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WRIST & HAND PROTOCOLS

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INTRODUCTION

In many ways, the rehab model is broken.

It's not that the interventions practitioners provide aren't helpful or that rehab doesn't work—it's that the system is fundamentally flawed, and that has created a disconnect between the role of the practitioner, the goals of rehab, and the needs of the patient.

I became a physical therapist (PT) to help people. But when I started my first job in an orthopedic clinic nearly two decades ago, I was instantly hamstrung by the insurance-based model. I was expected to see a dozen patients a day, the sessions were kept too short, and return visits were spaced much too far apart. Before patients could make a full recovery, their insurance coverage would run out and treatments would end. Like many of my fellow PTs, I was overworked and frustrated knowing that I wasn't providing adequate care for those who were suffering.

I'm sorry to say that the same problems persist today. A patient might have insurance, but they have trouble finding a clinic that prioritizes their health. And when they finally manage to locate such a clinic, they have to wait months for an appointment. Worse still, there are many patients who don't have insurance, which can take even less-than-optimal treatment options off the table because they can't afford the out-of-pocket expenses.

These factors tend to leave people with just a few options:

- They can do nothing and hope that their pain goes away or their injury heals.
- They can seek alternative forms of treatment and pay out-of-pocket for in-person care.
- They can attempt to self-manage their condition.

Let's examine each option. Through that examination, I'll outline the solutions *Rehab Science* provides—and tell you what this book is

about, who it's for, and how you can get the most out of it.

OPTION 1: DO NOTHING

Some injuries and pain symptoms simply go away with time—you rest, avoid the behaviors and activities that led to problems, and get better. In this way, doing nothing can work, but only immediately following an injury that causes sudden or acute pain.

With most injuries, you need to implement techniques that reduce swelling, promote blood flow, and alleviate pain within a few days of getting hurt and then start rebuilding the tissue with movement and exercise. But most people do the opposite. The natural response is to protect the area, which is fine in the early phases of healing but can turn into a passive coping strategy that perpetuates a cycle of pain avoidance. When you move less, the area becomes deconditioned, and the likelihood of reinjury and developing chronic pain increases.

OPTION 2: SEEK ALTERNATIVE IN-PERSON TREATMENTS

It's hard to beat in-person treatment from a skilled PT using science-based methods in a facility that prioritizes quality care. These PTs make assessments, design programs, select exercises, and use manual therapy techniques that are specific to the individual and the condition. If you have a catastrophic injury or need reconstructive surgery, it's the best option.

But let's assume you have pain or an injury that is less severe and not life-threatening—such as an overuse injury like a tendinopathy, muscle strain, joint sprain, sudden acute pain, or lingering pain. When in-person physical therapy is not optimal because the clinics in your area follow the broken model, you are left with complementary and alternative practices such as acupuncture, massage therapy, and chiropractic (to mention a few). Practitioners in these fields offer services that are typically not covered by insurance. You often pay out-of-pocket for treatment and, as a result, you may get more attention or receive a type of specialized care that can be helpful. But these modalities are not without flaws.

For starters, these services are out of reach for most people because they are too expensive or are not available locally. Even when complementary and alternative practices are an option, it can be difficult to find a practice that's geared toward mobility and resistance training, which have the best long-term evidence for resolving pain and rehabilitating injuries.

Even more concerning, many of these practices base their entire business model around the narrative that what they do is necessary for the patient to remain healthy. They stress the importance of return visits for tune-up treatments that might not really be needed. The role of a healthcare practitioner is to help patients find relief and heal—not to lock them into an endless cycle of follow-up. With this model, people can become dependent on the treatment and lose confidence in their ability to self-manage their condition.

OPTION 3: SELF-MANAGE

Self-guided pain and injury management is the heart of *Rehab Science*. The goal is to confront the problem intelligently with active coping strategies—education, movement, and exercise. Through education, you can learn how to identify and address potential factors that influence the pain experience. Movement and exercise will break the pain cycle, improve tissue capacity, and boost confidence in the system, which ultimately encourages self-efficacy.

When you learn how to do something yourself and avoid becoming dependent on medication, surgery, or passive manipulations, you gain physical and psychological strength and resiliency. The problem is that most people have an incomplete picture of how their mind and body are connected to their symptoms and what steps they need to take to get better. It's difficult to know who to trust and how to filter through information to find the right treatment plan. People get stuck, or they jump from one program to another, never making progress.

I wrote this book to change that.

