromes involving the neck. The Gall Bladder meridian passes through the lateral aspect of the neck and GB-39 has the ability to relieve pain along the entire length of its channel. When needling GB-39 for this purpose, it is advisable to achieve a strong Qi sensation. While manipulating the needle have the patient try to slowly turn his head from side to side. This should be done at regular intervals throughout the treatment session.

BAILAO

Bailao is an extra point that does not belong to any specific primary or secondary meridian. It is a local point at the back of the neck that is located 2 cun superior to DU-14 and 1 cun lateral to the midline. It is particularly beneficial in releasing pain and stiffness of the neck. Needle using a reducing technique.

Supplemental/Alternate Points

TH-5

If the pain is located on the lateral aspect of the neck, use TH-5 (–), which is the confluent point of the Yang Linking vessel (*Yang Wei Mai*). The Triple Heater meridian passes through the postero-lateral aspect of the neck, and TH-5 has the ability to relieve pain along the entire length of its channel.

GB-20, LU-7

If the patient also complains of headache or symptoms of a common cold, add LU-7 and GB-20. Both GB-20 (/) and LU-7 (–) have a particular effect on releasing wind from the head and neck. This point combination can relieve symptoms of the common cold such as headache, nasal congestion, chills, fever, and a stiff and painful neck.

DU-14

If the patient has a common cold and complains of fever with pain at the nape of the neck, or if the patient complains of sweating and feeling weak, use DU-14 (/, –). This point is also indicated for severe stiffness of the neck.

GB-21

If the pain radiates to the upper trapezius muscles, add local point GB-21 (/).

SI-11, SI-12

If the pain radiates to the scapula, consider these two local points. Choose whichever point is most tender to palpation and needle with a reducing technique.

Standard Medical Treatment

There are several ways to approach this patient's pain. First, he is in significant daily discomfort that is not controlled by full dosages of acetaminophen and NSAIDs. Because of this, a short course of Percocet® or Vicodin® may be appropriate if the patient is able to function during the day on these medications. Otherwise, Ultracet® or another pain reliever may be appropriate.

It is difficult to sleep with so much discomfort and it is difficult to heal without adequate sleep. A muscle relaxant, such as Flexeril® or Zanaflex®, may help the patient get a good night's sleep and also let the muscles relax.

Some physicians advocate the use of a soft cervical collar *at night only* in order to protect the neck from abnormal positioning during sleep. Others feel that this is unnecessary and may even impede recovery. The jury is still out on this question.

The patient should ice his neck for 20 minutes 3 times per day. A bag of frozen peas fits this purpose nicely. Note that Chinese medicine would strongly argue against the use of ice. If you are going to pursue acupuncture in conjunction with allopathic treatment for this patient, it would be best to avoid ice for this patient, and in fact for all patients when doing acupuncture. Chinese medicine considers pathogenic cold as a root cause of musculoskeletal conditions, and the use of ice would contribute toward this.

Physical therapy, once the patient is able to tolerate the exercise, will help the pain go away and stay away. Therapy will focus on postural exercises, stretching, strengthening, and scapular stabilization.

CLINICAL NOTE An MRI in this case will likely be negative, but it is wise to get one in order to rule out other potentially more serious problems (such as discitis). With a negative MRI result, treatment with oral steroids can be initiated. Furthermore, if the pain begins to radiate down the arm and/or the pain persists and an epidural steroid injection is considered, the MRI will already have been obtained. If the MRI is postponed, more invasive treatment would also have to be postponed, prolonging the patient's symptoms.

Although not significantly supported (or refuted) by research, acupuncture would likely be helpful in the acute period of neck pain. It is therefore advisable to consider initiating an acupuncture treatment protocol at initial presentation. However, this depends on the severity of symptoms and the willingness of the patient. If the patient is skeptical or hesitant about acupuncture (or if financial considerations are a limiting factor), it is reasonable to wait because acute neck pain will likely resolve in a timely fashion with more conservative care. If the symptoms persist or worsen enough that the patient changes his or her mind, you can begin acupuncture at this point.

Cervical radiculopathy/radiculitis

CHIEF COMPLAINT: "My neck and arm hurt."

HISTORY OF PRESENT ILLNESS

Mr. Washington is a right-handed, 42-year-old man with a 2-week history of right lateral neck and shooting right arm pain. He says the pain started 2 weeks ago in his neck. He thought it would go away, but over the next few days he started to feel pain shooting down his arm. He describes the pain as "electric" and "sharp." Mr. Washington denies any weakness but says that he does feel some tingling sensations in his arm that go into his fourth finger and intermittently into the middle finger.

His pain also follows a certain distribution. His neck pain is more or less constant but the pain and tingling that radiate down his arm only happens six or seven times per day. The neck pain is more of a dull ache. When asked how bad his pain is on a scale of 0–10, he says the neck pain is a 3, but the shooting pain, when present, is an 8 or 9.

He denies any systemic symptoms. He has no significant medical history. He smokes half a pack per day, does not drink or use illegal drugs. He has never had this type of pain before. He has not tried anything to help relieve the pain.

Physical Examination

Mr. Washington is a well-developed, well-nourished man who appears his stated age and presents in no acute distress. His vital signs are stable. He has full range of motion of his upper extremities bilaterally. He has 5/5 strength and sensation is intact in his upper extremities bilaterally. His biceps, brachioradialis, and triceps reflexes are brisk and symmetric. He has a negative Hoffman sign bilaterally. He has a positive Spurling sign on the right side that reproduces the shooting pain into his hand. His neck has only minimally restricted range of motion in lateral flexion (ear to shoulder) and otherwise full range of motion.

Differential Diagnosis

This is 42-year-old man with a likely C7 cervical radiculopathy. The cause of his radiculopathy is likely either facet joint arthropathy or a bulging or herniated disc. Less likely causes include ligamentum flavum hypertrophy or other lesion (such as a metastasis).

Diagnostic Studies

X-rays (AP and lateral) of the cervical spine are appropriate. These will likely show some facet arthropathy. MRI is also appropriate, particularly if epidural steroids or oral steroids are being considered.

CLINICAL NOTE

The MRI can be obtained now or can be obtained later if more conservative treatments fail. The advantages of ordering the MRI now include ruling out other potential etiologies and also utilizing the results if an epidural steroid injection or oral steroids are considered subsequently. This is largely a logistic consideration. In some institutions, and with some insurance companies, the MRI may take days (or even weeks) to obtain. If that is the case, it may be best to start the process sooner. In other institutions, the MRI can be obtained on the day it is ordered. If this is the case, a trial of more conservative therapy first may be best.

Acupuncture Treatment

Principal Points

C6, C7, AND T1 HUA TUO JIAJI POINTS

These three points lie 0.5 cun lateral to the lower border of the spinous processes of the sixth and seventh cervical vertebrae as well as the first thoracic vertebrae. These points are indicated because this patient presents with a C7 radiculopathy. The points should be needled on the right side only, using a reducing or even technique.

TH-1

TH-1 is a Jing-Well point. Jing-Well points are the distal-most points of the 12 primary channels. They also represent the starting point of the Sinew channels. The Sinew channels, also commonly translated as tendino-muscular channels, include what we may think of as the connective tissues of the body: muscles, tendons, ligaments, and fascia. From a Chinese medicine perspective, the Sinew meridians may be seen as the extrinsic aspect of the primary meridians. But whereas not all of the primary meridians travel proximally from the distal extremities (see the Yang meridians of the feet), the Sinew meridians all originate at the tips of the fingers or toes and travel proximally. Principally, they conduct Wei Qi, otherwise known as Defensive Qi. Wei Qi protects the body from invasion of environmental factors such as wind, cold, heat, and damp. The relative strength of Wei Qi may also determine to what degree one is affected by a traumatic injury.

In this particular case, the patient describes symptoms of radiating pain and numbness. This hints at an invasion of the external pathogen wind. Needling Jing-Well points can stimulate Wei Qi in order to promote the release of an external pathogenic factor. In fact, the Jing-Well point represents the specific place at which an external pathogenic factor can be released. In this case, we have chosen TH-1, being the Jing-Well point of the Triple Heater (*San Jiao*) meridian, because the Triple Heater meridian and its sinew channel covers the area of the lateral upper extremity where this patient complains of his symptoms. TH-1 can either be needled or bled to produce just a few drops of blood. The idea of bleeding is to move blood to expel wind.

TH-3

TH-3 (/) is a Shu-Stream point. The Shu-Stream points are also known as transporting points. They represent that point on a meridian where external pathogens may travel interiorly. TH-3, therefore, is needled in order to prevent the internal movement of the wind pathogen. The needle should be pointed distally toward the Jing-Well point to imply an outward movement toward the exterior.

TH-5

TH-5 (–) is the confluent point of the Yang Linking vessel (*Yang Wei Mai*), but in this example, it is of greater importance that it is the Triple Heater's Luo-Connecting point. A Luo-Connecting point is the location where a collateral branches off from its primary meridian to connect with its related pair. Luo points therefore have a special effect in addressing problems of their interior-exterior related channel pair. The Triple Heater meridian is paired with the Pericardium meridian. Although the Triple Heater meridian appears to be the primarily affected channel in this case, there are symptoms that we can ascribe to its relative, the Pericardium

channel. That is, while the radicular symptoms primarily occur in the lateral upper extremity, they occasionally occur in the medial forearm. TH-5 can address these symptoms as well as numbness and pain of the lateral arm and neck.

TH-12, TH-14, TH-15

These points of the Triple Heater meridian lie on the lateral upper arm, shoulder, and suprascapular fossa, respectively. Each should be palpated and whichever is sore or painful should be needled with a reducing technique.

Supplemental/Alternate Points

P-9, P-7, P-6

If the radicular symptoms predominantly affect the Pericardium meridian as evidenced by tingling primarily in the middle finger or the palm of the hand, choose this group of points. P-9 is the Jing-Well point, P-7 is the Shu-Stream point, and P-6 is the Luo-Connecting point of the Pericardium channel. The reason for choosing these categories of points are the same as listed earlier.

GB-20, LIV-3, BL-17

If the patient also presents with dizziness or vertigo, tremors, tinnitus, or pale complexion, consider these three points to subdue Liver wind and nourish blood. GB-20 (/) is a point on the occiput that can be used to relieve local pain as well as eliminate symptoms of wind such as dizziness, vertigo, tremors, and tinnitus. LIV-3 (/) is the Shu-Stream point of the Liver channel. It can be used to address the listed symptoms through its action of reducing Liver wind while at the same time nourishing Liver blood. BL-17 (+) is the Hui-Influential point of blood, and can thus tonify and invigorate the blood.

Hua Tuo Jiaji Points

Hua Tuo was a famous Daoist physician of the Eastern Han Dynasty. He has been mentioned as the first surgeon of China, is credited with developing techniques of anesthesia, and has also earned fame as the creator of a set of Qigong exercises known as the Five Animal Frolics.

Of particular relevance to our discussion is the group of points that bear his name: the Hua Tuo Jiaji points. This is a group of 17 points that are located bilaterally along the sides of the spinal column, 0.5 cun lateral to the lower border of each

spinous process beginning at the first thoracic vertebrae and ending with the fifth lumbar vertebrae. Years later, these points were assigned to the cervical spine as well.

Needling these points can relieve pain and other symptoms in their local areas as well as in those areas represented by their corresponding dermatomal and myotomal distributions. If the pain that is being treated is caused by cold, needle the Hua Tuo Jiaji points toward the Du channel (Governor vessel). In doing so, yang will be mobilized to neutralize yin.

An example would be a case of medial scapular pain that first appeared after the patient shoveled snow while dressed in just a light sweatshirt. This pain may be stabbing, well localized, aggravated by cold weather, and improved by warmth and movement. In this case, we may choose Jiaji points associated with T3-5 and needle them medially toward the Du channel.

If the pain is more associated with wind, the needle should be pointed laterally so as to use yin to neutralize yang. This could apply to a case of a man who after sitting in front of a fan without wearing a shirt began to experience back pain that shifts from the mid to upper back with some regularity, sometimes feeling sore, sometimes feeling sharp, and is accompanied by twitching, tremors, or spasms.

Standard Medical Treatment

Physical therapy will be helpful for this patient and should be prescribed. Therapy should focus on postural exercises, stretching, and strengthening.

Oral analgesics such as acetaminophen may be helpful. Some physicians advocate a 1- or 2-week trial of an anti-inflammatory such as an NSAID or Celebrex® (assuming blood pressure is within normal limits). Other physicians favor a trial of a nerve-stabilizing agent such as Neurontin®, Cymbalta®, or Lyrica®. Lyrica may be the easiest to dose and best tolerated.

If symptoms do not respond to more conservative measures and other more serious etiologies (e.g., cancer, infection) are ruled out on an MRI, an oral steroid taper may be helpful. A fluoroscopically guided epidural steroid injection can also be considered. If progressive neurologic symptoms develop, or symptoms are disabling and resistant to aggressive conservative care, then surgical options should be considered.

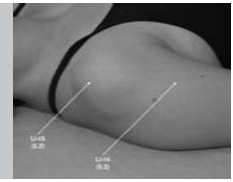
Acupuncture is safer than epidural steroid injections. It is also safer than most medications, including NSAIDs and oral steroids. The efficacy of acupuncture for acute cervical radicular symptoms is not supported or refuted by the literature. However, anecdotally it has been shown to work and it seems a more than reasonable adjunctive treatment approach if the patient is amenable. It should be instituted along with physical therapy and medications as needed.

Anterior shoulder pain

CHIEF COMPLAINT: "My shoulder hurts."

HISTORY OF PRESENT ILLNESS

Ms. Friedman is a 36-year-old woman with no significant past medical history who presents complaining of 2 weeks of left anterior shoulder pain. Ms. Friedman has a 5-year-old daughter and a 3-year-old son. She says that she has noticed a twinge in her left shoulder off and on for the last 2 years, but it usually goes away. It typically starts after lifting her children. When it has occurred in the past, she tries to avoid lifting them and carrying heavy items for a while. Usually, the pain disappears but this time she felt a twinge after picking up her son and noticed that the "twinge" didn't go away. For the last 2 weeks, she has pain during certain activities such as getting dressed or carrying groceries. The pain is worst with overhead movements (e.g., combing her hair). Fastening a bra is also painful for her. She took some Advil, which helped the pain somewhat but then the pain kept returning. When asked how bad her pain is on a scale of 0–10, she says the pain is a 5 or 6. In the last few days, the pain began to bother her at night and she has had trouble lying on her left side. She denies any pain radiating down her arm. The pain stays in her anterior shoulder. She denies any numbness, tingling, or other paresthesias.



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SHOULDER PAIN

She does not drink, smoke, or take illegal drugs. Her review of systems is negative. Prior to having her children, she was working as a schoolteacher. She is currently a full-time homemaker.

Physical Examination

On exam, Ms. Friedman is a pleasant, well-developed, well-nourished, thin woman in no acute distress. She has full range of motion of her upper extremities bilaterally, although she does have pain at end range of motion of her left shoulder in flexion and internal rotation. She has full range of motion of her neck. She has 5/5 strength in her upper extremities as well as intact sensation bilaterally. She has brisk and symmetric biceps, brachioradialis, and triceps reflexes bilaterally. The Spurling and Hoffman signs are negative.

She has positive impingement signs in her left shoulder, including a positive Hawkin sign, positive Neer test, and positive empty can test. Yergason and Speed tests are negative. She has no tenderness over the bicipital groove or along the biceps tendon. She has a negative cross arm test and negative O'Brien test.

Differential Diagnosis

This is a 36-year-old woman with a classic case of rotator cuff impingement syndrome and/or subacromial bursitis. Other potential diagnoses would include bicipital tendonitis, cervical radiculitis, glenoid capsule tear, acromioclavicular arthritis, and another lesion such as a tumor.

Diagnostic Studies

Some physicians may order an X-ray to rule out other potential etiologies and to visualize the acromion process. This is not unreasonable, but it is not necessary. Many physicians would not order the X-ray unless the patient failed to respond to conservative therapy.

Acupuncture Treatment

Principal Points

REN-12, K-17, ST-24

This point prescription comes from the style of acupuncture known as Abdominal Needling (*Fu Zhen*). Abdominal Needling is an imaging system much like auricular acupuncture in that the entire body can be imaged and treated by using points on the abdomen alone.

Specifically, this imaging system is comprised of three layers. The first is accessed by superficial needling (with minor exceptions), and maps the exterior of the body (the *Wei* level) including the head, trunk, and four extremities. The second layer is accessed by moderate puncture and corresponds to the standard meridian system, linking the external with the internal (the *Ying* level). Finally, the third layer, accessed by deeper puncture, is represented by the image of a bagua superimposed on the abdomen. A bagua is a series of eight trigrams consisting of broken or unbroken lines, and was used by the ancient Chinese as a way of explaining natural phenomena and applied philosophy. In this case, the symbols of the bagua correspond to the body's internal organs, and this deeper layer is used for chronic, internal, or constitutional issues (the *Yuan* level).

With respect to shoulder pain, we are accessing the superficial level and we begin by puncturing Ren-12. In traditional acupuncture, Ren-12 is considered the Front-Mu point of the stomach and the Hui-Influential point of the fu organs. Next, puncture K-17 on the healthy side, which, for this patient, is on the right. On the superficial level of Abdominal Needling, K-17 corresponds to the neck. Finally, needle ST-24 on the affected side, which corresponds to the ipsilateral shoulder. In more classical styles of acupuncture, ST-24 has the function of relaxing tight soft tissues especially in the areas of the trapezius and the occiput.

Have the patient flex and rotate his arm. There should be some decrease in pain or increase in movement after a few minutes. If not, then use a technique called *the triangle method*. Taking ST-24 as the apex

of the triangle, insert two needles 0.3–0.5 cun inferior and lateral to the point. If the shoulder pain is more laterally located, insert these two needles slightly lateral to the suggested location. If the pain is more medially located, insert the two needles slightly medial to the suggested location. If the pain moves toward the posterior aspect of the shoulder, insert the needles to a slightly deeper depth.

There should be minimal needle manipulation when using this treatment paradigm. No lifting and thrusting. Only mild rotation should be applied. Strong stimulation is not desirable. Retain the needles for at least 30 minutes and have the patient move her affected arm at regular intervals. It is appropriate to use a heat lamp on the abdomen during this treatment.

This treatment is applicable to all forms of shoulder pain and limited movement including adhesive capsulitis.

Standard Medical Treatment

This patient will benefit from physical therapy that focuses on scapular stabilization exercises, strengthening of the rotator cuff, and stretching exercises.

A corticosteroid and anesthetic injection may be useful to speed the healing process. If given, the patient should also be enrolled in a structured course of physical therapy.

Shoulder impingement syndrome is treated very effectively with a properly performed subacromial steroid and anesthetic injection along with physical therapy. Of course, not all patients with impingement syndrome require an injection. Often, physical therapy alone is sufficient. The efficacy of acupuncture for impingement syndrome is not clear from the literature. In the end analysis, if a patient is a candidate for a subacromial steroid injection, this along with physical therapy is often the treatment of choice. It is probably not necessary to offer physical therapy, subacromial steroid injection, and acupuncture. Then again, acupuncture is less invasive than a subacromial steroid injection and so may be tried first if the patient and physician feel this is more appropriate.

Furthermore, if the patient does not like the idea of an injection, does not have symptoms that are severe enough to warrant an injection, has received subacromial injections in the past without benefit, or has received too many injections in the past and can no longer receive steroid injections into this area, then acupuncture along with physical therapy is a very reasonable alternative. According to one study, acupuncture was more

effective than ultrasound for impingement syndrome (although more research is needed before conclusions about its efficacy can be drawn). If a patient wants to try acupuncture, it is certainly a reasonable alternative. Furthermore, if you do treat with acupuncture and physical therapy first, then you can still use a subacromial steroid injection later if needed.

Anterior shoulder pain

CHIEF COMPLAINT: "My shoulder hurts."

HISTORY OF PRESENT ILLNESS

Mr. Jones is a 32-year-old man with no past medical history who presents complaining of anterior shoulder pain. He says it has come on gradually over the last month and he is not sure exactly when it started. He does not remember "injuring" it but says that he lifts weights in the gym and has noticed that the pain has been getting worse when he does shoulder and biceps exercises. He denies any radiating pain from his neck or pain going down his arm. He denies any numbness, tingling, burning, or other paresthesias. He says he has never had a pain like this in the past. He has not done anything to help relieve the pain except for avoiding lifting as much weight in the gym. When asked how bad his pain is on a scale of 0–10, he says the pain is usually about a 4, but if he tries to lift a heavy weight then it can be a 7 or 8.

