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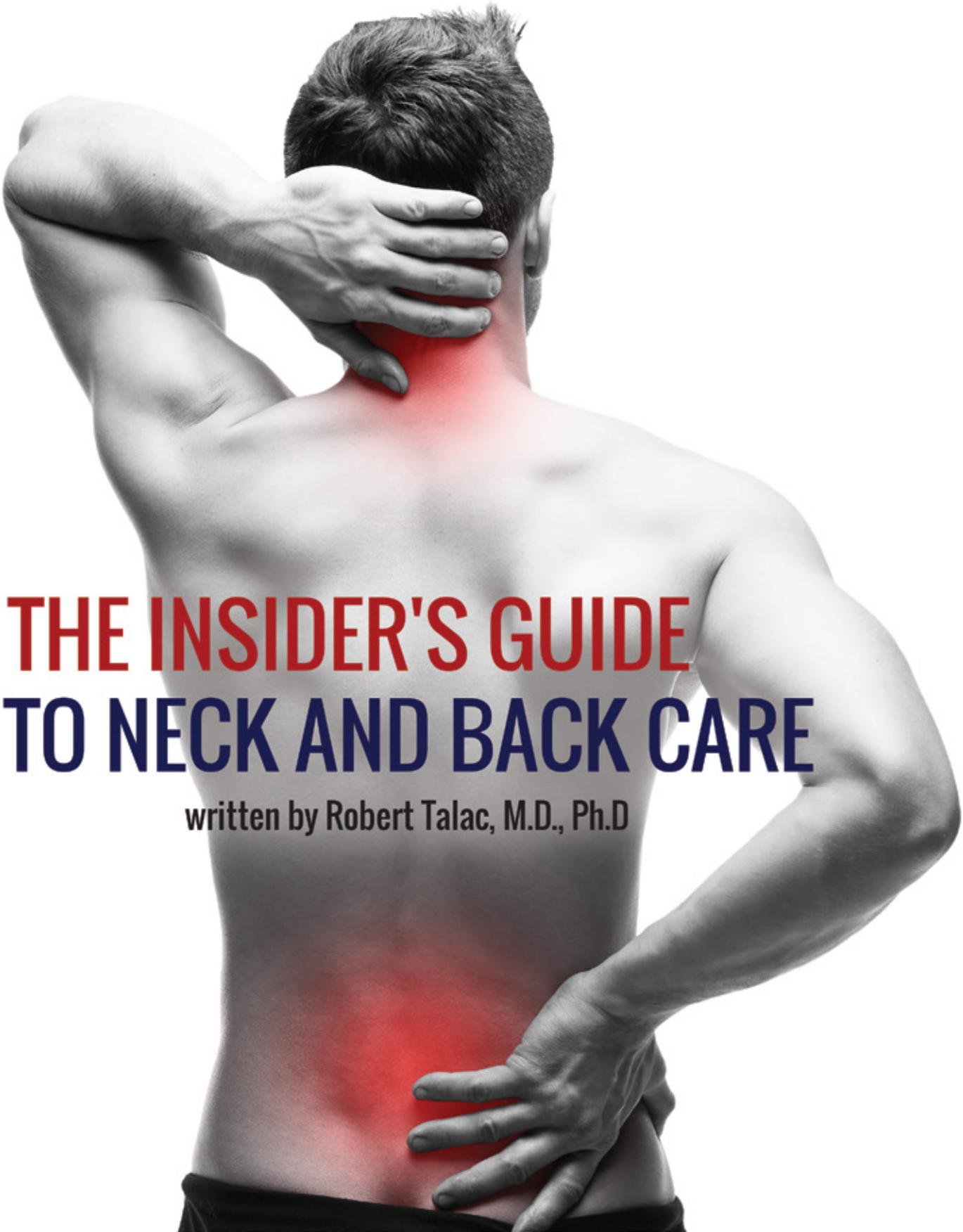

THE INSIDER'S GUIDE TO NECK AND BACK CARE

written by Robert Talac, M.D., Ph.D

ADVANCED SPINE INSTITUTE

The INSIDER'S GUIDE TO NECK AND BACK CARE

This information is my attempt to offer a quick and concise way for you to learn about why your back or neck is hurting.

I have intentionally left out many of the complicated nuances and extreme details that can be very important in your spine care. This is not meant to be an all-encompassing encyclopedia of the spine, or to replace the examination or treatment of a licensed physician. I hope the information here will provide you with a logical framework that will help you to quickly find the best care possible and be able to meaningfully participate in your care. It is meant to summarize the information that I have gathered over the last twenty plus years of studying surgery in general and spine in particular, speaking with thousands of patients, and reading thousands of pages of spine literature.

I hope that you find this information helpful.

Please don't hesitate to contact me if I can be of any assistance.