BECOMING YOUR OWN PT

My intention with this book is to simplify the science so that it is accessible to everyone, and to provide stepwise strategies for dealing with the most common musculoskeletal conditions. I've done so with two groups in mind:

- People who want to better understand how to treat orthopedic pain and injuries on their own
- Medical and non-medical practitioners (doctors, physical therapists, personal trainers, and so on) who want to expand their knowledge, pass along evidence-based strategies to their patients or clients, and find concise methods and programs that they can reference and implement

To help you navigate this book, I've broken it into three parts. Part I: Pain and Part II: Injury focus on education. Knowing what pain is, how it works, and what the different types are will give meaning and purpose to the strategies for alleviating and preventing both acute and chronic conditions. The same is true for injuries. There are many types, each of which has a different healing time frame and plays into how you should approach rehab. When you understand pain, you get better faster. When you understand what is injured and how long it should take to heal, you're less likely to make the injury worse, and you will recover more quickly. Understanding improves adherence, and adherence promotes consistency—both of which are necessary for getting better.

Parts I and II also explain how pain and injury are different, which is why I discuss them separately. They are often related because injuries can create acute pain, but you can have pain even when no tissue is damaged—as is the case with chronic pain. That's important to know because if you have pain that is not tied to an injury, you might need to address other aspects of your lifestyle that could be contributing factors, which I cover in Chapter 4.

Part III: Rehab provides comprehensive rehab protocols for the most common pains and injuries for all the main regions and joints of the body (see here for the full body area map). Each protocol includes a movement and exercise program broken into three phases based on your pain symptoms, stage of healing, and functional abilities—similar to a program that a licensed PT would develop for you.

To address your particular pain or injury immediately, go to Part III, find the protocol that matches your symptoms or diagnosis, and then follow the rehab exercise program. Just be sure to review the introductory chapters in that part so you understand how the protocols are structured and how to get the most from the exercises.

I'd also like to point out that you do not need to be in pain or injured to benefit from the programs. Whether your goal is to address a weak link in your body, improve mobility with certain movements or ranges of motion, or strengthen a specific body region, the three-phase exercise programs will serve you well. Simply go to the body region that you want to improve or maintain and follow a program, or cherry-pick from the exercises to design your own program.

Remember, the exercises you do in rehab are the same exercises you use to maintain and improve the health of your body.

If you decide to go to Part III as your first stop, that is fine. You don't need to understand the science behind pain and injury to benefit from the programs. Although I believe the science is important to understand—the knowledge can expedite healing, prevent future occurrences, and help you approach rehab in a more efficient way—the protocols are the highlight of this book. When followed diligently, they are the quickest route to recovery. However, I've found that as patients go through them and experience the benefits, they often become more interested in the science, which is waiting for you in Parts I and II.

With a healthcare system designed to treat symptoms with medication and surgical interventions and a rehab model that doesn't always provide the best care, it's more important than ever to take control of your health—and that is exactly what *Rehab Science* will help you do. Through education and stepwise programs, it will empower you to self-manage common musculoskeletal issues and start resolving your pain and healing your injuries on your own terms.

PART I
PAIN

CHAPTER 1

WHAT IS PAIN?

"What is pain?" is probably not the first question you would ask when you are experiencing pain, but it's an important one to answer.

First, it's crucial to realize that pain is not only normal but also important to your overall health. **Pain is an unpleasant experience that helps keep you alive by alerting you to actual or potential bodily damage.**[1] It warns you that something might be wrong, and it gives you an opportunity to change or stop what you're doing to prevent further harm. But pain is a complex phenomenon, and many factors influence it.

In the coming chapters, I'll outline what's going on inside your body when you experience pain and equip you with the tools and knowledge to prevent and alleviate it. Because there are strategies that can help, even if you've been in pain for years and nothing has worked. By educating yourself, you can reshape how you think about pain and take the first steps toward healing.

But before you delve into the solutions and prescriptive protocols, it's helpful to understand why we approach pain the way we do. How did pain science get to where it is today? How do we know what pain is and how it works?

THE CARTESIAN MODEL OF PAIN

Much of what we used to believe about pain was based on the Cartesian model established by philosopher, mathematician, and scientist René Descartes in his book *L'Homme*, published in 1644. He proposed that pain messages were detected by receptors in the body and sent along pathways to the brain. Those messages made us aware of a problem so that we could act in a way to reduce further harm.[2]

Back then, pain was thought to be a fairly simple sensory experience, as if the nervous system was merely detecting an external sensation—something that existed independent of the brain.