Mr. Jones does not take any medications. He drinks 2–3 beers every night, does not smoke, and does not take illegal drugs. Mr. Jones works in construction. His review of systems is negative.

Physical Examination

On exam, Mr. Jones is a muscular, well-developed, well-nourished man in no acute distress. He has full range of motion of his upper extremities bilaterally. He has full range of motion of his neck. He has 5/5 strength and intact sensation in his upper extremities bilaterally. He has brisk and symmetric biceps, brachioradialis, and triceps reflexes bilaterally. He has negative Spurling and negative Hoffman signs.

He has negative impingement signs in his left shoulder, including a negative Hawkin, Neer, and empty can test. He has a positive Yergason and positive Speed tests. He has exquisite tenderness that reproduces his typical pain over the bicipital groove. He has a negative cross arm test and negative O'Brien test.

Differential Diagnosis

This patient is a 32-year-old man with a typical case of bicipital tendonitis. Other potential causes include shoulder impingement syndrome, cervical

radiculitis, glenoid capsule tear, acromioclavicular arthritis, and another lesion such as a tumor.

Diagnostic Studies

None would be routinely indicated.

Acupuncture Treatment

Principal Points

LI-14, LI-15

This point prescription borrows from the style of acupuncture known as I Ching (*Yi Jing*) acupuncture. It is based on the trigrams and hexagrams of the *Book of Changes*, otherwise known as the *I Ching*. To the Chinese, the *I Ching* is one of the most important books in history. It is a book of wisdom that describes the laws of change of the universe, be it on a macrocosmic or microcosmic level. The *I Ching* has been applied to various fields of study including sociology, astronomy, divination, and medicine.

One of the theories of I Ching acupuncture suggests the use of points on the affected meridian's paired channel based on its interior–exterior relationship. For example, for problems of the Stomach channel, choose corresponding points on the Spleen meridian. The paired channels based on an interior–exterior relationship are as follows: Lung–Large Intestine, Stomach–Spleen, Heart–Small Intestine, Bladder–Kidney, Pericardium–Triple Heater, and Gall Bladder–Liver.

In this case, due to the anatomical location of the pain, the affected channel is the Lung meridian of the hand (Taiyin). Employing this treatment paradigm, we may therefore choose points of the Large Intestine meridian of the hand (Yangming). The corresponding points would be those in the area of the shoulder joint on the contralateral side of the pain. Therefore, our point prescription for this case would be LI-14 and LI-15 on the right side. If there are any points in between that are tender to palpation, they should be needled as well.

Needles should be retained for at least 30 minutes and manipulated at regular intervals. Have the patient move the affected extremity a few times throughout the treatment. There should be a noticeable decrease in symptoms during and after the treatment.

Standard Medical Treatment

This patient would benefit from physical therapy to focus on stretching and strengthening exercises. He may also benefit from a corticosteroid and anesthetic injection into the tendon sheath (although *never* into the tendon itself).

As with rotator cuff impingement syndrome, bicipital tendonitis is usually treated effectively with physical therapy and possibly a bicipital tendon sheath injection of steroid and anesthetic. From an evidence-based perspective, little can be said regarding the efficacy of acupuncture for bicipital tendonitis.

Physical therapy could be part of the treatment protocol for all patients. If symptoms are not severe enough to warrant an injection, if the patient does not want an injection, if the patient has received bicipital tendon sheath injections in the past without benefit, or has received too many injections in the past and can no longer have steroids injected into this area, then acupuncture along with physical therapy is a very reasonable first-line approach.

It may also be appropriate in this patient population to offer physical therapy, injection, and acupuncture from the outset. Of course, this should be done on a case-by-case basis, according to the patient's expectations and desires. As is often the case, acupuncture is very unlikely to have a negative effect, and may provide some benefit as part of a comprehensive treatment plan.

Shoulder and acromioclavicular pain

CHIEF COMPLAINT: "My shoulder and collarbone hurt."

HISTORY OF PRESENT ILLNESS

Mr. Rodriguez is a 47-year-old man with a history of type II diabetes who presents with a 3-month history of right shoulder pain. When asked exactly where the pain is, he points to his right anterior shoulder and acromioclavicular joint. He says that he hurt his collarbone in high school when he was playing football but doesn't remember exactly what the injury was. He knows that he was forced to miss a few games while his shoulder healed. Over the last 3 months, he has noticed that his shoulder and collarbone have been more and more painful. Reaching across his body is painful. He denies any pain radiating down his arm. He denies any numbness, tingling, or other paresthesias. When asked how bad his pain is on a scale of 0–10, he says the pain fluctuates between a 3 and a 6. It gets worse as the day goes on.

Mr. Rodriguez does not drink alcohol, smoke, or use illegal drugs. He takes Glucophage® for his diabetes. He has tried taking Tylenol for his pain but says it only helps a little bit. His review of systems is negative.

Physical Examination

On exam, Mr. Rodriguez is a well-developed, well-nourished man in no acute distress. He has full range of motion of his upper extremities

bilaterally. He has full range of motion of his neck. He has 5/5 strength and intact sensation in his upper extremities bilaterally. He has brisk and symmetric biceps, brachioradialis, and triceps reflexes bilaterally. He has negative Spurling and negative Hoffman signs.

He has negative impingement signs in his left shoulder, including a negative Hawkin, Neer, and empty can test. He has a negative Yergason and negative Speed test. His bicipital groove is not tender. He has a positive cross arm test. He has tenderness over his acromioclavicular joint. He has a negative O'Brien test.

Differential Diagnosis

This is a 47-year-old man with a fairly classic case of acromioclavicular arthritis. Other potential causes include shoulder impingement syndrome, glenohumeral arthritis, glenoid capsule tear, bicipital tendonitis, and cervical radiculitis.

Diagnostic Studies

X-rays are appropriate to evaluate the shoulder and acromioclavicular joints.

Acupuncture Treatment

Principal Points

LI-15, LI-16

LI-15 (–) and LI-16 (–) are local points used to relieve pain.

JIANQIAN

Jianqian (–) is an extra point on the anterior shoulder. It is a local point used to relieve pain.

LI-3, LI-4, LI-7

These three points can be alternated each treatment and needled with a reducing technique. LI-3 is a Shu-Stream point and LI-4 is a Yuan-Source point. They are both indicated when there is pain along the course of the Large Intestine meridian, in particular when there is pain of the anterolateral shoulder. LI-7 is a Xi-Cleft point and is especially indicated if there is acute pain or motor impairment of the shoulder.

ST-38

ST-38 is a common distal point indicated for the treatment of shoulder pain. It should be needled with a reducing technique. More importantly, the needle should be directed inferiorly and posteriorly toward BL-58.

Palpate bilateral ST-38 points. The more sensitive of the two is the point that should be chosen for needling.

Supplementary/Alternate Points

LI-14

If the pain radiates to the anterior deltoid, use local point LI-14 (–).

GB-21

If the pain radiates to the upper trapezius, use local point GB-21 (/).

TH-14, TH-13, TH-5, TH-6

If pain is located posterior to the acromion process, use TH-14 (–). If pain radiates to the postero-lateral deltoid, use TH-13 (-, /). Along with the previously mentioned points, alternately use distal points TH-5 and TH-6. TH-5 is a Luo-Connecting point and TH-6 is a Jing-River point. They are both indicated when there is pain along the course of the Triple Heater meridian.

SI-10, BL-58

If there is posterior shoulder pain, use local point SI-10 (–) and distal point BL-58 (–). Needle insertion at BL-58 should be angled superior and anterior toward ST-38. Both the contralateral and ipsilateral BL-58 should be palpated and the more sensitive point is the one that should be chosen for needling.

SI-11, SI-12, SI-6

For scapular pain, add local point SI-11 (–). If pain radiates to the supraspinatus muscle, add local point SI-12 (–). SI-6 (/) is a Xi-cleft point and as such is indicated for pain along the course of the Small Intestine meridian.

Standard Medical Treatment

Physical therapy that includes stretching and strengthening exercises will be helpful for this patient. Ice over the acromioclavicular joint is an excellent anti-inflammatory because of how superficial the joint is.

An injection of corticosteroid and anesthetic medication into the acromioclavicular joint can be very helpful.

It is difficult to determine when exactly acupuncture should be used as part of the treatment algorithm. The decision to use acupuncture should be based on the patient's expectations and desires. There are no recommendations to be made based on evidence-based medicine. It must be on a case-by-case decision. The treatment should include physical therapy. It is reasonable to offer physical therapy and acupuncture as well as physical therapy and a steroid and anesthetic injection. Alternatively, physical therapy, a steroid and anesthetic injection, and acupuncture may be helpful.

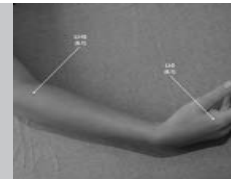
Lateral elbow pain

CHIEF COMPLAINT: "My elbow hurts."

HISTORY OF PRESENT ILLNESS

Ms. Turner is a 49-year-old woman in good general health who presents with a 1-week history of right elbow pain. She says that she raked the leaves in her backyard and started to feel pain after that. It has not gone away, and continues to bother her whenever she tries to do activities that involve her right arm. For example, she says that opening jars or doors is painful. Yesterday, she felt the pain when she shook someone's hand. She says the pain feels sharp. When asked how bad her pain feels on a scale of 0–10, she says the pain is around a 3 or 4 at its best and 6 or 7 at its worst. She denies any pain radiating down her forearm or up into her arm. She denies any numbness, tingling, burning, or other paresthesias. She has not had this pain in the past. She has not done anything for the pain since it started except to try and rest her elbow.

Ms. Turner does not drink, smoke, or use illegal drugs. She works as a travel agent. Her review of systems is negative. She has no medical problems and takes no medications. She does take a multivitamin and calcium with vitamin D supplement daily.



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ELBOW PAIN

Physical Examination

On exam, Ms. Turner is a well-developed, well-nourished woman in no acute distress. She has full range of motion of her upper extremities bilaterally. She has 5/5 strength and intact sensation in her upper extremities bilaterally. However, her right wrist extension is limited to testing secondary to pain. She has a positive Cozen test on the right side. Her right lateral epicondyle is tender to palpation.

Differential Diagnosis

This is a 49-year-old woman with a classic case of lateral epicondylitis. Another potential cause would include radial tunnel syndrome.

Diagnostic Studies

None are routinely ordered.

Acupuncture Treatment

Principal Points

LI-9, LI-10, LI-11

All three are local points at the common wrist extensor muscle belly, with LI-11 sitting at the lateral end of the transverse cubital crease. As local points, they can all be used to treat pain near the lateral epicondyle. LI-11 has the added benefit of clearing heat and wind from the skin, the Large Intestine channel, and the bowels. Therefore, if the patient also complained of dry, itchy, or hot skin, diarrhea or abdominal pain, or frontal headache, LI-11 would be most appropriate.

For this treatment, choose between one and all three of these points. The best choice would be based on which points are tender to palpation. Needle those points with a reducing technique.

An alternative needling technique is called threading. This involves inserting the needle at one point, LI-9 in this example, and puncturing deeply so as to connect all three points with one needle. For this technique, use a 40-mm or 50-mm needle.

LI-3, LI-4

These two points can be alternated each treatment and needled with a reducing technique. They are distal points, which relieve pain along the course of the Large Intestine meridian.

TH-6

The Triple Heater channel (*San Jiao*) traverses the lateral forearm. TH-6 (/) can activate the meridian and relieve pain along its pathway. An interesting note: It is also particularly useful in treating constipation and lateral costal pain.

Supplemental/Alternate Points

LU-5

LU-5 (/) is indicated if there is poor active range of motion at the elbow.

TH-3, TH-9, TH-10

If the pain is more posteriorly located and Triple Heater meridian involvement is suspected, use TH-3 (/), TH-9 (–), and TH-10 (/).

SP-9, ST-40

If there is a heavy sensation of the upper limb, add SP-9 (–) and ST-40 (–) to help eliminate dampness. SP-9 is the He-Sea and water point of the Spleen meridian and is a common point used to treat disorders characterized by dampness or retention of fluid. ST-40 is a common point used to treat disorders characterized by dampness and phlegm. It also has an affinity with the chest and can address problems such as productive cough, a sensation of fullness in the chest, confusion, and lethargy.

GB-34

GB-34 (–) on the contralateral side of the pain would be particularly indicated if the pain was located along the Triple Heater meridian. This illustrates the principle of using the Shaoyang meridian of the foot to treat the Shaoyang meridian of the hand. GB-34 is also the Hui-Influential point of the body's tendons.

In a case of lateral epicondylitis when the pain has been narrowed down to a very local area in the common wrist extensor muscle belly, you can use a needling technique known as the *compass method*. This involves inserting four needles relatively superficially into the muscle belly, arranged as though they were the four corners of a square or the four cardinal directions on a compass. The needles should be angled toward the site of pain. A fifth needle should be inserted perpendicularly, somewhat deeper, and directly into the site of pain, as though it was at the center of the compass. Moxa or heat lamp is appropriate.

Standard Medical Treatment

Physical therapy that focuses on stretching and strengthening exercises would be helpful. Ice is a very effective anti-inflammatory for this complaint.

An injection of corticosteroid and anesthetic may be helpful.

A combination of relative rest, ice, and physical therapy is often effective in treating lateral epicondylitis. In fact, the natural history with no treatment at all of lateral epicondylitis is favorable. An injection of steroid and anesthetic is also highly effective to quicken improvement. Although open to debate, some research suggests that acupuncture is also effective in treating lateral epicondylitis. It seems reasonable to use acupuncture as an adjunctive treatment in combination with relative rest, ice, physical therapy, and/or a steroid and anesthetic injection. Acupuncture is less invasive and has fewer adverse effects than an injection of steroid and anesthetic. As always, patient preferences should play a leading role. If a patient does not want to undergo the risks of a steroid injection, acupuncture (although perhaps not as immediately effective) may be a more palatable option. If the acupuncture, relative rest, ice, and therapy are not effective, an injection is still an option.

Cubital tunnel syndrome

CHIEF COMPLAINT: "My ring and little fingers are numb."

HISTORY OF PRESENT ILLNESS

Ms. Perret is a 64-year-old, left-handed woman with history of high cholesterol who presents with 3 weeks of numbness and tingling in her left fourth and fifth fingers. She says that her symptoms have been getting progressively worse. Initially, she felt a dull ache in her left elbow and a "funny feeling" in her fifth finger. Slowly, the "funny feeling" became more of an uncomfortable numbness and tingling. The ache in her elbow has likewise become more uncomfortable. She cannot identify anything that might have brought on the pain. She has not changed her activities in the last month. She does note that she has been spending more time at the computer because her son has been sending her pictures of her grandson on the computer.

Ms. Perret says she does not drink alcohol, smoke, or use illegal drugs. She takes Lipitor® for her heart condition. She has not done anything for her pain since it began. She does note that sometimes her symptoms are worse in the morning when she wakes up.

Physical Examination

On exam, Ms. Perret is a pleasant, well-developed, well-nourished woman who appears her stated age of 64. She walks with a non-antalgic gait. She has 5/5 strength in her upper extremities bilaterally except her left grip strength, which is somewhat reduced at 4/5. She has decreased sensation in her left fourth and fifth fingers on the ulnar side. She has brisk and symmetric biceps, brachioradialis, and triceps reflexes bilaterally.

She has a positive Tinel sign over the cubital tunnel on her left side. Sustained maximal flexion of the left elbow reproduces her symptoms. She has a positive Froment sign (she was asked to hold a piece of typing paper between her straight left thumb and palm. While doing this, the paper was easily pulled out of her hand. To prevent this from happening, Ms. Perret flexed her flexor pollicis longus to try to make up for her adductor pollicis weakness. When performed on the right side, she was able to resist the examiner's pulling).

She has a negative Phalen test, negative carpal compression test, and negative carpal tunnel Tinel sign on the left side. She has a negative Spurling test on the left.

Differential Diagnosis

This 64-year-old woman has a classic case of cubital tunnel syndrome. Other potential causes would include cervical radiculopathy, brachial plexopathy, ulnar collateral ligament injury, ulnar compression at Guyon's canal, and carpal tunnel syndrome.

Diagnostic Studies

None are routinely indicated. If the diagnosis is in doubt, electromyography and nerve conduction velocity studies (EMG/NCS) may be helpful.

Acupuncture Treatment

Principal Points

SI-1

SI-1 is a Jing-Well point. Jing-Well points are the distal-most points of the 12 primary channels. They also represent the starting point of the Sinew channels. The Sinew channels, also commonly translated as tendinomuscular channels, include what we may think of as the connective tissues of the body: muscles, tendons, ligaments, and fascia. From a Chinese medicine perspective, the Sinew meridians may be seen as the extrinsic aspect of the primary meridians. Whereas not all of the primary meridians travel proximally from the distal extremities (see the Yang meridians of the feet), the Sinew meridians all originate at the tips of the fingers or toes and travel proximally. Principally, they conduct Wei Qi, otherwise known as Defensive Qi. Wei Qi protects the body from invasion of environmental factors such as wind, cold, heat, and damp. The relative strength of Wei Qi may also determine to what degree one is affected by a traumatic injury.

In this case, the patient describes radiating symptoms of numbness and tingling. This hints at an invasion of the external pathogen wind. She also complains of a dull ache in her elbow. This implies an exterior invasion of dampness. The fact that she has high cholesterol may be evidence of an internal accumulation of dampness as well. Nevertheless, a Chinese medicine diagnosis may be given as wind–damp obstruction.

Needling Jing-Well points can stimulate Wei Qi in order to promote the release of an external pathogenic factor. In fact the Jing-Well point represents the place at which the external pathogenic factor can be released. In this particular case, we have chosen SI-1, being the Jing-Well point of the Small Intestine meridian, because the Small Intestine meridian and its Sinew channel travels through the cubital tunnel. SI-1 can either be needled or bled to produce just a few drops of blood. The idea of bleeding is to move blood to expel wind.

SI-3

SI-3 (/) is a Shu-Stream point. The Shu-Stream points are also known as transporting points. They represent that point on a meridian where external pathogens may travel interiorly. Therefore, SI-3 is needled in order to prevent the internal movement of the wind–damp pathogen. The needle should be pointed distally toward the Jing-Well point so as to imply an outward movement toward the exterior.

SI-6

SI-6 (–) is the Xi-Cleft point of the Small Intestine meridian. As such, it is indicated when there is acute pain along its pathway. Of course, this includes the medial elbow.

SI-8, H-3

SI-8 and H-3 are both local points at the medial elbow. SI-8 actually lies over the cubital tunnel. These points should be palpated and chosen based on which is sore to the touch. Needle with a reducing technique.

Supplemental Points

SP-9, SP-6

If there is a predominance of other symptoms associated with dampness such as edema, a sensation of heaviness, diarrhea, or turbid discharges, add SP-9 (/) and SP-6 (/). As a combination, these points strengthen the spleen, which reduces a root cause of damp accumulation. They also regulate water metabolism and promote urination so as to drain dampness. SP-6 has the added benefit of invigorating the blood and calming the mind.

UB-12, L-7

If there is a predominance of other symptoms associated with wind such as dizziness, rhinitis, stiff neck, or itchiness, add UB-12 (–, /) and L-7 (–). UB-12 is called *Fengmen* or Wind Gate. Its name reveals its function in releasing wind from the exterior of the body by regulating the balance between *Ying* Nutritive Qi and *Wei* Defensive Qi. Needling L-7 also stimulates *Wei* Qi on the exterior in order to expel pathogenic wind. In this particular case, choose the contralateral or right L-7.

CLINICAL NOTE This treatment strategy could easily apply to a case of medial epicondylitis provided the pain was along the course of the Small Intestine meridian. If the pain was along the Heart meridian, then it would be reasonable to choose the Heart meridian's Jing-Well (H-9), Shu-Stream (H-7), and Xi-Cleft (H-6) points, while adding a local point or two that are tender to palpation such as H-3 or SI-8.

Standard Medical Treatment

A simple, lightweight plastic arm splint for Ms. Perret to wear at night and while she is at the computer will likely help her symptoms.

If symptoms persist, physical or occupational therapy may be helpful. If symptoms continue for more than 3 months despite aggressive conservative measures, surgical decompression and/or transposition of the ulnar nerve may be considered.

It is difficult to determine the role of acupuncture for cubital tunnel syndrome. The adverse effects are minimal, and so it is reasonable to use as an initial treatment along with a splint and physical therapy. It is also reasonable to at least attempt acupuncture before considering a much more invasive option such as surgery.

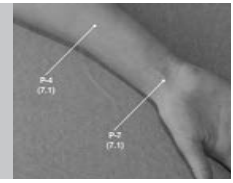
Carpal tunnel syndrome

CHIEF COMPLAINT: "I have shooting pains in my hand."

HISTORY OF PRESENT ILLNESS

Ms. Russo is a 42-year-old female legal secretary who spends a lot of time in front of the computer. She says that in the last 10 days, she has noticed pain, numbness, and tingling in her right wrist and first 3 digits. The pain is described as "achy." Sometimes, the symptoms wake her at night and she wakes up shaking her hand to try to "wake it up." In addition to increased symptoms at nighttime, Ms. Russo has also noticed that her symptoms are worse while working at the computer. She denies any weakness or any pain radiating up her arm. She denies any neck pain. She says she has never had these symptoms before. She has taken some Advil for the pain but says it does not help much.

Ms. Russo is otherwise healthy. She has no medical problems and takes no medications. She drinks a glass of red wine every night, does not smoke, and does not use illegal drugs. Her review of systems is negative.



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WRIST AND HAND PAIN

Physical Examination

On exam, Ms. Russo is a well-developed, well-nourished woman in no acute distress. She has full strength and range of motion in her upper extremities bilaterally. She has numbness in her right first through third digits on the palmar side. She has a positive carpal compression test, and a positive Tinel sign over the carpal tunnel on the right side. She also has a positive Phalen test on the right. She has a negative Tinel sign over Guyon's canal on the right. She has brisk and symmetric biceps, brachioradialis, and triceps reflexes bilaterally. She has a negative Spurling test bilaterally.

Differential Diagnosis

This is a 42-year-old woman with a classic case of carpal tunnel syndrome. Other potential causes of her symptoms include pronator syndrome, cervical radiculopathy, brachial plexopathy, and ulnar neuropathy.

Diagnostic Studies

EMG/NCS studies may be performed. They should be obtained if the diagnosis remains in doubt. The results can also be used to document severity of nerve injury and help guide the invasiveness of treatment.

Acupuncture Treatment

Principal Points

P-7

P-7 (/, –) is a local point on the palmar aspect of the transverse wrist crease, over the pathway of the median nerve. The needle should be inserted pointing distally along the Pericardium meridian. Needling this point may elicit a nerve-related sensation in the first three digits. According to acupuncture theory, this is an appropriate response. If this sensation is obtained, no further manipulating of the needle should be performed.

P-4

P-4 (–) is the Xi-cleft point of the Pericardium meridian. As such, it can relieve acute symptoms associated with disorders of the Pericardium channel. Of anatomical interest is the fact that it lies proximal to P-7 on the palmar aspect of the forearm, along the pathway of the median nerve.

Supplemental Points

LI-4

Radiating pain and numbness that tend to be worse at night are indicative of what Chinese medicine refers to as Wind or Wind–Damp obstruction. LI-4 is a common point used to expel wind especially from the head and face, but in a more general sense from the superficies of the body. Owing to its location on the dorsal aspect of the hyper-thenar web space, reducing LI-4 is indicated for painful obstruction of the hand and fingers.

L-7

L-7 (–) when combined with LI-4 enhances its function in relieving exterior Wind. Furthermore, the Lung and Large Intestine channels are interiorly and exteriorly related. L-7 is a Luo-Connecting point and LI-4 is a Yuan-Source point. Combining the two is known as the *Yuan-Luo technique*. A Luo-Connecting point is the location where a collateral branches off from its primary meridian to connect with its related pair. Using the Yuan and Luo points together enhances their ability to remove stagnations or obstructions by promoting the circulation of Qi. When treating carpal tunnel syndrome, L-7 should be needled pointing distally. For most other conditions, L-7 is needled pointing proximally.

Standard Medical Treatment

A resting wrist splint to hold Ms. Russo's wrist in the neutral position should be obtained. She should use the splint at night and, if she is agreeable to this, use it during the day while at the computer. An ergonomic

evaluation of her workstation in the office should also be performed. Ergonomic education in the physician's office or with an occupational therapist should also be provided.

An injection of steroid and anesthetic into the carpal tunnel can be helpful.

If an underlying cause is suspected to be contributing to her carpal tunnel syndrome (e.g., hypothyroidism, diabetes), then this should be addressed appropriately.

If symptoms persist despite aggressive conservative care, EMG/NCS studies should be obtained and surgical decompression should be considered.

> Many acupuncturists can relay anecdotal information of successful acupuncture treatments for carpal tunnel syndrome. Despite this anecdotal, unpublished information, there is surprisingly sparse research in this area, leaving it impossible to offer evidence-based recommendations. Mild carpal tunnel syndrome often responds very well to ergonomic education and a resting wrist splint at night. If symptoms persist or if the syndrome is moderate or severe, more aggressive intervention may be necessary. A carpal tunnel injection of steroid and anesthetic (in conjunction with other physical therapy, ergonomic training, and a wrist splint) is an option with a high rate of efficacy. Surgical release is always a more aggressive but highly effective option. It seems reasonable to consider acupuncture at any point in the treatment paradigm of carpal tunnel syndrome. Certainly before or in addition to a steroid injection, acupuncture should be considered. Also, acupuncture is a reasonable therapeutic alternative to try prior to considering surgical release.

deQuervain's tenosynovitis

CHIEF COMPLAINT: "My wrist hurts."

HISTORY OF PRESENT ILLNESS

Ms. Brown is a 24-year-old woman in good general health who presents with pain over the dorsolateral aspect of her right wrist, just over the radial styloid. She reports that she just had her first child, a healthy baby girl, 8 months ago. For the last 6 months, she has been experiencing this same pain and the symptoms have not improved. It hurts when she picks up her daughter. She has not done anything for the pain and had been afraid to take any medications because she was breastfeeding. She stopped breastfeeding last month. Ms. Brown denies any numbness, tingling, burning, or

other paresthesias. She has never had this pain before. When asked how bad her pain is on a scale of 0–10, she says the pain is about a 3 out of 10 but can get as bad as 5 or 6 out of 10 when she has to use her hands a lot.

Ms. Brown says she does not drink any alcohol, smoke tobacco, or use illegal drugs. Her review of systems is negative.

Physical Examination

On exam, Ms. Brown is a pleasant woman, well nourished, well developed, and in no acute distress. She walks with a non-antalgic gait. She has full range of motion in her upper extremities bilaterally. She has 5/5 strength and her sensation is intact in her upper extremities bilaterally. Her biceps, brachioradialis, and triceps reflexes are brisk and symmetric. She has a positive Finkelstein test on the right side.

Differential Diagnosis

This 24-year-old woman has a classic case of deQuervain's tenosynovitis. Other potential causes include intersection syndrome and wrist sprain.

Acupuncture Treatment

Principal Points

ST-41, SP-5

DeQuervain's tenosynovitis usually results in pain at the location of the acupuncture point LI-5. Indeed, that is the case for this patient. The Large Intestine meridian is also known as the Yangming meridian of the hand. We can therefore choose the corresponding point of the Yangming meridian of the foot on the contralateral side. The Yangming meridian of the foot is the Stomach meridian. These coupled meridians work harmoniously together to form a circuit that regulates Qi.

The ankle corresponds to the wrist so we would therefore choose as part of our point prescription ST-41. Palpate around the left ST-41 area. The point most tender to palpation should be needled to elicit a Qi sensation. If there is more than one tender area, add one or two needles in the vicinity of ST-41. Have the patient move the wrist and hand while the needle is being manipulated. There should be a noticeable improvement in symptoms.

If the pain is located more toward the extensor pollicis brevis tendon, the Lung meridian may also be affected. In this instance, the painful area would approximately be located at point LU-9. The Lung meridian is also known as the Taiyin meridian of the hand. The Taiyin meridian of the foot is the Spleen meridian. Therefore, choose the point on the Spleen meridian located on the contralateral ankle, which would be SP-5. Of further relevance is the fact that SP-5 has the effect of relaxing the sinews.

Palpate around the left SP-5 area. The point most tender to palpation should be needled to elicit a Qi sensation. If there is more than one tender area, add one or two needles in the vicinity of SP-5. Have the patient move the wrist and hand while the needle is being manipulated. Again, there should be a noticeable improvement in symptoms. The needles should be manipulated regularly throughout the treatment session, and they should be retained at least 30 minutes. After a treatment, if the patient has significant pain relief, caution him to continue as though the area were still injured. In that way you will maximize the opportunity for a complete recovery. Up to ten treatment sessions comprise one complete course.

Standard Medical Treatment

A thumb spica splint should offer this patient good relief. Ice is also an excellent anti-inflammatory for this area. A short course of occupational therapy may be considered.

A steroid and anesthetic injection into the tendon sheath (*never directly into the tendon*) may be helpful for resistant symptoms.

> A thumb spica splint and ice are often all that is required to treat this condition. However, occasionally symptoms persist. There is no evidence regarding the efficacy of acupuncture for deQuervain's tenosynovitis. Because it is less invasive than a steroid and anesthetic injection, acupuncture is a reasonable alternative to try before (or in addition to) the injection.

First carpometacarpal (CMC) joint arthritis

CHIEF COMPLAINT: "My thumb hurts."

HISTORY OF PRESENT ILLNESS

Ms. Sherman is a 63-year-old woman with a history of alternating diarrhea and constipation, fatigue, and chronic lower back pain who presents with a 1-year history of right thumb pain. The pain is located specifically at the base of her right thumb. She says she feels weak when she tries to pinch things between her thumb and fingers. She says her thumb feels "stiff."

Ms. Sherman denies any numbness, tingling, burning, or other paresthesias. She denies any locking or clicking in her thumb. When asked how bad her pain is on a scale of 0–10, she says the pain is about a 4/10.

In general, Ms. Sherman says that she tries to rest her thumb to help with the symptoms. She has not been to a doctor for the pain before. She was recently in the hospital for diverticulitis and so has not had time to deal with this pain yet.

Her review of systems is negative. She has an allergy to sulfa medications (from which she gets a rash) but no other allergies. She says she does not drink alcohol, smoke cigarettes, or use illegal drugs. She is a retired sixth grade teacher.

Physical Examination

On exam, Ms. Sherman is a thin woman in no acute distress who appears her stated age. She walks with a non-antalgic gait. She has full range of motion in her upper extremities bilaterally. She has 5/5 strength and intact sensation in her upper extremities bilaterally. She has brisk and symmetric biceps, brachioradialis, and triceps reflexes bilaterally.

Ms. Sherman's dorsal and radial aspects of her thumb are tender. She has a positive grind test on the right.

Differential Diagnosis

This 63-year-old woman has a classic case of CMC arthritis. Other potential causes would include systemic arthritis (such as rheumatoid arthritis), fracture, and deQuervain's tenosynovitis.

Diagnostic Studies

X-rays may be obtained and will likely reveal signs of osteoarthritis such as joint space narrowing, sclerotic changes, and cystic changes.

CLINICAL NOTE The degree of symptoms does not always correlate with degree of arthritis seen on an X-ray. The X-ray can give clues as to the structural damage within the joint. However, arthritis may be in the joint even if it is not visible on an X-ray. Always treat the patient, not the X-ray.

Acupuncture Treatment

Principal Points

LI-5, L-9

These are both local points at the base of the thumb and as such may be used to relieve pain. The fact that the patient complains of stiffness implies cold lodged in the joints. In this case, heat via moxa or heat lamp is applicable. Needle with a reducing technique in order to draw the pathogenic cold up to the surface.

L-11, LI-1

L-11 and LI-1 are Jing-Well points and as such they can stimulate Wei Qi in order to release, in this instance, pathogenic cold. In addition, they can relieve pain along the length of their channels.

Supplemental Points

TH-4, ST-42, UB-23

In this case, the patient exhibits symptoms associated with cold obstruction in the first CMC joint. Because she has a history of chronic lower back pain, it would not be out of the question to infer that this cold may be due to a deficiency of kidney yang. Reinforcing UB-23, which is the back-Shu point of the Kidneys, can help tonify the Kidneys. Heat is applicable.

Kidney Yang supports Spleen Yang and its ability to facilitate normal digestion. Spleen Qi in turn reinforces Kidney Qi. Because in this particular case there may be a long-term issue with Kidney Qi, Spleen Yang may be deficient as well. Thus, a cycle of taxation has ensued. TH-4 is the Yuan-Source point of the Triple Heater (*San Jiao*) meridian. The Triple Heater (*San Jiao*), and in particular TH-4 (+), can be used to tonify Yuan-Primary Qi when there is chronic Kidney deficiency. ST-42 is the Yuan-Source point of the Stomach meridian. As the Source point, it can strengthen the Stomach and its related Zang organ, the Spleen, as well as relieving cold obstruction in the joints. When ST-42 (+) is combined with TH-4 (+), this tonifying action is enhanced.

The point combination of TH-4, ST-42, and UB-23 has a strong tonifying action and in general is a good combination to think of when there is a complaint of fatigue. They are equally applicable when there is cold in the joints due to deficiency.

Standard Medical Treatment

Occupational therapy would be appropriate for this patient. Paraffin and other heating modalities in therapy may be helpful.

Using a thumb spica splint for 2–3 weeks may be helpful.

Analgesic medication and/or topical analgesics (e.g., cream, spray) may be helpful.

An intra-articular corticosteroid and anesthetic injection may be helpful.

Occasionally, surgical intervention may be necessary. Surgical options include arthroscopy, osteotomy, trapeziectomy, and arthroplasty.

Although the use of acupuncture for CMC arthritis has not received attention in the literature, it has been shown to be efficacious for osteoarthritis in other parts of the body (e.g., knee). It is reasonable to consider using acupuncture early in the treatment of CMC arthritis. It may be used in combination with a splint and occupational therapy. It is a good alternative to use before considering an intra-articular steroid injection. However, it could also be used after an injection. It should be at least considered prior to surgical intervention.

Wrist sprain

CHIEF COMPLAINT: "My wrist hurts."

HISTORY OF PRESENT ILLNESS

Ms. Antonich is a 34-year-old woman in good general health who fell yesterday morning. She says she slipped on a patch of black ice and landed on her hands. She was not otherwise injured but felt pain in her left wrist. She went to the emergency department where they took X-rays and told her that she had only suffered a sprain. They put her wrist in an elastic bandage wrap, told her to put ice on her wrist at night, and to take Tylenol for the pain. She was given this office's phone number for further care.

Ms. Antonich denies any numbness, tingling, burning, or other paresthesias. She says the pain is located primarily on the top of her wrist and that it hurts to move it. She has been wearing the elastic bandage wrap since going to the ER the day before. She does not have a copy of her X-rays with her. When asked how bad her pain is on a scale of 0–10, she says the pain is 5/10 without Tylenol and 3/10 with Tylenol.

Ms. Antonich says she drinks alcohol occasionally, does not smoke cigarettes, and does not use illegal drugs. Her review of systems is negative. She is not aware of having allergies to any medications.

Physical Examination

On exam, Ms. Antonich is a well developed and nourished, pleasant woman in no acute distress. Moving her wrist in any plane causes obvious discomfort. She has 5/5 strength and full range of motion in her upper extremities bilaterally except her left wrist. On her left wrist, a small ecchymotic lesion, about 4 cm in size, is present on the dorsal surface. Range of motion and strength testing are restricted in the left wrist secondary to pain. Sensation throughout both upper extremities is intact. Radial pulses are intact bilaterally. Capillary refill is less than 2 seconds bilaterally. She has full range of motion of all five fingers on the left hand. There is no

tenderness in the anatomic snuffbox. Her dorsal wrist, particularly on the ulnar side, is tender. Palpation of the carpal bones does not reveal any obvious deformity. No instability of the wrist is noted on provocative testing.

Differential Diagnosis

This is a 34-year-old woman with a probable wrist sprain. The other potential cause of her pain that must be ruled out is a wrist fracture.

Diagnostic Studies

X-rays were obtained in the emergency department. These should be obtained and reviewed and/or repeat X-rays taken.

CLINICAL NOTE If there were tenderness in the anatomic snuffbox, or if the pain were localized to the snuffbox, then a scaphoid fracture must be ruled out. This would likely include MRI, bone scan, or subsequent X-rays. If a scaphoid fracture is suspected, the wrist should be treated as if there were a scaphoid fracture until ruled out.

Acupuncture Treatment

Principal Points

Treatment Option #1

Acute wrist sprain can be treated simply and effectively by a system known as wrist and ankle acupuncture. This system identifies six points that encircle each wrist and ankle. Each point corresponds to one of six longitudinal zones of the body, much like one might think of a dermatome. The six points on the wrists treat disorders above the diaphragm while the six points below the wrists treat disorders below the diaphragm. By no means is this system of acupuncture intended only for problems located on the wrists and ankles themselves. However, acute pain or sprains of the wrists or ankles tend to respond very well to this type of treatment.

There exist three points medially located and three points laterally located on the lower legs and forearms, respectively. The three medial points are called *Upper or Lower 1, 2, and 3*, and the three lateral points are called *Upper or Lower 4, 5, and 6*. Because we are discussing a case of wrist sprain with pain, we shall consider the points of the upper limbs. Because the pain is on the dorsal-ulnar aspect of the wrist, we should select points Upper 6 and Upper 5.

Upper 6 is located on the dorsal aspect of the forearm at the inner border of the ulna along the Small Intestine meridian, 2 cun proximal to

the crease of the wrist. Upper 5 is located on the dorsal midline of the forearm, 2 cun proximal to the crease of the wrist at point TH-5. Needles should be 0.25 mm in diameter and 30 mm in length. Insertion is directed distally and is subcutaneous only. There should not be any needling sensation. If there is any strong sensation, then retract the needle and reinsert. Once inserted, the handle of the needle should rest against the forearm. Have the patient move her wrist in all directions to make sure that the needles have not penetrated into the muscular level. If the needles move with any movement of the hand, then retract the needle and reinsert. Once the needles are comfortably in place the handles can be taped down to the skin. Have the patient attempt to move her wrist. Some degree of pain relief should be felt within the first few minutes.

These needles can be retained in place for up to 3 days after which the patient can come in to have them removed, or he can remove the needles on his own. After two or three treatments, there should be significant improvement in pain and swelling.

Treatment Option #2

UB-60, UB-62, GB-40 *OR* H-7, P-7

Because the wrist sprain is acute and bruising is noted, local points would be too painful to needle. Therefore, we should choose corresponding contralateral points on the unaffected left wrist or the left ankle. Palpate the listed points to determine which is most tender or sore.

This case involves an injury to the dorsal-ulnar aspect of the wrist. This points to a problem of the Small Intestine and/or Triple Heater (*San Jiao*) meridians. The Small Intestine meridian is also called the Taiyang meridian of the hand, while the Triple Heater (*San Jiao*) meridian is called the Shaoyang channel of the hand. These terms are not meaningless. They offer important clues in terms of treatment.

For problems of the Taiyang meridian of the hand, we can choose corresponding points on the Taiyang meridian of the foot. Similarly, for problems of the Shaoyang meridian of the hand, we can choose corresponding points on the Shaoyang meridian of the foot. The Taiyang meridian of the foot is the Urinary Bladder meridian and the Shaoyang meridian of the foot is the Gall Bladder meridian. The points on the ankle that correspond to this left wrist injury would be the right-sided UB-60, UB-62, and GB-40. Palpate these points and determine which are most reactive, then needle with a reducing method until the patient experiences a sensation of Qi. If, however, when palpating you find a distinctly tender point that lies near GB-40 (for example) but is not exactly located at GB-40, that is the point that should be chosen for needling.

If none of the contralateral ankle points are tender to palpation, try the corresponding points on the unaffected wrist. To determine the corresponding points, we must first determine the corresponding channels

based on their interior–exterior relationship. This relationship implies a physiological association as well as an anatomical partnering so the 12 primary meridians together form one dynamic whole.

In this particular case, due to the anatomical location of the pain, we have determined the affected channels to be the Small Intestine meridian of the hand (Taiyang) and the Triple Heater (*San Jiao*) meridian of the hand. Employing this treatment paradigm, we may therefore choose points of the opposite Heart meridian of the hand (Shaoyin) or the Pericardium meridian of the hand (Jueyin) accordingly. Choosing points of these meridians on the wrist gives us H-7 and P-7. If there are any spots near but not exactly on these two points, they should be needled instead of or as well as H-7 and P-7.

While you manipulate the needles, have the patient move her wrist in all planes. There should be an immediate and noticeable reduction in symptoms. Retain the needles for approximately 30 minutes, manipulating them at regular intervals to achieve a needling sensation.

Standard Medical Treatment

Ms. Antonich will likely benefit from rest, ice, and elevation of her wrist. A Velcro wrist splint or plastic cast may also be used. Once she is feeling better, physical therapy may be helpful.

CLINICAL NOTE A surgical referral should be made for third-degree sprains for evaluation and possible surgical intervention.

▶ Acupuncture can be helpful in acute injuries. It may help quicken the recovery process. If the patient is interested, it is a very reasonable adjunctive therapy in the acute period.

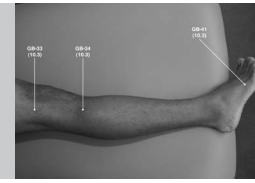
Acute lower back pain

CHIEF COMPLAINT: "I hurt my back."

HISTORY OF PRESENT ILLNESS

Mr. Waterhouse is a 44-year-old man with a 1-week history of "intense" lower back pain. He describes the back pain as sharp and confined to his lower back. It does not radiate into either of his lower extremities. He denies any numbness, tingling, burning, or other paresthesias. He denies any weakness. He is not sure what brought the pain on. He went home from work a week ago and felt an ache in his back. The next morning, he woke up with terrible back pain. Since then, the pain has continued. Because of pressures at work, he was not able to take any time off. He says that the pain is worse with sitting and better with standing and walking around. The pain seems worse with bending forward and better with leaning backwards. Coughing, sneezing, and straining during a bowel movement also make the pain worse. Of note, Mr. Waterhouse works as a vice president for a large investment firm and spends a large part of his day sitting. He also says in the past month he has been under a considerable amount of stress because of work and has been working longer hours than usual.

Mr. Waterhouse says he has had back pain off and on for years, but it has never been this bad. He says he knows he is about 20 pounds overweight and understands this



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LOWER BACK PAIN

may be contributing to his problem. In general, the pain is worse in the morning, gets better when he moves around, and then gets worse during the day while he is sitting at work.

Mr. Waterhouse has been taking extra-strength Tylenol and full-dose Advil around the clock to help with his pain. He also admits to taking his wife's Percocet® to help him sleep for the last two nights. He says that he has never been a "good sleeper" but has hardly been sleeping at all since this pain began. When asked how bad his pain is on a scale of 0–10, he says the pain has been hovering around 8.

Mr. Waterhouse is otherwise in good health. He has no known medical problems and does not take any medications except for seasonal allergy medications. He has no known drug allergies. He has not had any recent unintended weight loss. His review of systems is negative.

Physical Examination

Mr. Waterhouse is a well-developed, well-nourished overweight man in no acute distress. His gait is non-antalgic. He has pain reproduction with trunk flexion. Trunk extension and oblique extension do not reproduce the pain. He is able to toe and heel walk without difficulty. He has a negative straight leg raise and a negative slump test. He has full pain-free range of motion of his hips.

Mr. Waterhouse has full range of motion of his lower extremities although his hamstrings and hip flexors are noted to be tight. He has 5/5 strength and intact sensation in his lower extremities bilaterally. He has brisk and symmetric patellar and Achilles reflexes bilaterally. He does not have a Babinski sign on either lower extremity.

Mr. Waterhouse's lumbar paraspinals are diffusely tender (right somewhat more tender than left), but no trigger points are palpable. He does not have tenderness over his greater trochanter on either side. He has a negative Patrick test. He has a negative Thomas test.

Differential Diagnosis

This is a 44-year-old man with acute lower back pain. Potential etiologies of his lower back pain include discogenic, facet syndrome, lumbar strain/sprain, and sacroiliac joint pain.

CLINICAL NOTE The patient's age and the fact that his pain is worse with bending forward, coughing, sneezing, and having a hard bowel movement all point toward discogenic pain. In addition, the fact that the pain is worse in the morning suggests discogenic pain. However, because of the acute nature of the pain, it is difficult to rule out a simple sprain or strain. Regardless, in this early stage the workup and treatment are largely the same.

Diagnostic Studies

None are routinely necessary at this point. If the symptoms persist, X-ray and/or MRI may be appropriate.

Acupuncture Treatment

Principal Points

BL-20

Leading a sedentary lifestyle as well as working long hours tend to weaken the normal functions of the spleen and stomach, and result in a taxation of Qi. A weak spleen is one of the leading internal causes of dampness, and indeed this patient exhibits signs of dampness. He is overweight and his pain is worse with forward flexion. These symptoms of heaviness are main characteristics of what Chinese medicine refers to as dampness. BL-20 (+) is the Back-Shu point of the Spleen. Reinforcing BL-20 strengthens the Spleen's Qi and in doing so diminishes the root cause of the accumulation of dampness.

BL-23

BL-23 (+) is the Back-Shu point of the Kidneys. It is a local point that can relieve pain of the lower back. Reinforcing BL-23 will also serve to strengthen the kidneys and their ability to support the spleen.

ST-40

When Qi stasis leads to long-term accumulation of dampness or phlegm, this can lead to symptoms of emotional disturbance. ST-40 (–) can help eliminate long-standing dampness that has led to an accumulation of phlegm. It helps calm the mind to relieve symptoms of depression, lethargy, worry, and an increased sensitivity to stressful circumstance.

BL-63

BL-63 (–, /) is the Xi-Cleft point of the Bladder meridian. As such, it is of particular usefulness in relieving acute pain from along the course of the Bladder meridian. This patient's lumbar paraspinal muscles are tender to palpation, and lie on the course of the Bladder meridian.

SP-3, SP-10

This patient's acute back pain is worse at rest and improved with "walking around." According to Chinese medicine, this type of pain suggests a stagnation of Qi and blood. Also contributing to Qi stasis in this patient is the fact that he leads a sedentary lifestyle. SP-3 (+) is the Yuan-Source point of the Spleen. It tonifies the spleen, and regulates and relieves Qi stasis. SP-10 (+) invigorates the blood and relieves blood stasis. This is an effective point combination to move the Qi and blood.

Supplemental Points

LIV-6

LIV-6 (+) is the Xi-Cleft point of the Liver channel. It can help regulate the blood and relieve stagnation. Although this patient does not complain of numbness, it is useful to know that LIV-6 can address symptoms of numbness.

P-6, P-7

Alternatively use P-6 (/) and P-7 (/) to help calm the mind and relieve stress. Both points are indicated if the patient complains of palpitations due to anxiety. P-6 would be more appropriate if the patient complains of nausea, stuffiness of the chest, or melancholy. P-7 would be more appropriate if the patient complains of excessive fear or anger.

Xi-Cleft Points

CLINICAL NOTE

The categorization of Xi-Cleft points can be traced back to the famous work *Systematic Classic on Acupuncture and Moxibustion (Jia Yi Jing)*. Relevant to our discussion are the Xi-Cleft points of the 12 primary channels. These points represent specific locations where the Qi and blood of a given channel begin to descend or submerge from its more superficial pathway starting at the Jing-Well points on the distal extremities. These points are particularly useful in the treatment of acute pain, especially that which occurs along its channel's trajectory. Examples follow.

LU-6: elbow and upper arm pain
LI-7: toothache
ST-34: abdominal pain
SP-8: menstrual pain
H-6: chest pain
SI-6: shoulder pain
BL-63: lumbar pain
K-5: painful urination and menstruation
P-4: chest pain
TH-7: temporal pain
GB-36: lateral neck and trunk pain
LIV-6: urogenital pain

Standard Medical Treatment

This patient's pain will likely improve on its own without intervention. Reassurance of this fact is part of the treatment. In addition, ice and a brief course of NSAIDs may be helpful. The patient should also either go to a physical therapist for a short course of therapy or be carefully instructed in exercises to do at home. These exercises should focus on stretching and strengthening his lower extremities and strengthening his core with a good lumbar stabilization regimen. These exercises will help the pain resolve more quickly and stay away.

A muscle relaxant to let the muscles relax and help Mr. Waterhouse get some sleep may also be helpful. If the pain is too severe, a short course of Percocet or Vicodin may be appropriate. Mr. Waterhouse should be strenuously advised *not* to take his wife's medications.

It is notoriously difficult to study any treatment for acute lower back pain. This is because most cases resolve spontaneously on their own regardless of treatment strategy. Nevertheless, certain treatments can expedite recovery. One of the most important treatments, when appropriate, is *reassurance that the pain typically goes away*. In addition, encouraging return to activities as soon as possible is helpful. Bed rest beyond a day inhibits recovery. Acupuncture, in the acute period of lower back pain, can be a very effective treatment. Anecdotally, acupuncture has a relatively high rate of efficacy in the acute treatment period for a variety of disorders, including acute lower back pain. Once the pain has resolved, acupuncture along with a structured physical therapy or home exercise program can continue for several weeks to maximize benefits. The physical therapy should progress to a home exercise program and this should be continued indefinitely.

Chronic facetogenic lower back pain

CHIEF COMPLAINT: "My back hurts."

HISTORY OF PRESENT ILLNESS

Ms. Martinez is a 75-year-old woman with no significant past medical history who presents with a 2-year history of lower back pain. She says that sometimes her left buttock aches when her back pain is at its worst. The symptoms never radiate beyond her buttocks. She denies any numbness, tingling, burning, or other paresthesias. She denies any weakness. When asked how bad her pain is on a scale of 0–10, she says the pain is usually 3/10 but can be as bad as 5/10. She went to two different doctors about a year ago. They told her that she has arthritis in her back and, short of surgery, there was not much she could do. She went to physical therapy and liked the "massages" but didn't continue her exercises when her therapy sessions were done. She doesn't remember what exercises she did in therapy. She says the pain is better with resting and worse with walking for long periods of time. Coughing and sneezing do not affect the pain.

Ms. Martinez says she occasionally takes Tylenol for the pain but otherwise has just learned to live with it. Her friend told her that there might be more that could be done for her pain, so subsequently she decided to make an appointment with this office. She denies any recent weight change, fevers, chills, or change in her bowel or bladder habits.

Ms. Martinez takes a calcium supplement with vitamin D and a multivitamin daily. She says she does not drink alcohol, smoke cigarettes, or use illegal drugs. She has no known drug allergies and her review of systems is negative.

Physical Examination

On exam, Ms. Martinez is a well-developed, well-nourished woman who appears her stated age. She walks with a non-antalgic gait. Trunk flexion does not reproduce her pain. Trunk extension, particularly trunk left oblique extension, reproduces her pain, including the pain that goes into her left buttocks.

She is able to toe walk and heel walk without difficulty. She has a negative straight leg raise and negative slump test. She has 5/5 strength, intact sensation, and full range of motion in her lower extremities. She has brisk and symmetric patellar and Achilles reflexes. She has no Babinski sign in either lower extremity. She has a negative Patrick test and negative Thomas test bilaterally. She is noted to have relatively tight hamstrings and hip flexors bilaterally. Her lumbar paraspinals are minimally tender and no trigger points are appreciated.

Differential Diagnosis

This is a 75-year-old woman with chronic lower back pain likely secondary to facet joint disease. Other potential causes include discogenic pain and sacroiliac joint pain.

Diagnostic Studies

X-rays and MRI would be appropriate for this patient.

Acupuncture Treatment

Principal Points

BL-23

BL-23 (+) is the Back-Shu point of the kidneys. Owing to the patient's age as well as her description of her symptoms (soreness, pain that is worse upon exertion and improved with rest), it is reasonable to deduce that this pain comes from a deficiency of Qi and blood. The kidneys are the source of original Qi. Reinforcing BL-23 has the ability to tonify kidney's Qi.

LIV-8

LIV-8 (+) is the He-Sea and water point of the Liver meridian. It can nourish and invigorate the blood. When the Liver's blood is not sufficient, there may be signs such as muscle or tendon tightness or cramping.

REN-4

REN-4 (+) is an important point to tonify the kidney's Qi. It is especially useful to address deficiency syndromes experienced later in life including a weak and sore lumbar region.

K-3
K-3 (+) is the Shu-Stream and Yuan-Source point of the kidney meridian. It can be used to nourish and strengthen the kidneys and the lumbar region.

BL-26
BL-26 (+) is a local point on the lumbar–sacral junction. It is indicated especially for deficiency-type lower back pains.

Supplemental/Alternate Points

BL-53, BL-54
In the case of buttock pain, these two local points should be palpated and whichever is more reactive should be needled. Needle on the affected side only using an even technique.

H-5, H-7
H-5 (/) and H-7 (/) can both be added to this prescription if there are palpitations or insomnia. H-5 is more suitable when there is nocturnal urination and nervousness. H-7 is more suitable if there is poor memory or inappropriate laughter.

DU-20, REN-6, ST-36, BL-20, BL-17
This combination of points can relieve symptoms of Qi and blood deficiency such as dizziness and orthostatic hypotension. DU-20 (/) is the highest point on the body and can be used to raise deficient yang Qi. REN-6 (+) reinforces the Qi and is indicated for a wide variety of deficiency syndromes. Bl-17 (+) is the Hui-Influential point of blood. It can tonify and invigorate the blood. BL-20 (+) is the Back-Shu point of the spleen, and ST-36 (+) is the He-Sea point of the Stomach meridian. Together they invigorate the Qi of the middle heater, which is the source of postnatal Qi. It is a very effective point combination to tonify deficient conditions.

REN-12
Add REN-12 (+) if there is poor appetite or indigestion. REN-12 is the Hui-Influential point of the Fu organs and the Front-Mu point of the stomach. In addition to poor appetite and indigestion, it is appropriate for reflux, nausea, and diarrhea.

Standard Medical Treatment

There are a few ways to approach this patient depending on her preferences and the results of the imaging studies. She would likely benefit from flexion-based physical therapy that emphasized lumbar stabilization and stretching and strengthening her lower extremities. If she wanted to be more aggressive, facet joint blocks (either intra-articular or medial nerve

branch blocks) would be appropriate. The medial branch blocks are purely diagnostic whereas the intra-articular blocks may be therapeutic as well as diagnostic. If the blocks (which must be done under fluoroscopic guidance) confirm the diagnosis of facet joint pain, then a radiofrequency rhizotomy may be performed.

> The use of acupuncture in the treatment of chronic back pain (whether it is coming from facet joint disease or the disc) remains inconclusive. Some reports indicate that acupuncture is effective, and that it reduces the need for oral medications. Others report that acupuncture is not effective. Facet joint pain is different from discogenic pain in that true facet joint disease has a very high rate of treatment success with relatively noninvasive means (mainly radiofrequency rhizotomy). However, facet joint blocks and rhizotomy are still more invasive than acupuncture. It is therefore reasonable in the author's opinion to attempt acupuncture in receptive patients prior to facet blocks.

Lumbosacral radiculitis/ radiculopathy

CHIEF COMPLAINT: "I have shooting pains running down my leg."

HISTORY OF PRESENT ILLNESS

Mr. Lane is a 52-year-old man with a history of GERD (controlled with Prevacid®) who presents with a 1-week history of back and shooting right leg pain. He says the pain in his back is a dull ache, but the pain that shoots down his leg is "sharp, electric, and radiating." When asked to point to exactly where the pain travels, he points down the side of his thigh, along his lower leg, and then to the top of his foot and into his big toe.

Mr. Lane says he cannot remember any inciting event that might have caused the pain. He woke up and felt a dull ache in his back. The next day, he started having shooting pain. He denies any numbness, tingling, burning, or other paresthesias. He also denies any weakness. He says that coughing and sneezing do not seem to affect the pain. He took some Aleve®, which helped the ache in his back but did not help the shooting pain down his leg. The ache in his back has become constant but the shooting pains come intermittently. Bending forward, sitting for a prolonged period of time, and tying his shoelaces make the pain worse. Mr. Lane says that lying on his back flat makes the pain better.

Mr. Lane recalls no recent unintended weight loss, fevers, chills, or change in bowel or bladder function. When asked how bad his pain is on a scale of 0–10, he says the dull ache is 2 or 3/10 but the shooting pain is 10/10 at its worst.

Mr. Lane works as an electrical engineer. He says that he does not drink, smoke cigarettes, or use illegal drugs. He does smoke a cigar about once per week. His review of systems is negative.

Physical Examination

On exam, Mr. Lane is a well-developed, well-nourished, muscular man who appears slightly younger than his stated age of 52. He walks with a non-antalgic gait. He is able to toe walk and heel walk without difficulty. To his surprise, he loses his balance when trying to stand only on his left foot. However, he does not have a Trendelenburg sign.

He has a positive straight leg raise and positive slump test on the left side. He has full range of motion of his lower extremities. His sensation, including light touch, pinprick, and proprioception is intact in his lower extremities bilaterally. Mr. Lane is noted to have 4/5 left hip abduction strength and 4/5 left extensor hallucis longus strength but otherwise has 5/5 strength throughout.

Mr. Lane has brisk and symmetric patellar and Achilles reflexes. He does not have a Babinski sign bilaterally. He does not have any clonus in his lower extremities bilaterally. His lumbar paraspinals are tight but no trigger points are appreciated.

Differential Diagnosis

This 52-year-old man has a classic case of L5 radiculitis/radiculopathy. Based on the history and physical examination, the radicular symptoms are likely secondary to a herniated disc. Other potential causes of the patient's symptoms include facet hypertrophy and a buckled ligamentum flavum.

CLINICAL NOTE A radiculitis refers to radicular *pain*. Radiculopathy refers to neurologic *loss* such as weakness or decreased sensation. In an L5 radiculopathy, patients may not complain of weakness, but careful testing may reveal hip abductor weakness that may contribute to an unsteady gait.

Diagnostic Studies

X-ray and/or MRI may be appropriate. The MRI would be obtained in order to rule out other potentially serious pathologies and if a fluoroscopically guided epidural steroid injection is potentially indicated.

CLINICAL NOTE If the patient does not want to be aggressive in treating the symptoms, an MRI at this point is probably unnecessary. If the symptoms persist for another week, an MRI would be advisable. One of the advantages of getting the MRI earlier is that if symptoms worsen and the

patient is amenable to an epidural steroid injection, the patient doesn't have to first wait for the MRI.

Acupuncture Treatment

Treatment Option #1

Principal Points

LING GU, DA BAI, SI-3

Ling Gu and Da Bai are points originally termed by Master Tung Ching-Chang. Master Tung practiced acupuncture in Taiwan from 1949 into the 1970s. He belonged to a family lineage of several generations of acupuncturists. Master Tung's style of acupuncture differed from others in that his points were often not those traditionally written of in books. And while many of his points mirrored the more traditional versions, Master Tung ascribed to them different names and functions. Lastly, Master Tung's style is known for its use of just a few distally located needles. He was quite famous, and many view him as one of the greatest acupuncturists of the last generation.

Ling Gu is located approximately 0.5 cun proximal to LI-4. Da Bai is located approximately 0.5 cun proximal to LI-3. When a loose fist is formed there are usually small depressions in these two areas. SI-3, which according to Master Tung's style is termed Wan Shun Yi, is the confluent point of the Governor vessel (*Du Mai*). It is thus indicated for pain along the spine and of its related Taiyang channel, the Bladder meridian, which runs parallel to the spine. This combination of points is very useful in treating acute sciatica or lower extremity radicular pains.

Each of these points is very sensitive to needling, and a strong sensation is desired for a better overall treatment effect. Needling should be done on the contralateral side of the pain. After inserting the needles have the patient move their lumbar region slowly back and forth. Retain the needles for at least 30 minutes, manipulating them at regular intervals. A degree of symptom relief is often immediate.

Treatment Option #2

Principal Points

L3, L4, AND L5 HUA TUO JIAJI POINTS

These three points lie 0.5 cun lateral to the lower border of the spinous processes of the third, fourth, and fifth lumbar vertebrae. These points are indicated because this particular patient presents with an L5 radiculopathy. The points should be needled on the right side only using a reducing or even technique.

GB-30

GB-30 (–) is one of the most commonly used points to treat lower extremity radicular pains. From the Chinese medical point of view, needling GB-30 can relieve wind, cold, and damp obstruction in the lower extremities.

GB-31

Because this patient complains of pain that travels down the lateral aspect of his right lower extremity, the Gall Bladder meridian of the foot Shaoyang as the affected channel is implicated. GB-31 (–) is a local point along the Gall Bladder meridian on the lateral thigh. It is indicated when there is painful obstruction due to wind and damp, and often prescribed to address lower extremity weakness. Of particular interest is GB-31's ability to treat itchiness. It owes this to its function of dispersing wind.

GB-34

GB-34 (/) is the Hui-Influential point of the tendons. It is therefore indicated when there is stiffness or tightness of the soft tissues of the lower leg. It also addresses weakness of the lower extremity, and can relieve pain along the course of its channel.

GB-39

GB-39 (–) treats lower extremity weakness especially when it is due to wind and damp. It also alleviates pain along the course of the Gall Bladder channel.

GB-41

This patient complains of pain in his lateral lower extremity that crosses the dorsum of his foot and goes into his big toe. The Gall Bladder meridian traverses the lateral lower extremity. At GB-41 there is a branch that goes to the big toe where it connects with the liver channel. GB-41 (/) addresses this last connection of the affected channel.

In addition, GB-41 is the confluent point of the Belt channel (*Dai Mai*), which is one of the Eight Extraordinary vessels. The Belt channel wraps around the circumference of the waist, and GB-41 is therefore appropriate for Qi stagnation in the area of the waist. On a psychological level, the Belt channel represents those emotions or sentiments that we hold onto and are unable to let go of. This can be thought of as an accumulation of dampness due to Qi stagnation. Opening the Belt channel helps let go of those accumulations. To treat the Belt channel specifically, in addition to GB-41, add GB-26, GB-28, and LIV-13.

Supplemental/Alternate Points

BL-54, BL-37, BL-40, BL-57, BL-60

If the radicular symptoms travel down the posterior lower extremity instead of the lateral lower extremity, the affected meridian would be the

Bladder meridian of the foot Taiyang. This group of points will relieve painful obstruction along their associated channel.

Standard Medical Treatment

Mr. Lane would benefit from a good, structured course of extension-based physical therapy to focus on core stabilization, stretching, and strengthening. Some physicians advocate using a nerve-stabilizing agent such as gabapentin (Neurontin) or pregabalin (Lyrica®). An advantage of Lyrica is that it has fewer adverse effects and is easy to dose. Other physicians advocate a muscle relaxant, particularly at night to help with sleep.

If oral steroids are being considered, it may be advisable to get an MRI first to rule out potentially serious underlying problems such as an infectious etiology or malignancy.

A fluoroscopically guided epidural steroid injection may offer a great deal of benefit to reduce the inflammation around the nerve root. However, this is a more invasive option.

Surgical decompression is always an option if aggressive conservative therapy is not helpful. Also, surgical evaluation should be obtained urgently if the patient develops progressive neurologic symptoms or a change in bowel or bladder function.

Of note, Mr. Lane should also be counseled that cigars are also dangerous for his health. In addition to possibly prolonging his life, quitting his cigar usage may also help alleviate his back pain.

> There are no studies that argue definitively for or against using acupuncture for lumbar radicular symptoms. As with other pathologies, this decision must be made on a case-by-case basis. It is less invasive than epidural steroid injections. Ideally, the patient can be treated initially with physical therapy, acupuncture, and oral medications as needed. If these fail to relieve symptoms, more aggressive interventions such as fluoroscopically guided epidural steroid injections can be considered. If symptoms are particularly severe, and/or if neurologic signs are present, epidural steroid injections and potentially even surgical options may need to be considered sooner.

Hip osteoarthritis (OA)

CHIEF COMPLAINT: "My groin hurts."

HISTORY OF PRESENT ILLNESS

Mr. Gladstone is a 62-year-old man with no significant past medical history who presents with complaint of worsening right hip and groin pain for the last 4 months. He says that the pain is worst in his groin, but he also sometimes feels pain in the outside of his hip. The pain is worse with weight-bearing activities. He likes to go for long walks, but in the last month has limited his walking to several blocks because the pain has gotten so bad. He describes the pain as "sharp" and "stabbing." Climbing stairs also makes the pain worse. In general, resting makes the pain better. He denies any trauma to his hip or groin in the past year.

Mr. Gladstone denies any numbness, tingling, burning, or other paresthesias. He denies any weakness. He denies any pain shooting down his leg. He does say that sometimes he finds himself limping because of the pain.

When asked how bad his pain is on a scale of 0–10, he reports the pain is a 1 or 2 at rest but can be a 5 or 6 with prolonged walking or stair climbing. He has not done anything for the pain except try to rest his legs, hoping the pain will go away. He denies any clicking or popping of his hip joint. He does not have any trouble

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HIP PAIN

with urination. He has not had any change in bowel or bladder function. He denies any testicular pain.

Mr. Gladstone says he drinks occasional alcohol, does not smoke, and does use illegal drugs. He works as a corporate attorney. His review of systems is negative. He says he has no known allergies to any medications.

Physical Examination

On exam, Mr. Gladstone is a pleasant, well-developed, well-nourished man in no acute distress who appears his stated age of 62. He walks with an antalgic gait, favoring his left side. He is able to toe and heel walk without difficulty. He has full trunk flexion and extension without pain. He has a negative straight leg raise and negative slump test. Groin and hip pain is elicited with internal rotation of his right hip. He says this is his typical pain.

He has 5/5 strength in all four extremities. His sensation is intact in his lower extremities bilaterally. He has brisk and symmetric patellar and Achilles reflexes bilaterally. He does not have a Babinski sign in either lower extremity. He has a positive right-sided Patrick test. He has a negative Thomas test, although he is noted to have tight hip flexors. He does not have pain with right hip flexion and adduction.

CLINICAL NOTE Hip flexion and adduction can reproduce pain from a hip labral tear and may be useful when taken in the context of the age of the patient, the HPI, and the rest of the exam, as a physical exam maneuver for distinguishing a hip labral tear from hip osteoarthritis.

Differential Diagnosis

This is a 62-year-old man with probable hip osteoarthritis. Other less likely causes of his symptoms include sacroiliac joint pain, hip labral tear, and lumbar radiculitis.

Diagnostic Studies

X-rays would be appropriate at this time.

CLINICAL NOTE Remember that signs of arthritis seen on X-ray do not necessarily correlate with patient symptoms. The X-ray must be seen as part of the entire clinical picture. Treat the patient, not the film.

Acupuncture Treatment

Principal Points

GB-29 AND GB-30

This patient complains of pain on the outside of his hip. The location of this pain implicates the Gall Bladder meridian. GB-29 (–) and GB-30 (–) are local points that are indicated for the treatment of hip pain.

GB-40

GB-40 (–) is a distal point on the Gall Bladder meridian, and the channel's Yuan-Source Point. The Yuan-Source points on the yang meridians have the effect of dispelling pathogenic factors from their associated channel.

BL-62

BL-62 (–, /) is the opening point of the Yang Heel channel (*Yang Qiao Mai*) and is indicated for stiffness of the lateral lower extremity, in this case, the hip.

SP-6

SP-6 is a distal point on the Spleen meridian and has a noted analgesic effect. The Spleen meridian traverses the anterior groin. Reducing SP-6 can relieve pain in its associated channel. It also will help resolve dampness and invigorate blood.

Supplemental/Alternate Points

GB-27, GB-28

These two points lie medial and inferior to the anterior superior iliac spine. They are local points that can influence pain in the inguinal groove. Needle using an even or reducing technique so that a sensation radiates medially throughout the inguinal groove. It is not necessary to use both points in the same treatment. They can be alternated or chosen based on whichever point is more tender to palpation.

SP-3, ST-36

These two points are indicated if there is pronounced dampness evidenced by any or all of the following: worsening of symptoms in rainy or humid weather, heaviness or weakness of the lower extremity, diarrhea, and an overweight body type or craving sweets. Dampness as an internal pathogenic factor is most often linked to a deficiency of Spleen Qi. SP-3 is both the Shu-Stream and Yuan-Source point of the Spleen meridian. As such, it is an important point in tonifying Spleen Qi. ST-36 is the Lower He-Sea point of the Stomach meridian. It has the specific actions of tonifying Qi, strengthening the Spleen and Stomach, and resolving dampness. The Spleen and Stomach are interiorly–exteriorly related channels. Together they have a symbiotic tonifying effect. Needle these points with a reinforcing technique.

BL-30

If symptoms are worse with cold, choose BL-30 (/) and add moxa or heat lamp.

GB-43, ST-44

If there are symptoms of heat such as redness, swelling, or a hot sensation in the joint, needle these Ying-Spring points. GB-43 (–) and ST-44 (–) are Ying-Spring points that clear heat symptoms from their respective channels.

TH-6

In the presence of additional heat symptoms such as constipation, add TH-6 (–).

ST-40

When damp or heat symptoms cloud the mind resulting in poor concentration, confusion, or lethargy, add ST-40 (–).

Shu-Stream Points

CLINICAL NOTE

The distinguished text *Classic of Difficulties (Nan Jing)*, which dates back to the period of the Warring States, outlines a treatment paradigm that remains popular today: the theory of the Five Transporting Points.

The Five Transporting Points are: Jing-Well, Ying-Spring, Shu-Stream, Jing-River, and He-Sea. Of particular relevance to our discussion are the Shu-Stream points, which are indicated for "feelings of soreness, heaviness in the body, and painful joints." This concept is most applicable to the Shu-Stream points belonging to the Yang channels. These points and their relevant indications are listed here.

LI-3: toothache, pain in the lower jaw, and pain of the anterior shoulder and lateral elbow
ST-43: abdominal pain, pain of the eyes, pain on the dorsum of the foot and toes, facial edema
SI-3: stiffness and pain of the posterior neck, paravertebral back pain, scapular pain, stiffness of the fingers, pain of the eyes
BL-65: occipital headache, posterior neck pain, paravertebral back pain, posterior thigh pain, pain of the foot and toes
TH-3: temporal headache, earache, pain and stiffness of the fingers, posterior elbow pain, lateral shoulder pain
GB-41: lateral trunk pain, upper trapezius pain, temporal headache, breast pain, pain on the dorsum of the foot

Standard Medical Treatment

Physical therapy that focuses on stretching and strengthening exercises will be helpful for this patient. Oral supplementation with glucosamine and chondroitin sulfate also may be helpful. Oral medications such as NSAIDs or acetaminophen can be of some use, although they do carry their own adverse effects.

An intra-articular steroid and anesthetic injection can be effective. These should be done under fluoroscopic or ultrasound guidance to ensure accurate needle placement. Intra-articular hyaluronic acid injections for hip osteoarthritis remain under investigation.

Surgical intervention can be effective but should be considered only if aggressive nonsurgical care does not control the symptoms.

Acupuncture has been shown to decrease pain for hip osteoarthritis. Ideally, acupuncture can be used in combination with physical therapy and possibly glucosamine and chondroitin sulfate. Oral medications such as NSAIDs and acetaminophen can then be used as needed. If symptoms persist, intra-articular steroid and anesthetic injection would be an appropriate next step.

Iliopsoas tendonitis

CHIEF COMPLAINT: "My thigh hurts."

HISTORY OF PRESENT ILLNESS

Ms. Alvarado is a 46-year-old corporate attorney who presents with 4 months of sharp left anterior thigh pain. She says, "It feels like someone is sticking a knife in my thigh every time I go for a run." Ms. Alvarado says she works long hours but likes to work out. For the last 4 months, it has gotten harder and harder to run. She typically runs through the pain, but she is no longer able to do so. She says the pain does not radiate down her leg. She denies any numbness, tingling, burning, or other paresthesias. She denies any weakness. She denies any clicking or popping in her hip.

Ms. Alvarado says she does not smoke, drink, or use illegal drugs. She has two teenage children who are both in good health and doing well in school. Her review of systems is negative. She says she does not have any known drug allergies. She has always been in good health and does not take any medications. She takes a multivitamin every day.

Physical Examination

On exam, Ms. Alvarado is a well-developed, well-nourished woman who appears younger than her stated age of 46. She walks with an antalgic gait, favoring her right side. She is able to toe and heel walk without difficulty. She has full trunk flexion and extension without pain. She has 5/5 strength in her lower extremities but left hip flexion testing reproduces her symptoms. Her sensation to light touch is intact in her lower extremities bilaterally. She has brisk and symmetric patellar and Achilles reflexes bilaterally. She has full range of motion of her lower extremities bilaterally. When her left hip is placed into flexion, abduction, and external rotation and then moved into extension, the patient experiences a snapping sensation and pain. Ms. Alvarado has a negative Patrick test and negative Thomas test. She has point tenderness over her anterior thigh along her iliopsoas tendon.

Differential Diagnosis

This 46-year-old woman likely has iliopsoas tendonitis/bursitis. Other potential causes would include a hip labral tear, hip osteoarthritis, and sacroiliac joint pain.

Diagnostic Studies

X-rays can be obtained to help evaluate for osteoarthritis. MRI and/or ultrasound may also be obtained. If the diagnosis is clear from clinical exam, no diagnostic studies at this time may be necessary.

CLINICAL NOTE If imaging studies are not ordered and the patient fails to respond to conservative care after 2 weeks, imaging studies should be obtained to confirm the diagnosis.

Acupuncture Treatment

Principal Points

HUA TUO JIAJI POINTS AT L 1, 2, 3, 4, AND 5

The psoas muscle originates at the vertebral bodies of the five lumbar vertebrae. As such, reducing the corresponding Hua Tuo Jiaji points may help relieve stagnation and pain due to involvement of the psoas.

ST-31

ST-31 is a local point that will relieve pain of the anterior thigh. Needle ST-31 (–) toward the area of greatest discomfort until a needling sensation radiates there.

ST-28, ST-29, ST-30

Needle whichever of these local points are tender to palpation with an even or reducing technique. If you find, for example, that neither ST-28 or ST-29 exactly are painful to pressure, but a point that lies between them is, then it is preferable to choose the painful point. Points that do not have specific name or location but are nevertheless tender to palpation are termed *Ashi* points and are appropriate for needling.

Supplemental/Alternate Points

ST-9

ST-9 (/) is an important analgesic point. It helps regulate Qi and blood, and addresses pain in the inguinal region.

SP-12

If there is pain along the Spleen channel, choose SP-12 (/) as a local point.

SP-5

SP-5 (+) can address muscle spasms and tension. According to Chinese medicine, the Spleen has the function of preventing the blood from extravasating. Reinforcing SP-5 can strengthen the Spleen, thereby keeping the Liver's blood in the sinews, and facilitate an overall relaxing effect. Another good reason for choosing a point from the Spleen's channel to treat a disorder of the Stomach channel is due to the internal–external relationship between the two organs. This combination will have a balancing effect, therefore helping to improve the efficacy of the treatment.

Standard Medical Treatment

Rest, ice, compression, and elevation (RICE) will be helpful for Ms. Alvarado. Physical therapy that incorporates gentle stretching activities can also be helpful. Occasionally, a steroid and anesthetic injection (never into the tendon itself) performed under ultrasound guidance can be helpful.

Surgery for resistant cases can be considered, although it should only be used as a last resort. Surgical options include tendon lengthening, partial tendon release, and tendon release.

> RICE and therapy are often effective for iliopsoas tendonitis. In refractory cases, prior to considering a steroid and anesthetic injection, acupuncture, which is a less invasive option, should be considered.

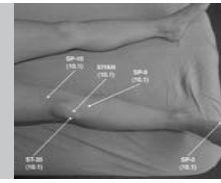
Knee osteoarthritis

CHIEF COMPLAINT: "My knee hurts."

HISTORY OF PRESENT ILLNESS

Mr. O'Brien is a 63-year-old man with no significant past medical history who presents with a 3-month history of insidious left knee pain. The pain is primarily located on the medial side of the knee but he says that when the pain is bad, the whole knee hurts. Mr. O'Brien says that going for long walks and climbing stairs makes the pain much worse. Sitting for a long car ride or in the movie theater also make the pain worse and he often feels that he has to straighten his knee to relieve the pain. Mr. O'Brien describes the pain as dull and aching. He says that recently it is difficult to "get going" in the morning because his knee feels stiff. He does not recall any trauma to the knee. He denies any locking, catching, or giving way of the knee. Mr. O'Brien has always been active. He enjoys hiking but has not gone in more than a month because of the pain. When asked how bad his pain is on a scale of 0–10, he says the pain is around a 3/10 but can be as bad as 6/10 if he tries to go for too long a walk.

Mr. O'Brien says that he drinks about 3 beers per week, does not smoke, and does not use illegal drugs. His review of systems is negative. He does not take any medications. He does not have any known allergies to medications.



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KNEE PAIN

Physical Examination

On exam, Mr. O'Brien is a well-developed, well-nourished, overweight man in no acute distress who appears his stated age of 63. He has an antalgic gait and favors his right side. He has 5/5 strength in his lower extremities bilaterally. His sensation is intact and he has full range of motion in his lower extremities bilaterally. He has brisk and symmetric patellar and Achilles reflexes. His left knee has a minimal effusion. The knee is not warm or erythematous. He has no joint line tenderness. Apley compression and distraction tests are negative. He has no tenderness on the undersurface of the patella. He has no joint instability. He has a negative Wilson test. He has crepitus in his left knee.

Differential Diagnosis

This 63-year-old man likely has left knee osteoarthritis. Other potential causes of his pain include meniscal tear and patellofemoral syndrome.

Diagnostic Studies

X-rays would be appropriate.

CLINICAL NOTE Remember that radiographic findings do not necessarily correlate with symptoms. Always be sure to treat the patient, not the X-ray.

Acupuncture Treatment

Principal Points

XIYAN, ST-35

Xiyan (/) is the name given to two acupuncture points located just below the patella, on either side of the patellar tendon. The lateral Xiyan point is identical to ST-35. These points are indicated when there is pain of the knee joint itself, or when there is a complaint of stiffness of the knee. It is applicable to use heat lamp or moxa if the pain is worse in cold weather or when the knee is cold.

SP-9

SP-9 (–) is a local point on the medial aspect of the knee. It has the effect of resolving dampness as well as treating pain and swelling of the knee.

SP-10

SP-10 (–) invigorates the blood and relieves stasis. It can be used to treat pain and stiffness of the knee. Direct the needle toward the center of the knee.

SP-3

SP-3 (/) is a Shu-Stream point, and as such is indicated for heaviness in the body, and sore, painful joints. In this particular case, it appears as though the Spleen meridian of the foot Taiyin is the affected channel. This explains the choice of SP-3.

Supplemental/Alternate Points

REN-4

If the patient complains of feeling as though his entire body were cold, or reports sensitivity to cold that in turn exacerbates his symptoms, add REN-4 (/) and apply heat via moxa or heat lamp.

SP-6

If there is a predominance of symptoms associated with dampness, add SP-6 (/). This point connects all three Yin channels of the lower limb. It not only strengthens the spleen and stomach, which reduces a root cause of damp accumulation, but it also promotes blood circulation, calms the mind, and relieves pain along the course of its channel.

ST-34

If the pain is on the lateral aspect of the knee, use ST-34 (–). This is the Xi-Cleft point of the Stomach meridian and can relieve pain along the course of its channel. It is a common point to use when there is pain, swelling, or impaired range of motion of the knee.

ST-3

Employing the principle of treating above to affect below, ST-3 (/) can be used to resolve lower extremity issues such as knee pain and swelling.

GB-33, GB-34, GB-43

If the pain of the lateral knee is along the Gall Bladder channel, use this group of points. GB-33 (–) and GB-34 (–) are local points that treat painful obstruction of the knee. GB-43 (–) is a distal point along the channel that can resolve pain of the knee and lateral thigh.

BL-40, BL-63

If there is pain at the posterior aspect of the knee, use these points. BL-40 (–) is a local point in the popliteal fossa. BL-63 (–) is a distal point along the course of the channel. It is the Xi-Cleft point of the bladder channel and can be used to relieve pain along its course.

ST-44, SP-2

If there are symptoms of heat such as erythema, redness, warmth, effusions, or symptoms worsening in hot weather, add ST-44 (/) and SP-2 (/). They are Ying-Spring points. This category of points can be used to clear heat. Needle in a distal direction in order to suggest the elimination of this pathogenic factor.

Standard Medical Treatment

First, Mr. O'Brien should be advised that it is important that he lose the appropriate amount of weight. Appropriate information should be given or a referral made for him to get the support he needs to lose the weight, which will help take the extra pressure off his knee and lessen his pain.

Physical therapy should be very helpful for Mr. O'Brien. Therapy should focus on strengthening the quadriceps through closed chain exercises. Stretching exercises should also be emphasized.

Ice is helpful as an anti-inflammatory and should be used after therapy.

Glucosamine and chondroitin sulfate may be helpful for Mr. O'Brien.

An intra-articular steroid and anesthetic injection may be helpful if the symptoms are resistant to more conservative measures. Intra-articular injections of hyaluronic acid may also be helpful.

A short course of NSAIDs may be helpful as anti-inflammatory and analgesic medications. Acetaminophen is also helpful as an analgesic and may be better tolerated in some patients.

Surgical options should only be considered if aggressive conservative treatments are not successful in controlling the symptoms. Surgical options include osteotomy and total knee arthroplasty.

Multiple studies suggest that acupuncture may be effective for reducing pain in patients with knee osteoarthritis. Ideally, acupuncture can be used in conjunction with physical therapy and, potentially, glucosamine and chondroitin sulfate in the initial presentation of arthritis symptoms. If symptoms persist, then an intra-articular injection of steroid or injections of hyaluronic acid may an appropriate next step.

Knee meniscus tear

CHIEF COMPLAINT: "My knee hurts."

HISTORY OF PRESENT ILLNESS

Mr. Cohen is a 34-year-old computer software engineer who presents with right knee pain. He was playing basketball a week ago when he made a cutting movement to his right and felt a sudden pain in his right knee. He had to stop playing because of the pain. Since that time, he has put ice on it and tried to keep it elevated as much as possible. He says that the pain has gotten somewhat better but not much. He can put weight on his leg but can't climb stairs without support. Two nights ago, he woke up with intense pain in his knee. The knee felt "locked" and he had to spend 20 minutes massaging it before he could relax and straighten it. He found that experience very frightening and so he called this office in the morning for an appointment. When asked how bad his pain is on a scale of 0–10, he says the pain is 6/10. He has taken 400 mg of ibuprofen three times a day for the past week. He has also taken an occasional extra-strength Tylenol. He says the drugs help marginally for the pain. Mr. Cohen says his knee swelled a little bit after the injury but the swelling has since dissipated.

Mr. Cohen is otherwise healthy. He works out regularly and does not take any medications. He says he does not smoke, drinks about one drink per day, and does not use illegal drugs. He does not have any known allergies to medications.

Physical Examination

On exam, Mr. Cohen is a well-developed, well-nourished, muscular man in no acute distress. He walks with an antalgic gait favoring his left side. He has 5/5 strength in his lower extremities bilaterally. His sensation is intact

and he has full range of motion in his lower extremities bilaterally. He has brisk and symmetric patellar and Achilles reflexes. There is no effusion in his left knee. The knee is not warm or erythematous. Medial joint line tenderness is noted. He has a positive Apley compression and negative distraction test. The McMurray test is also positive. He has no tenderness on the undersurface of the patella. He has no joint instability. No crepitus in the knee is noted.

Differential Diagnosis

This 34-year-old man likely has a torn medial meniscus. Other potential causes of his symptoms include ligamentous injury and patellofemoral syndrome.

Diagnostic Studies

X-rays of the knee would be appropriate. An MRI of the knee would also be appropriate to aid with prognostication.

Acupuncture Treatment

Principal Points

MEDIAL XIYAN

Xiyan is the name given to two acupuncture points located just below the patella, on either side of the patellar tendon. The lateral Xiyan point is identical to ST-35. Because this case involves medial knee pain only, we need only use the medial Xiyan (/). This point is indicated when there is pain of the knee joint itself, or when there is a complaint of stiffness of the knee.

LIV-7

LIV-7 (–) is a local point on the medial aspect of the knee that addresses local pain, swelling, and stiffness.

LIV-8

LIV-8 (/) is another local point on the posterior medial aspect of the knee. It can invigorate the blood and relieve local pain.

LIV-2

LIV-2 (–) is a distal point on the Liver meridian that can relieve pain of the medial knee and thigh. It is a Ying-Spring point and has a particular effect of relieving heat. Thus, this point would be particularly applicable if there were additional symptoms of warmth, redness, and swelling of the knee.

Supplemental/Alternate Points

ST-35, GB-34, GB-35, GB-38

If this scenario was associated with a lateral meniscal injury, use this point prescription instead. ST-35 (/) is indicated for pain and stiffness of the knee. GB-34 (–) is a local point of the inferior lateral knee. It is also the Hui-Influential point of the tendons, and is appropriate for painful obstruction of the knee whether it is associated with heat or cold. GB-35 (–) is the Xi-Cleft point of the Yang Linking channel (*Yang Wei*). It can relieve pain of the lateral lower extremity and specifically pain and swelling of the knee. GB-38 (–) is a distal point of the Gall Bladder channel. It clears heat from the Gall Bladder channel and treats weakness and pain of the lateral lower extremity.

Standard Medical Treatment

Mr. Cohen may continue with PRICE (Protection, Rest, Ice, Compression, and Elevation) of his knee. He could wait a week to see if his symptoms resolved. If they do not, he should start physical therapy. Alternatively, it would also be reasonable to start physical therapy at this point to help him get better quicker (depending on how aggressive Mr. Cohen wants to be with his treatment).

Depending on the findings on MRI, surgical intervention may be appropriate. Surgical options include partial meniscectomy and/or repair. Surgery is more often needed when the meniscal tear extends into the avascular center ("white") portion of the meniscus and/or in patients with bucket-handle tears.

▶ It is reasonable to use acupuncture as well as protection, rest, and elevation in the acute period for this patient. However, using acupuncture and ice concurrently is not advocated by traditional Chinese medicine. Ultimately, the efficacy of acupuncture for medial meniscus injuries is unclear. Certain meniscal tears (e.g., those that extend to the avascular portion, bucket handle tears) are more likely to require surgery. Acupuncture may still be used for these patients, but is much less likely to be helpful. Other meniscal tears may respond well to acupuncture, although this statement is not based on research-based evidence (but rather clinical anecdotal experience). Ideally, acupuncture should be started in the acute phase of injury. It can begin prior to obtaining an MRI. However, once the MRI results are obtained, the decision to continue with protection, rest, elevation, acupuncture, and/or physical therapy may need to be reconsidered depending on the MRI findings.

Iliotibial band syndrome

CHIEF COMPLAINT: "My knee hurts when I run."

HISTORY OF PRESENT ILLNESS

Ms. Jackson is a 39-year-old woman with no significant past medical history who presents complaining of anterolateral left knee pain whenever she goes for a run. She says that she typically runs for an hour every day. She has been doing this for about 15 years. However, in the last 6 months, she has noticed pain in her knee when she runs. The pain is worse when she puts her heel down during the run. Sometimes she feels as if there is a "popping" sensation over her knee when running. She denies any locking or buckling of her knee. She says her knee is not painful while sitting. She does say that if she climbs more than one flight of stairs (which she sometimes does when visiting one of her friends), she feels pain in the knee. She denies any trauma to her knee.

Ms. Jackson is happily married, has three children, and works as a schoolteacher. She says she does not smoke cigarettes, drink alcohol, or use illegal drugs. Ms. Jackson has a negative review of systems. She takes a multivitamin every day. She does not have any known allergies to medications.

Physical Examination

On exam, Ms. Jackson is a well-developed, well-nourished woman in no acute distress. She walks with a non-antalgic gait. Her feet reveal hyperpronation bilaterally. She has 5/5 strength in her lower extremities bilaterally. Her sensation is intact to light touch and she has full range of motion in her lower extremities bilaterally. She has brisk and symmetric patellar and Achilles reflexes.

There is no effusion present in her left knee. She has tenderness to palpation over the lateral femoral condyle. This tenderness is made worse while flexing and extending the knee. She has a normal Q-angle. She has no joint line tenderness. She has no tenderness on the undersurface of the patella. She has a negative Apley compression and distraction test. She has a negative McMurray test. She has a negative Wilson test. She does not have crepitus. There is no instability of the joint noted. She has no tenderness over her pes anserinus bursa.

Differential Diagnosis

This 39-year-old woman likely has iliotibial band syndrome as the cause of her symptoms. Other potential causes include meniscus injury, PFS, ligament injury, osteoarthritis, bursitis, and tendonitis.

Diagnostic Studies

None are routinely indicated.

Acupuncture Treatment

Principal Points

GB-33

GB-33 (/) is a local point that can relieve pain at the lateral knee. It is particularly effective in treating knee pain that is exacerbated by cold.

GB-34

GB-34 (/) is a local point that can relieve pain at the lateral knee. It is also the Hui-Influential point of the tendons and can therefore be used for symptoms such as cramping, contractions, stiffness, or tightness.

GB-41

GB-41 (/) is a distal point of the affected channel. It has a strong ability to facilitate the flow of liver Qi, and thus dissipate stagnation and relieve pain in the Gall Bladder channel.

BL-17, BL-18

BL-17 (/) is the Hui-Influential point of blood. BL-18 (/) is the Back-Shu point of the Liver. In concert, they nourish blood and spread stagnant Liver Qi. The tissues associated with the Liver are the tendons. Deficient and stagnant Liver blood can cause stiff, tight and painful tendons.

Supplemental Points

GB-31

If there is itching or wandering pain up and down the lateral thigh, add GB-31 (–). This point has the function of eliminating wind, which is associated not only with wandering pain (in this case of the Gall Bladder channel), but also of itching and various pathologies of the skin.

Alternative Treatment

BL-62, BL-59, GB-29, SI-10, GB-20, SI-3

This is an alternate treatment involving the Yang Motility or Heel channel (*Yang Qiao Mai*). The Yang Heel channel is one of the eight extraordinary meridians. Its trajectory begins at BL-62 below the lateral malleolus and travels up the lateral aspect of the lower leg, thigh, and trunk moving into the shoulder. It then connects with the stomach channel on the face before ending at the inner canthus at BL-1.

Among the indications for a Yang Heel treatment are tightness of the lateral leg, weakness of the medial leg, and difficulty or pain when bending and straightening the knee. This patient has a tight ITB and weakness of the soft tissues of the medial lower leg leading to overpronation. She also has pain that is exacerbated by flexion and extension of the knee.

BL-62 is the opening point of the Yang Heel vessel. BL-59 is the Xi-Cleft point of the Yang Heel channel, which has a noted analgesic effect and is therefore indicated for pain of that channel. GB-29 connects the treatment with the Shaoyang zone of the lateral leg. SI-10 is a meeting point of the Yang Heel (*Yang Qiao Mai*) and Yang Linking (*Yang Wei Mai*) channel. Systemically, it can relax the tendons and relieve swelling. Locally, it alleviates shoulder and scapular pain. SI-3 is the confluent point of the Governor vessel (*Du Mai*). It forms a coupled pair along with BL-62 and mobilizes Yang Qi. SI-3 should be needled on the contralateral side.

Other symptoms of Yang Heel channel involvement includes lower back pain, difficulty standing for long periods secondary to weakness, aversion to wind or cold, shoulder pain, dizziness, headache, insomnia, tremors, agitation, and hyperthyroidism. If any of these additional symptoms are present, the case for a Yang Heel treatment can be made.

Standard Medical Treatment

Ms. Jackson would likely benefit from treatment with ice over the iliotibial band. Physical therapy that focuses on stretching the iliotibial band, including soft tissue mobilization and other modalities, will be helpful. Orthotics to provide arch support and correct the hyperpronation will be helpful. These should be obtained and then Ms. Jackson should return for a gait evaluation with the orthotics if the symptoms persist.

▶ Acupuncture may be used along with or in lieu of physical therapy and orthotics in the acute phase of injury. As with patellofemoral syndrome, this recommendation is not based on any published research. However, it does seem a reasonable approach. Alternatively, more conservative measures (including physical therapy and orthotics) can be instituted first and acupuncture added if symptoms persist. As always, the decision of when to initiate acupuncture therapy should be guided by the patient's preference.

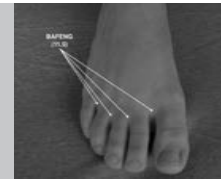
Ankle sprain

CHIEF COMPLAINT: "My ankle hurts."

HISTORY OF PRESENT ILLNESS

Mr. Williams is a 36-year-old man who presents with a 3-day history of left ankle pain. He was playing touch football when he fell over his ankle. Immediately following the injury, he felt pain along the lateral aspect of his ankle. He was able to bear weight on it and has been walking with a limp since then. He says his ankle is swollen and painful and has not gotten better since the injury. He hasn't done anything for his symptoms. He says the pain is aching and throbbing. When asked how bad his pain is on a scale of 0–10, he says the pain is 5/10.

Mr. Williams works as a biochemist and has been in good health. He does not take any medications. He has never hurt his ankle before. His review of systems is negative. He says that he does not smoke cigarettes, drink alcohol, or use illegal drugs. He does not have any known allergies to medications.



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ANKLE AND FOOT PAIN

Physical Examination

On exam, Mr. Williams walks with an antalgic gait, favoring his right side. His left ankle is ecchymotic and a moderate effusion is present. He is able to bear weight for more than 10 steps. He does not have any tenderness over the medial and lateral malleoli, base of the fifth metatarsal, navicular bone, or posterior inferior 4 inches of the fibula and tibia. He does not have foot tenderness. He does have a positive anterior drawer test. He has a negative talar tilt test. He has brisk and symmetric patellar and Achilles reflexes bilaterally. He has 5/5 strength and intact sensation in his lower extremities bilaterally. His dorsalis pedal pulses are intact bilaterally.

CLINICAL NOTE

Grade I (First degree) = Stretched anterior talofibular ligament (ATFL) and possibly calcaneofibular ligament (CFL)

Grade II (Second degree) = Partial ATFL tear and stretched CFL

Grade III (Third degree) = Complete ATFL and CFL tear and partial posterior talofibular ligament tear (PTFL)

Differential Diagnosis

This 36-year-old man most likely has a grade I anterior talofibular ligament (ATFL) sprain. Other potential causes include a grade II sprain.

Diagnostic Studies

According to the Ottawa ankle rules (see Clinical Note), which were developed to determine which people with ankle injuries require ankle radiographs and which do not, Mr. Williams does *not* require ankle radiographs. If symptoms persist beyond 6 weeks, or do not seem to be improving as expected, an MRI may be indicated.

CLINICAL NOTE

A modified version of the Ottawa ankle rules states that if a patient presents within 10 days of injury and is able to bear weight for four or more steps on the injured ankle *and* does not have tenderness in the (1) medial and lateral malleoli, (2) base of the fifth metatarsal, (3) navicular bone, (4) posterior inferior 4 inches of the fibula and tibia, and (5) does not have foot tenderness, then radiographs are not necessary.

Acupuncture Treatment

Treatment Option #1

Acute ankle sprain can be simply yet effectively treated by a system of acupuncture known as wrist and ankle acupuncture. This system of acupuncture was developed almost 50 years ago by Professor Zhang Xinshu. This system identifies six points that encircle the wrists and ankles. Each point corresponds to one of six longitudinal zones of the body, much like one might think of a dermatome. The six points on the wrists treat disorders above the diaphragm while the six points below the wrists treat disorders below the diaphragm. By no means is this system of acupuncture intended only for problems located on the wrists and ankles themselves. However, acute pain or sprains of the wrists or ankles tend to respond very well to this type of treatment.

There exist three points medially located and three points laterally located on the lower legs and forearms, respectively. The three medial points are called *Upper or Lower 1, 2, and 3*, and the three lateral points are called *Upper or Lower 4, 5, and 6*. Because we are discussing a case of lateral ankle sprain, we shall consider the points of the lower limbs. Because we suspect involvement of the anterior talo-fibular ligament, we should select points Lower 4 and Lower 5.

Lower 4 is located at the midpoint between the tibial crest and the anterior border of the fibula, 3 cun above the lateral malleolus. Lower 5 is

located at the midline of the lateral lower leg; 3 cun above the lateral malleolus. Needles should be 0.25 mm in diameter and 30–40 mm in length. Insertion is directed inferiorly and is subcutaneous only. There should not be any needling sensation. If there is any strong sensation then retract the needle and reinsert. Once inserted, the handle of the needle should rest against the lower leg. Have the patient move his ankle in all directions to make sure that the needles have not penetrated into the muscular level. If the needles move at all with foot movement then retract the needle and reinsert. Once the needles are comfortably in place the handles can be taped down to the skin. Have the patient attempt to bear weight on the ankle. Some degree of pain relief should be felt within the first few minutes.

These needles can be retained in place for up to 3 days after which the patient can come in to have them removed, or he can remove the needles on his own. After two or three treatments, there should be significant improvement in gait, pain, and swelling. If the calcaneo-fibular ligament was also involved, or if there was severe pain in the posterior aspect of the lateral ankle, point Lower 6 can be added. Lower 6 is located on the anterior border of the Achilles tendon, 3 cun above the lateral malleolus.

Treatment Option #2

TH-4, SI-4, SI-5, SI-6

Palpate these points on the contralateral side of the ankle sprain. Notice that these points are all on the wrist. In the Spiritual Pivot (*Ling Shu*) it states, "Treat the left side with points on the right side and treat the right side with points from the left side. Select points from the lower part of the body for disease in the upper part of the body and select points from the upper part of the body for disease in the lower part of the body." In keeping with this theory, we can relate the ankle and wrist, knee and elbow, shoulder and hip. More specifically, in the case of left ankle pain we can use points on the right wrist.

Remember the injury in question lies along the Gall Bladder and Urinary Bladder channels of the left ankle. The Gall Bladder channel is also termed the Shaoyang channel of the foot, while the Bladder channel is termed the Taiyang channel of the foot. These names are not meaningless. They offer important clues in terms of treatment. For problems of the Shaoyang meridian of the foot, we can choose corresponding points on the Shaoyang meridian of the hand. Similarly, for problems of the Taiyang meridian of the foot we can choose corresponding points on the Taiyang meridian of the hand. The Shaoyang meridian of the hand is the Triple Heater (*San Jiao*) meridian and the Taiyang meridian of the hand is the Small Intestine channel. The corresponding points on the wrist would be TH-4, and SI 4, 5, and 6.

Palpate these points and determine which are most reactive, then needle those points with a reducing method until the patient experiences a sensation of Qi. Have the patient move his ankle while you manipulate the needles. There should be an immediate and noticeable reduction in symptoms. Retain the needles for approximately 30 minutes, manipulating them at regular intervals to achieve a needling sensation.

Standard Medical Treatment

Mr. Williams would benefit from protection, rest, ice, compression, and elevation (PRICE). An air stirrup may also be helpful. Crutches can be given to provide ambulation support. Physical therapy is also needed to facilitate full recovery. Therapy will focus on range of motion, proprioception, and strengthening exercises.

> Acupuncture may be very helpful in the acute stage of an ankle sprain. It should be considered along with protection, rest, elevation, and an air stirrup as first-line care. Ice may be used if acupuncture is not instituted. Note that this statement is not supported (or refuted) by research. However, from anecdotal clinical experience, acupuncture in conjunction with a standard therapeutic regimen can help in the healing process of an acute ankle sprain.

Plantar fasciitis

CHIEF COMPLAINT: "The bottom of my right foot hurts."

HISTORY OF PRESENT ILLNESS

Ms. Stefanovic is a 76-year-old woman with a history of diabetes, high cholesterol, and high blood pressure who presents with a 2-week history of right heel pain. She says that the pain is primarily over her medial heel but also extends along the arch of her foot. The pain is worst in the morning and she says that she always knows that her first step in the morning will be very painful. If she sits for a prolonged period of time, her foot hurts when she first stands up and takes a few steps. If she walks for a prolonged period of time, the pain also is worse. Lying down and resting makes the pain better.

Ms. Stefanovic denies any numbness, tingling, burning, or other paresthesias. She denies any weakness. She denies any shooting pain from her back or leg. She has never had these symptoms before. She has not done anything for the symptoms.

Ms. Stefanovic takes Glucophage®, Zocor®, and Toprol XL®. She also takes a multivitamin and calcium supplement with vitamin D every day. She says that she does not drink alcohol, smoke cigarettes, or use illegal drugs. She has no known allergies to medications. Her review of systems is negative.

Physical Examination

On exam, Ms. Stefanovic is a pleasant, well-developed, well-nourished woman in no acute distress who appears her stated age of 76. Her gait is non-antalgic. She does not hyperpronate. She has 5/5 strength in her lower extremities bilaterally. She has intact sensation and full range of motion in her lower extremities bilaterally. She has 2+ dorsalis pedis pulses bilaterally. She has brisk and symmetric patellar and Achilles reflexes bilaterally.

Ms. Stefanovic has point tenderness over the medial calcaneal tuberosity that reproduces her pain. Passive dorsiflexion of her right foot also reproduces her painful symptoms. The lateral calcaneus is not tender.

Differential Diagnosis

This 76-year-old woman most likely has plantar fasciitis. Another potential cause of her pain would include tendonitis.

Diagnostic Studies

None are routinely indicated.

Treatment Option #1

Principal Points

SP-4, K-2, K-4

SP-4 (/), K-2 (/), and K-4 (/) are local points that will relieve pain along the medial heel and sole of the foot.

Supplemental/Alternate Points

K-6

K-6 is the confluent point of the Yin Motility or Yin Heel vessel (*Yin Qiao Mai*). If there is additional tightness along the medial aspect of the lower leg, add K-6 (/).

K-7, SP-9

Add K-7 (+) and SP-9 (+) if there is lower extremity edema. According to the theories of the Five Elements, K-7 is the metal point of the kidney channel and hence the channel's mother point (kidneys belong to water). Reinforcing K-7 can strengthen the kidneys' ability to regulate fluid metabolism and treat edema. Reinforcing SP-9 can strengthen the Spleen's ability to transform dampness and address fluid retention.

BL-60, BL-61, BL-63, BL-64

If the pain is located at the lateral heel or sole of the foot, use BL-60, BL-61, and BL-63 or BL-64 as the principal points.

Treatment Option #2

Hand acupuncture, like auricular acupuncture, is another microsystem of acupuncture. Needling the "heel point" on the hand is very effective for relieving acute heel pain.

The "heel point" is located on the palmar aspect of the hand, at the proximal one-fourth mark on a line between P-7 and P-8. This point should be needled 0.3–0.5 cun deep on the contralateral side of the pain. Manipulate the needle until a sensation of soreness is felt, then have the patient attempt to bear weight on the affected heel. Retain the needle for approximately 30 minutes, rotating the needle at regular intervals. Have the patient alternate between resting and bearing weight on the heel throughout the treatment.

Standard Medical Treatment

Ms. Stefanovic would benefit from ice and physical therapy that focuses on stretching the plantar fascia and Achilles tendon. While a formal physical therapy program is preferable, patients can also be instructed on these exercises in the office. One excellent stretch for patients is to place a towel around the bottom of the foot and slowly stretch the ankle in dorsiflexion. This stretch should be performed in the morning before getting out of bed and also before getting up after prolonged sitting. In addition, it, along with other exercises, should be performed daily.

In many patients, a nighttime splint to hold the ankle in dorsiflexion and prevent the plantar fascia from contracting overnight may be helpful. Foot orthotics can also be helpful.

For recalcitrant symptoms, an injection of corticosteroid and anesthetic can be used. This injection should only be performed with caution, however, because it carries the serious risk of heel fat pad necrosis and/or plantar fascia rupture.

Recently, injections of botulinum toxin have also been used to treat plantar fasciitis. More studies are needed to evaluate the efficacy of this type of injection for this disorder. Also, costs to patients may be prohibitive.

Surgical intervention is rarely necessary.

> Acupuncture is less invasive than a steroid and anesthetic injection for plantar fasciitis. Therefore, it should be considered in conjunction with physical therapy and possibly a nighttime splint and/or orthotics.

Metatarsalgia

CHIEF COMPLAINT: "The ball of my foot hurts."

HISTORY OF PRESENT ILLNESS

Ms. Brown is a 44-year-old woman with no significant past medical history who presents with 3 months of worsening pain in the ball of her left foot. The pain is worse with weight-bearing activities such as walking. She says the pain is worse when she wears her favorite shoes. She says these shoes do have a tight toe box. She denies any numbness, tingling, burning, or other paresthesias. She denies any weakness. She says she has not had this problem in the past, although she does say that sometimes she has foot pain at the end of a long day of working. Ms. Brown works as a laboratory technician. Sitting or lying down makes the pain better.

Ms. Brown says she does not smoke, drink alcohol, or use illegal drugs. Her review of systems is negative. She does not take any medications and has no known drug allergies.

Physical Examination

On exam, Ms. Brown is a well-developed, well-nourished woman in no acute distress who appears her stated age of 44. She walks with a non-antalgic gait. She has 5/5 strength in her lower extremities bilaterally. She has intact sensation and full range of motion in her lower extremities bilaterally. She has brisk and symmetric patellar and Achilles reflexes. She has a callus over the second and third metatarsal heads of the left foot. She has some mild hyperpronation bilaterally. The plantar aspects of the metatarsals on the left foot are tender. No misalignment of the toes is noted. No bony defects are noted on palpation. She has a negative squeeze test.

Differential Diagnosis

This 44-year-old woman likely has metatarsalgia. Other potential causes of her symptoms include stress fracture, Morton's neuroma, and tendonitis.

Diagnostic Studies

X-rays are appropriate to help rule out a bony pathology.

Acupuncture Treatment

Principal Points

BAFENG

Bafeng (translated as Eight winds) are a series of extra points that are located on the dorsum of the foot between each of the toes, 0.5 cun

proximal to the margin of the web spaces. These points should be needled obliquely and with an even or reducing technique, toward the site of discomfort.

The Bafeng points, which include the Ying-Spring points LIV-2, ST-44, and GB-43, not only relieve local pain, but they can also reduce symptoms of heat including redness and swelling.

SP-3, BL-65

SP-3 and BL-65 are points on the medial and lateral foot just proximal to the MTP joints. Use these points when pain extends over the entire ball of the foot. Needle insertion should be perpendicular using a reducing technique.

Supplemental/Alternate Points

K-1

For pain that radiates toward the center of the sole of the foot, add local point K-1 (/).

K-3, GB-39, BL-11

If there is evidence of a stress fracture, add K-3 (+), GB-39 (+), and BL-11 (+). Chinese medicine associates the health of the bones with the kidneys. Reinforcing the kidneys' Yuan-Source point can benefit the bones, while GB-39 and BL-11 are the Hui-influential points of the marrow and bones, respectively.

SP-1, LIV-1, ST-45, GB-44, BL-67

For indications of blood stagnation such as a persistent, fixed, and stabbing pain or a purplish color to the foot, choose one or more of the Jing-Well points on the toes (SP-1, LIV-1, ST-45, GB-44, and BL-67) according to which channel seems most affected. For example, if there is a purplish color on the big toe with a fixed pain at the first MTP joint, then choose LIV-1 and SP-1. Similarly, if there are heat signs such as inflammation and erythema, choose the Jing-Well point associated with the affected area. These points can be pricked to cause bleeding.

Standard Medical Treatment

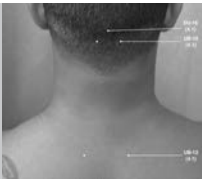
Ms. Brown would benefit from a metatarsal pad, which is placed behind the metatarsal head to take the pressure off the metatarsals. She should also be advised that she will need proper shoes that give her better support. Shock-absorbing insoles may be helpful. Arch supports may also be helpful.

Acupuncture may be helpful in conjunction with or in lieu of a metatarsal pad and appropriate orthotics. It would also be reasonable to first try the metatarsal pad and orthotics and only use acupuncture if pain persists.

Evidence for Acupuncture in Neck Pain

A 2006 Database of Systematic Reviews reviewed the evidence of acupuncture for neck disorders. The review did not find any trials for acupuncture for acute neck pain. However, 10 trials were found and examined for acupuncture treatments for chronic neck pain. The review concluded that there was moderate evidence to support using acupuncture for chronic mechanical neck disorders, and that acupuncture was more effective than sham treatments. The Cochrane review also concluded that acupuncture had moderate evidence to support its use for chronic neck pain with radicular symptoms. Of note, the Cochrane review included a total of only 661 participants and reported that the methodological quality of the studies was "not considered high."

Most of the studies on acupuncture and neck pain report on acupuncture's efficacy in the short term. One study was published in *Pain* by C.M. Witt et al. in November 2006 after the Cochrane review randomized more than 3,000 patients with chronic neck pain (lasting >6 months) into an



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ACUPUNCTURE: A REVIEW OF THE PUBLISHED RESEARCH

acupuncture or control group and followed them through 6 months. Both groups continued to receive their usual standard of care. The acupuncture group received up to 15 sessions spaced over 3 months. The acupuncture group did significantly better in terms of pain and disability, and this difference lasted through 6 months.

From the available studies, it is clear that acupuncture has a role to play in neck pain. However, from an evidence-based perspective, it is difficult to say what exactly that role is. Consider the following serious gaps in our knowledge: Previous research failed to adequately differentiate various types of chronic neck pain. Acute neck pain was not addressed. Acute cervical radiculopathy was not addressed. Radiculopathy was not differentiated on an etiologic basis – does a radiculitis caused by a protruded disc respond better to acupuncture than one caused by facet arthropathy? Or vice versa? Research has not adequately delineated whether acupuncture works better or worse than physical therapy, trigger-point injections, medications, or epidural steroid injections. There are a whole host of questions left unanswered from the available research.

The limitations from the available research may be frustrating, but they also leave an extraordinary opportunity for future researchers to find these important answers. Once we have a better understanding of when acupuncture might be most appropriate and beneficial, we can start comparing acupuncture protocols against one another to try to systematize that process.

Some general inferences can be reached: Acupuncture appears safer than epidural steroid injections, most medications, and surgery. It seems reasonable, therefore, that before these more invasive procedures are pursued, acupuncture be considered.

Evidence for Acupuncture for Shoulder Pain

In 2005, the Cochrane Database of Systematic Reviews analyzed the evidence for acupuncture in the treatment of various shoulder disorders, including osteoarthritis, adhesive capsulitis, and rotator cuff disease. They were only able to identify nine trials that were of sufficient quality to be included in the review. When compared to placebo, acupuncture was found not to be helpful for treating rotator cuff disease in two small studies. One trial did find that acupuncture plus physical therapy was better than therapy alone for increasing range of motion. When compared with nerve block, one Chinese study found that adhesive capsulitis responded better to suprascapular nerve block than to acupuncture. All the studies included patients who had shoulder pain for more than 3 weeks. In the end, the authors of the Cochrane review concluded that because of the small number of trials, the methodological problems of the existing trials, and the few subjects involved, few conclusions could be reached.

In 2005 in *Physical Therapy*, Johansson et al. published a study called "Effects of Acupuncture Versus Ultrasound in Patients with Impingement Syndrome: Randomized Clinical Trial." Eighty-five patients with a clinical diagnosis of impingement syndrome were randomized to receive acupuncture or ultrasound. Both groups also were given a home exercise program. While both groups improved, the acupuncture group showed a larger improvement over 12 months.

As with many other areas of acupuncture research, preliminary studies exist, but the door remains open for a researcher to fill in important gaps in our understanding of acupuncture for various shoulder disorders. Does acupuncture plus physical therapy work better than therapy alone for rotator cuff tendonitis? How well does acupuncture work for a labral tear? Does acupuncture work for acute shoulder pain from impingement syndrome? Does acupuncture have a role in the management of bicipital tendonitis or acromioclavicular joint arthritis?

Acupuncture has a low side-effect profile. It is arguably safer than even a subacromial steroid injection. However, it is unlikely to be as effective as a subacromial steroid injection for shoulder impingement syndrome.

Where, then, does acupuncture fit into the overall treatment algorithm for different shoulder disorders? From an evidence-based perspective, the answer is that we cannot currently give definitive recommendations. However, the answer for your practice must lie within the context of your patients' expectations and preferences. Can acupuncture be used as a substitute for a steroid injection? It seems reasonable that, if the patient agrees, acupuncture could be attempted, followed by an injection at a later date if the acupuncture or physical therapy are not successful.

Evidence for Acupuncture in the Treatment of Elbow Pain

In 2006, the Cochrane Database of Systematic Reviews analyzed the data evaluating acupuncture for lateral elbow pain, which they equated with lateral epicondylitis. Part of the inclusion criteria were studies that looked at patients with pain lasting longer than 3 weeks. The authors identified four randomized trials that fit their inclusion criteria but found significant flaws even within these trials. From these trials, the authors concluded that there was "insufficient evidence to either support or refute the use of acupuncture" for the treatment of lateral epicondylitis.

Another study, published in *Rheumatology* in 2004 by Trinh et al., reviewed the literature for acupuncture in the treatment of lateral epicondyle pain. Trinh et al. acknowledged that, of the six studies they included in their review, there was significant heterogeneity, including a lack of agreement as to how to define lateral epicondylitis. However, Trinh et al. believed that, with the caveat of the aforementioned limitations, the data do support the finding that acupuncture "effectively alleviates lateral epicondylitis on a short-term basis." Long-term benefits, including recurrence rates, could not be determined from the available data.

There is sparse research for acupuncture for many elbow disorders, including medial epicondylitis and cubital tunnel syndrome. In sum, it is not possible at this time to give responsible, evidence-based recommendations for acupuncture for medial epicondylitis and cubital tunnel syndrome. Nor is it possible to give definitive recommendations for acupuncture in the treatment of lateral epicondylitis. However, because of its low risk and low side-effect profile, it is reasonable to offer acupuncture as an initial treatment in conjunction with standard allopathic care for these conditions. In addition, for recalcitrant cases, acupuncture is very reasonable to pursue before invasive surgical options.

Evidence for Acupuncture for Hand and Wrist Pain

There is very little research to support or refute the use of acupuncture for wrist and hand pathologies. Limited evidence suggests that laser

acupuncture may be effective in the short term for carpal tunnel syndrome. However, no definitive conclusions can be drawn. Because of its relative low risk of side effects compared with other therapies, acupuncture can often be incorporated into the treatment algorithm. Of course, no treatment is without risk. A case report published in the *Journal of Hand Surgery* by Southworth and Hartwig in 1990 reported that an acupuncture needle had fractured, resulting in a foreign body in the carpal tunnel. The needle fragment was surgically removed during a carpal tunnel release and the patient rapidly improved.

Remember that acupuncture has risks, but overall it is better tolerated than many other treatments. If patients are interested and open to receiving acupuncture, it is a reasonable adjunctive treatment. However, it is important to note that this statement is based on clinical experience and anecdotal reports, not from evidence-based medicine.

Evidence for Acupuncture for Lumbar Pathologies

A review in *Annals of Internal Medicine* titled "A Review of the Evidence for the Effectiveness, Safety, and Cost of Acupuncture, Massage Therapy, and Spinal Manipulation for Back Pain" in 2003 by Cherkin et al. noted that "Few treatments for back pain are supported by strong scientific evidence," leading many to turn "to complementary and alternative medical therapies." The review evaluated the evidence on acupuncture for acute and chronic back pain and concluded, "The effectiveness of acupuncture remains unclear."

In some studies, acupuncture has been shown to reduce pain, disability, and use of oral medications. However, the relatively small sample sizes and other methodological problems prevent definitive conclusions from being drawn. Of note, it is unclear whether chronic back pain of different causes (discogenic vs. facet disease vs. sacroiliac) responds differently to acupuncture. Meanwhile, whereas the research seems to suggest that acupuncture might be effective for back pain, it is less conclusive with regard to lumbosacral radicular problems.

As with other parts of the body, acupuncture for lumbar pathologies is associated with a very low complication rate when done by experienced professionals. There was a case report published by Daivajna et al. in *Acupuncture in Medicine* in 2004 of a patient who developed facet joint septic arthritis that was believed to be secondary to acupuncture. However, for the most part, acupuncture can be considered relatively safe. For example, two studies reported in the *British Medical Journal* in 2001 found no serious adverse events in 66,000 acupuncture consultations in the United Kingdom.

The bottom line remains that more studies are needed to elucidate the efficacy for acupuncture in lumbar pathologies.

Evidence for Acupuncture for Hip Pain

There is evidence to suggest that acupuncture is an effective adjunctive treatment for hip osteoarthritis. In a study by Witt et al. in *Arthritis and Rheumatism* in 2006, the authors found that acupuncture plus standard care was "associated with a marked clinical improvement in patients with chronic OA-associated pain of the knee or hip" when compared with no acupuncture. These results were sustainable for 6 months. Acupuncture was not compared with sham acupuncture in this study. Aside from this study and a few preliminary findings, further studies are needed before definitive recommendations can be made regarding acupuncture for hip osteoarthritis. The evidence for or against the use of acupuncture for other hip pathologies, such as labral tear and iliopsoas tendonitis, has not been published to date. More research is needed. As with other areas of the body, acupuncture appears to be a relatively safe intervention.

Evidence for Acupuncture for Knee Pain

There is a reasonable amount of evidence to suggest that acupuncture is an effective adjunctive treatment for knee osteoarthritis. In a study by Witt et al. in *Arthritis and Rheumatism* in 2006, the authors found that acupuncture plus standard care was "associated with a marked clinical improvement in patients with chronic OA-associated pain of the knee or hip" when compared with no acupuncture. These results were sustainable for 6 months. Acupuncture was not compared with sham acupuncture in this study.

Another study by Witt et al. in 2005 published in *The Lancet* found that after 8 weeks of treatment, patients who received acupuncture had less pain and more joint function than patients treated with either minimal acupuncture (in which needles were inserted into nontraditional acupuncture points) or no acupuncture. The authors also found, however, that this benefit decreased over time. By 52 weeks, there was no difference in the acupuncture and minimal acupuncture groups. A study by Scarf et al. in 2006 published in *Annals of Internal Medicine* found that acupuncture was more effective than no acupuncture for knee osteoarthritis, but not more effective than sham acupuncture (which consisted of inserting acupuncture needles into nontraditional acupuncture points, similar to the "minimal acupuncture" condition in Witt's study). This, of course, raises the question of whether acupuncture—the simple act of inserting needles into the body—or placebo is responsible for the clinical gains observed from acupuncture intervention. However, as we know there are so many styles of acupuncture that perhaps the sham points were actually treatment points in an unintended paradigm. Nevertheless, while acupuncture does appear to be a useful adjunctive treatment for knee osteoarthritis, further research is needed before definitive recommendations could be offered.

Research evaluating the efficacy of acupuncture for other knee pathologies is also lacking and more research is needed.

Evidence for Acupuncture for Ankle and Foot Pain

The evidence does not support or refute acupuncture in the treatment of ankle and foot disorders. Interestingly, an animal study that simulated ankle sprains in rats found that the analgesic effect of using an electroacupuncture point (SI-6) on the contralateral limb offered an equivalent amount of pain reduction (as measured by the amount of stepping force on the affected ankle exhibited by the rat) as 2 mg/kg of morphine. This analgesic effect was not reproduced by stimulating another point (LI-4). Furthermore, stimulating SI-6 was not effective in treating knee arthritis pain. It was also not possible to block the analgesic effect of SI-6 for ankle pain by using an opioid antagonist (naloxone). An implication of this study may be that acupuncture point selection is important in producing analgesic effects, and that SI-6 may be an effective acupuncture point selection for ankle sprains.

It is interesting to note that these research findings are consistent with acupuncture thinking. It was explained in one of the cases how points on the wrist, which is where SI-6 is located, can be used to treat injuries of the ankle. In addition, SI-6, because it is on the Taiyang meridian of the hand, would be most effective for ankle pain posterior to the lateral malleolus near the Bladder channel of the foot Taiyang or anterior to the medial malleolus near the Spleen meridian of the foot Taiyin. It would not be as effective for postero-medial ankle pain or pain on the dorsal surface of the ankle. And in and of itself it would certainly not be effective for knee pain. Clearly, though, further research is needed to provide evidence-based recommendations regarding the usage of acupuncture in ankle and foot pathologies.

Acupoints

This chapter contains locations of all the acupoints referred to in the body of this text. They are categorized according to their associated meridian.

Points of the Lung Meridian

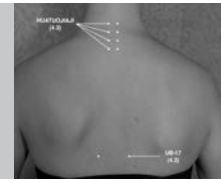
Chize (LU-5): on the cubital crease of the elbow, on the radial side of the biceps brachii tendon

Kongzui (LU-6): on the palmar aspect of the forearm, 7 cun proximal to the transverse wrist crease on a line connecting Taiyuan (LU-9) and Chize (LU-5)

Lieque (LU-7): on the radial aspect of the forearm, 1.5 cun proximal to the transverse crease of the wrist, superior to the radial styloid process

Taiyuan (LU-9): at the radial end of the transverse crease of the wrist, in the depression on the radial side of the radial artery

Shaoshang (LU-11): on the radial side of the thumb, 0.1 cun proximal to the corner of the nail



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ACUPUNCTURE POINT LOCATIONS

Points of the Large Intestine Meridian

Shangyang (LI-1): on the radial side of the index finger, 0.1 cun proximal to the corner of the nail

Sanjian (LI-3): on the radial side of the index finger, in a depression just proximal to the head of the second metacarpal bone

Hegu (LI-4): on the dorsum of the hand between the first and second metacarpal bones, at the midpoint of the second metacarpal bone

Yangxi (LI-5): on the radial side of the wrist, in the depression between the tendons of extensor pollicis longus and brevis (the anatomical snuffbox)

Wenliu (LI-7): on the radial aspect of the forearm, 5 cun proximal to Yangxi (LI-5), on a line connecting Yangxi (LI-5) and Quchi (LI-11)

Shanglian (LI-9): on the radial aspect of the forearm, 3 cun distal to Quchi (LI-l1), on a line connecting Yangxi (LI-5) and Quchi (LI-11)

Shousanli (LI-10): on the radial aspect of the forearm, 2 cun distal to Quchi (LI-l1), on a line connecting Yangxi (LI-5) and Quchi (LI-11)

Quchi (LI-11): at the lateral end of the transverse crease of the elbow, midway between Chize (LU-5) and the lateral epicondyle of the humerus

Binao (LI-14): on the lateral aspect of the upper arm at the lower border of the deltoid muscle, 7 cun proximal to Quchi (LI-11) on a line connecting Quchi (LI-11) and Jianyu (LI-15)
Jianyu (LI-15): in the depression just anterior and inferior to the acromion
Jugu (LI-16): on the superior aspect of the shoulder, in the depression between the acromion process and the scapular spine

Points of the Stomach Meridian

Juliao (ST-3): with the eyes looking directly ahead, directly below the pupil at the level of the lower border of the ala nasi, lateral to the nasolabial groove
Renying (ST-9): level with the tip of the Adam's apple, on the anterior border of the sternocleidomastoid muscle
Huaromen (ST-24): on the abdomen, 2 cun lateral to the anterior midline and 1 cun superior to the umbilicus
Shuidao (ST-28): on the lower abdomen, 2 cun lateral to the anterior midline and 3 cun inferior to the umbilicus
Guilai (ST-29): 4 cun below the umbilicus and 2 cun lateral to the midline or Zhongji (REN-3)
Qichong (ST-30): on the lower abdomen, 5 cun below the umbilicus and 2 cun lateral to the midline, level with the superior border of the pubic symphysis at Qugu (REN-2)
Biguan (ST-31): on the upper thigh just lateral to the sartorius muscle, directly below the anterior superior iliac spine, level with the pubic symphysis
Liangqiu (ST-34): 2 cun proximal to the latero-superior border of the patella
Dubi (ST-35): at the lower border of the patella, lateral to the patellar ligament
Zusanli (ST-36): below the knees, 3 cun inferior to Dubi (ST-35), and one fingerbreadth lateral to the crest of the tibia
Tiaokou (ST-38): on the lower leg, midway between ST-35 and ST-41, and one fingerbreadth lateral to the crest of the tibia
Fenglong (ST-40): on the lower leg, 8 cun superior to the lateral malleolus, and one fingerbreadth lateral to ST-38
Jiexi (ST-41): on the dorsum of the foot, at the midpoint of the transverse crease of the ankle, level with the prominence of the lateral malleolus, in the depression between the tendons of extensor digitorum longus and hallucis longus
Chongyang (ST-42): 1.5 cun distal to Jiexi (ST-41), at the highest point of the dorsum of the foot, in the depression between the second and third metatarsal bones and the cuneiform bones

Xiangu (ST-43): on the dorsum of the foot, in the depression distal to the junction of the second and third metatarsal bones, 1 cun proximal to Neiting (ST-44)
Neiting (ST-44): on the dorsum of the foot, between the second and third toes, 0.5 cun proximal to the web margin
Lidui (ST-45): on the lateral side of the second toe, 0.1 cun proximal to the corner of the nail

Points of the Spleen Meridian

Yinbai (SP-1): on the medial side of the big toe, 0.1 cun proximal to the corner of the nail
Dadu (SP-2): on the medial side of the big toe, distal and inferior to the first metatarso-phalangeal joint
Taibai (SP-3): on the medial side of the foot in the depression proximal and inferior to the head of the first metatarsal bone
Gongsun (SP-4): on the medial sides of the foot in the depression distal and inferior to the base of the first metatarsal bone
Shangqiu (SP-5): in the depression distal and inferior to the medial malleolus, midway between the tuberosity of the navicular bone and the prominence of the medial malleolus
Sanyinjiao (SP-6): on the medial side of the lower leg, 3 cun superior to the prominence of the medial malleolus, on the posterior border of the tibia
Diji (SP-8): on the medial side of the lower leg, 3 cun inferior to Yinlingquan (SP-9), in a depression posterior to the medial crest of the tibia
Yinlingquan (SP-9): on the lower border of the medial condyle of the tibia, in the depression on the medial border of the tibia
Xuehai (SP-10): 2 cun above the superior medial aspect of the patella, in a depression on the vastus medialis muscle
Chongmen (SP-12): 3.5 cun lateral to the anterior midline, level with the upper border of the pubic symphysis, lateral to the femoral artery

Points of the Heart Meridian

Shaohai (H-3): at the medial end of the transverse cubital crease when the elbow is flexed, midway between Quze (P-3) and the medial epicondyle of the humerus
Tongli (H-5): on the radial side of the flexor carpi ulnaris tendon, 1 cun proximal to the transverse crease of the wrist
Yinxi (H-6): on the forearm, on the radial side of the tendon of flexor carpi ulnaris, 0.5 cun above the transverse crease of the wrist
Shenmen (H-7): at the ulnar end of the transverse crease of the wrist, on the radial side of the tendon of flexor carpi ulnaris

Points of the Small Intestine Meridian

Shaoze (SI-1): on the dorsal aspect of the fifth finger, 0.1 cun proximal to the ulnar side of the nail

Houxi (SI-3): on the ulnar side of the hand, in the depression proximal to the head of the fifth metacarpal bone

Wangu (SI-4): on the ulnar side of the hand, in the depression between the base of the fifth metacarpal bone and the triquetral bone

Yanggu (SI-5): at the ulnar end of the dorsal aspect of the wrist, in the depression between the head of the ulna and the triquetral bone

Yanglao (SI-6): located with the palm facing the chest, in the bony cleft on the radial side of the ulnar styloid process

Xiaohai (SI-8): in the depression between the olecranon of the ulna and the medial epicondyle of the humerus

Naoshu (SI-10): on the posterior aspect of the shoulder, in the depression inferior to the scapular spine, directly superior to the axillary crease

Tianzhong (SI-11): on the infrascapular fossa, at the junction of the upper and middle third of a line drawn between the midpoint of the inferior border of the scapular spine and the inferior angle of the scapula

Bingfeng (SI-12): in the center of the suprascapular fossa, directly above Tianzhong (SI-11)

Quyuan (SI-13): just superior to the medial end of the scapular spine, midway between Naoshu (SI-10) and the spinous process of T2

Jianwaishu (SI-14): 3 cun lateral to the lower border of the spinous process of T1

Points of the Urinary Bladder Meridian

Tianzhu (UB-10): on the back of the neck at the lateral aspect of the trapezius muscle, 1.3 cun lateral to Yamen (DU-15), which is on the posterior midline level with the inferior border of the C1 spinous process

Dashu (UB-11): 1.5 cun lateral to the lower border of the spinous process of the first thoracic vertebrae

Fengmen (UB-12): 1.5 cun lateral to the lower border of the spinous process of the second thoracic vertebrae

Geshu (UB-17): 1.5 cun lateral to the lower border of the spinous process of the seventh thoracic vertebrae

Ganshu (UB-18): 1.5 cun lateral to the lower border of the spinous process of the ninth thoracic vertebrae

Pishu (UB-20): 1.5 cun lateral to the lower border of the spinous process of the eleventh thoracic vertebrae

Shenshu (UB-23): 1.5 cun lateral to the lower border of the spinous process of the second lumbar vertebrae

Guanyuanshu (UB-26): 1.5 cun lateral to the lower border of the spinous process of the fifth lumbar vertebrae

Baihuanshu (UB-30): 1.5 cun lateral to the midline of the back, at the level of the fourth posterior sacral foramen
Yinmen (UB-37): on the posterior aspect of the thigh on a line connecting Weizhong (UB-40) and Chengfu (UB-36), which is in the center of the transverse gluteal crease, 6 cun distal to Chengfu (UB-36)
Weizhong (UB-40): at the midpoint of the popliteal crease of the knee between the tendons of biceps femoris and semitendinosus
Baohuang (UB-53): 3 cun lateral to the midline of the back, at the level of the second posterior sacral foramen
Zhibian (UB-54): on the buttock, 3 cun lateral to the posterior midline, level with the hiatus of the sacrum
Chengshan (UB-57): in the depression directly below the junction between the medial and lateral muscle bellies of the gastrocnemius, approximately 8 cun inferior to Weizhong (UB-40)
Feiyang (UB-58): 7 cun directly superior to Kunlun (UB-60), and approximately 1 cun inferior and lateral to Chengshan (UB-57)
Fuyang (UB-59): on the lateral lower leg, 3 cun directly above Kunlun (UB-60)
Kunlun (UB-60): in the depression between the prominence of the lateral malleolus and the Achilles tendon
Pucan (UB-61): 1.5 cun directly inferior to Kunlun (UB-60), in a tender depression on the lateral aspect of the calcaneus
Shenmai (UB-62): in the depression directly below the lateral malleolus
Jinmen (UB-63): on the lateral side of the foot, in the depression posterior to the tuberosity of the fifth metatarsal bone
Jinggu (UB-64): on the lateral side of the foot, in the depression anterior and inferior to the tuberosity of the fifth metatarsal bone
Shugu (UB-65): on the lateral side of the foot, in the depression posterior and inferior to the head of the fifth metatarsal bone
Zhiyin (UB-67): on the lateral side of the small toe, 0.1 cun posterior to the corner of the nail

Points of the Kidney Meridian

Yongquan (K-1): on the sole of the foot between the second and third metatarsal bones, in the depression formed when the foot is plantar flexed, approximately one third of the distance between the base of the second toe and the heel
Rangu (K-2): on the medial side of the foot, anterior and inferior to the medial malleolus, in the depression on the lower border of the navicular bone
Taixi (K-3): in the depression between the prominence of the medial malleolus and the Achilles tendon
Dazhong (K-4): posterior and inferior to the medial malleolus, on the anterior border of the Achilles tendon

Shuiquan (K-5): 1 cun inferior to Taixi (K-3), in the depression anterior and superior to the calcaneal tuberosity
Zhaohai (K-6): in the depression 1 cun below the prominence of the medial malleolus
Fuliu (K-7): 2 cun directly above Taixi (K-3), on the anterior border of the Achilles tendon
Shangqu (K-17): 2 cun above the umbilicus, 0.5 cun lateral to the midline

Points of the Pericardium Meridian

Ximen (P-4): 5 cun above the transverse crease of the wrist, on a line connecting Quze (P-3) and Daling (P-7)
Neiguan (P-6): on the flexor aspect of the forearm, 2 cun proximal to the transverse crease of the wrist, between the tendons of palmaris longus and flexor carpi radialis
Daling (P-7): at the middle of the transverse crease of the wrist, between the tendons of palmaris longus and flexor carpi radialis
Laogong (P-8): on the palmar surface of the hand between the second and third metacarpal bones, where the tip of the middle finger rests when making a fist
Zhongchong (P-9): on the center of the tip of the middle finger

Points of the Triple Heater (San Jiao) Meridian

Guanchong (TH-1): on the lateral side of the ring finger, 0.1 cun proximal to the corner of the nail
Zhongzhu (TH-3): on the dorsum of the hand, in the depression just proximal to the fourth and fifth metacarpo-phalangeal joints
Yangqi (TH-4): on the transverse crease of the dorsum of the wrist, between the tendons of extensor digitorum communis and extensor digiti minimi
Waiguan (TH-5): 2 cun proximal to Yangqi (TH-4), between the radius and the ulna
Zhigou (TH-6): 3 cun proximal to Yangqi (TH-4), between the radius and ulna, on the radial side of extensor digitorum
Huizhong (SJ-7): level with and on the ulnar side of Zhigou (SJ-6), in the depression on the radial side of the ulna
Sidu (TH-9): on the postero-lateral aspect of the forearm, between the radius and ulna, 5 cun distal to the olecranon
Tianjing (TH-10): in the depression 1 cun proximal to the olecranon
Qinglengyuan (TH-11): with the elbow flexed, 1 cun proximal to Tianjing (TH-10)
Xiaoluo (TH-12): on the postero-lateral aspect of the upper arm, on a line drawn between Jianlao (TH-14) and the olecranon, midway between Qinglengyuan (TH-11) and Naohui (TH-13)

Naohui (TH-13): on the posterior border of the deltoid muscle, on a line drawn between Jianlao (TH-14) and the olecranon

Jianlao (TH-14): posterior and inferior to the lateral aspect of the acromion, in the depression 1 cun posterior to Jianyu (LI-15) that is formed when the arm is abducted

Tianlao (TH-15): at the medial aspect of the suprascapular fossa, midway between Jianjing (GB-21) and Quyuan (SI-13)

Points of the Gall Bladder Meridian

Fengchi (GB-20): below the occiput, in the depression between the sternocleidomastoid and upper trapezius muscles, level with Fengfu (DU-16)

Jianjing (GB-21): midway between Dazhui (DU-14), which is on the posterior midline inferior to the spinous process of C7 and the lateral aspect of the acromion, at the crest of the trapezius muscle

Wushu (GB-27): in the depression just anterior to the anterior superior iliac spine, 3 cun below the umbilicus, approximately level with Guanyuan (REN-4)

Juliao (GB-29): on the lateral aspect of the hip, at the midpoint between the anterior superior iliac spine and the greater trochanter

Huantiao (GB-30): on the postero-lateral aspect of the hip, one third of the distance between the greater trochanter of the hip and the hiatus of the sacrum

Fengshi (GB-31): on the midline of the lateral aspect of the thigh, 7 cun superior to the popliteal crease

Xiyangguan (GB-33): on the lateral aspect of the knee, 3 cun superior to Yanglingquan (GB-34), in the depression between the biceps femoris tendon and the femur

Yanglingquan (GB-34): on the lateral side of the leg, in the depression anterior and inferior to the head of the fibula

Yangjiao (GB-35): 7 cun superior to the prominence of the lateral malleolus, in the depression on the posterior border of the fibula

Waiqiu (GB-36): 7 cun superior to the prominence of the lateral malleolus, in the depression on the anterior border of the fibula

Yangfu (GB-38): 4 cun superior to the prominence of the lateral malleolus, at the anterior border of the fibula

Xuanzhong (GB-39): 3 cun superior to the prominence of the lateral malleolus, between the posterior border of the fibula and the peroneal tendons

Qiuxu (GB-40): in the depression anterior and inferior to the lateral malleolus.

Zulinqi (GB-41): in the depression distal to the junction of the fourth and fifth metatarsal bones, on the lateral side of the tendon of the extensor digitorum to the fifth toe

Xiaxi (GB-43): on the dorsum of the foot, between the fourth and fifth toes, 0.5 cun proximal to the margin of the web
Zuqiaoyin (GB-44): on the lateral side of the fourth toe, 0.1 cun proximal to the corner of the nail

Points of the Liver Meridian

Dadun (LIV-1): on the dorsal aspect of the big toe, 0.1 cun proximal to the lateral corner of the nail
Xingjian (LIV-2): on the dorsum of the foot, between the first and second toes, 0.5 cun proximal to the margin of the web
Taichong (LIV-3): on the dorsum of the feet, in the depression distal to the junction between the first and second metatarsal bones
Zhongdu (LIV-6): 7 cun superior to the prominence of the medial malleolus, immediately posterior to the medial border of the tibia
Xiguan (LIV-7): posterior and inferior to the medial condyle of the tibia, 1 cun posterior to Yinlingquan (SP-9)
Ququan (LIV-8): just superior to the medial end of the popliteal crease, anterior to the tendons of semitendinosus and semimembranosus

Points of the Ren Meridian

Guanyuan (REN-4): on the midline of the abdomen, 3 cun inferior to the umbilicus
Qihai (REN-6): on the midline of the abdomen, 1.5 cun inferior to the umbilicus
Zhongwan (REN-12): on the midline of the abdomen, 4 cun superior to the umbilicus

Points of the Du Meridian

Dazhui (DU-14): on the midline of the back, in the depression below the spinous process of the seventh cervical vertebrae
Fengfu (DU-16): on the midline at the nape of the neck, directly below the external occipital protuberance, approximately 1 cun above the posterior hairline
Baihui (DU-20): at the vertex or crown of the head, 5 cun posterior to the anterior hairline, at the midpoint of a line connecting the apexes of both ears
Shenting (DU-24): on the midline of the head, 0.5 cun above the anterior hairline

Extraordinary Points

Yintang: midway between the medial ends of the eyebrows

Bailao: on the posterior aspect of the neck, 2 cun superior to Dazhui (DU-14) and 1 cun lateral to the posterior midline

Ling Gu: when a loose fist is formed, in the small depression approximately 0.5 cun proximal to LI-4

Da Bai: when a loose fist is formed, in the small depression approximately 0.5 cun proximal to LI-3

Hua Tuo Jiaji: 0.5 cun lateral to the lower border of each spinous process between T1 and L5. Modern acupuncture theory includes C3–C7.

Wrist-Ankle Point Lower 4: at the midpoint between the tibial crest and the anterior border of the fibula, 3 cun above the lateral malleolus

Wrist-Ankle Point Lower 5: at the midline of the lateral lower leg, 3 cun above the lateral malleolus

Wrist-Ankle Point Upper 5: on the dorsal midline of the forearm, 2 cun proximal to the crease of the wrist at point TH-5

Wrist-Ankle Point Upper 6: on the dorsal aspect of the forearm at the inner border of the ulna along the Small Intestine meridian, 2 cun proximal to the crease of the wrist

Hand Point–Heel: on the palm of the hand, at the proximal point representing one-fourth of the distance between P-7 and P-8

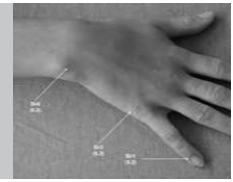
Bafeng: on the dorsum of the feet, between each of the toes, 0.5 cun proximal to the margins of the webs

The location of an acupoint is based on fixed anatomical landmarks, the proportional measurements between them, and what is known as finger measurement. These units of measurement are known as *cun*, and are described here.

Proportional Measurements

The distance between the…

anterior and posterior hairlines:	12 cun
glabella (Yintang) and the anterior hairline:	3 cun
anterior corners of the Hairline (ST-8):	9 cun
posterior hairline and the spinous process of C7:	3 cun
mastoid processes:	9 cun
posterior midline and the medial border of the scapula:	3 cun
midline of the body and the lateral aspect of the acromion:	8 cun
two nipples:	8 cun



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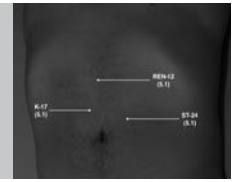
LOCATING ACUPOINTS – PROPORTIONAL MEASUREMENTS

sternocostal angle and the center of the umbilicus:	8 cun
umbilicus and the superior border of the pubic symphysis:	5 cun
anterior axillary fold and the free end of the 11th rib:	12 cun
axillary fold and the cubital crease:	9 cun
cubital crease and the transverse wrist crease:	12 cun
superior border of the pubic symphysis and the medial epicondyle of the femur:	18 cun
lower border of the medial condyle of the tibia to the apex of the medial malleolus:	13 cun
greater trochanter of the hip to the popliteal crease:	19 cun
popliteal crease to the apex of the lateral malleolus:	16 cun

Finger Measurements

The width of the interphalangeal joint of the thumb:	1 cun
The width of four fingers held together, level with the proximal interphalangeal joint of the middle finger:	3 cun



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SUGGESTED FURTHER READINGS

Chinese Acupuncture and Moxibustion (ISBN: 9787119017587)
Foundations of Chinese Medicine (ISBN: 9780443074899)
Acupuncture Energetics (ISBN: 9781572507067)
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