To your health,
Robert Talac, MD, PhD

About the Author

Robert Talac, MD, PhD is the founder of the Advanced Spine Institute in Houston, TX. He may not be your typical spine surgeon. He is personable, interactive, and enjoys spending a considerable amount of time getting know his patients. Most people come to see him with back or neck problems that significantly affect their quality of life. He focuses not only on alleviating the pain, but also on restoringfunction and performance.

Dr. Talac is a renowned orthopedic spine surgeon. He earned his medical degree from the Medical School of Masaryk University in Brno, Czech Republic. He has completed General Surgery Training as well as a fellowship in Surgical Oncology in Europe. He earned his PhD in Biophysics from Masaryk University. Dr Talac has a diploma in Minimally Invasive Surgery from the University of Louis Pasteur, Strasbourg, France.

In 1999, he relocated to the United States. He held a clinician/scientist position at the Mayo Clinic in Rochester, MN. He spent four years at the Mayo Clinic where he not only learned and perfected cutting-edge strategies that promote healing and recovery, but further internalized the most important lesson in practicing medicine – "the needs of the patient come first". He then completed residency in Orthopedic Surgery at the University of California, San Diego, CA and fellowship training in Spine Surgery at the Center for Spine Health, Cleveland Clinic, Cleveland, OH.

Dr. Talac is dedicated to advancing patient care through clinical research. He has been the author of more than fifty research publications and presentations. He is a contributor to several spine surgery textbooks.

He has been a multiple year winner of the Patient Choice Award and the Most Compassionate Doctor Award. These awards reflect the difference doctors make in the lives of their patients. The honor is bestowed on physicians who have received near perfect scores, as voted on by their patients. In fact, of the nation's 830,000 active physicians, only 5% of doctors were accorded this honor by their patients. The International Association of Orthopedic Surgeons recognized Dr. Talac as a Top Orthopedic Spine Surgeon.

Dr. Talac can be reached at his web site at www.advspineinstitute.com or 832-742-4303.

1 INTRODUCTION

Good. You have taken the first step towards better spine health. You have this book and you are reading it.

Even if you have read other books, this one is quite unique. My hope is that what you will learn here will change the way you think and approach any physician or healthcare professional.

I have recently treated a very unique patient. When I asked her how I could I help her, she surprised me with her request. She told me: "I have been suffering with low back pain for a long time. I have seen many professionals. I feel overwhelmed and can't seem to get ahead. The prospect of back surgery frightens me, but I can't live like this any longer. I want to know what you would do if you were in my shoes. I suspect that you are busy and would want to get results as fast as possible so you can get back to your life. You are a surgeon. Would you share your insight with me?

Although it may be tall order to put 20+ years of schooling, teaching and experience into a concise book, I decided to accept the challenge and write the book that will help patients make better decisions about their spine health. It will provide you with insider information that will help you interact with any health care professional more efficiently, get more control over what you do and how you do it. More importantly, you will get results faster and more efficiently.

2 SYMPTONS: WHAT DOTHEY MEAN WHY DO I HURT?

It can oftentimes be very easy to get bogged down in medical language and jargon when you are speaking with a doctor or a member of the medical community. We tend to have our own language and sometimes don't slow down and take the time to explain things in a language that everyone can understand. With this in mind let's take a moment to define a few terms, just to get everyone on the same page.

Let's start with 3 important terms: *a symptom, sign, and diagnosis.*

A ***symptom*** is a phenomenon that is experienced by the individual affected by the disease. An example of a common symptom ispain, fever, chills, tingling, weakness, or change in sensation. These symptoms are associated with many conditions. The presence or absence of single symptoms is often meaningless, but certain combinations of symptoms is typical for specific conditions.

A ***sign*** is a phenomenon that can be detected by someone(i.e. physician or medical professional) other than the individual affected by the disease. Signs are more specific than symptoms. Their presence or absence is very important. One of the simplest tests I do in my office when I see a patient with neck pain, is the Hoffman's reflex. This test is done by flicking the patient's middle finger and observing the reaction of their remaining fingers and thumb. In patients with compression on their cervical spinal cord all fingers will react with distinct flexion – resembling an attempt to grab an object. This phenomenon is called the Hoffman's sign. Similarly, in the low back I ask patients to raise their leg or straighten their knee. Thosewho have a rupture in theirdisc that is pushing on their sciatic nerve report a shooting pain traveling down their leg.

2 SYMPTONS

A ***diagnosis*** is an answer to the question "why do I hurt". A diagnosis is a cause or nature of the diseased condition (i.e. herniated intervertebral disc, lumbar stenosis)

Symptoms are usually the reason why the patient seeks medical attention. Symptoms and signs are essential elements that helpus, physicians,make a diagnosis. The tricky thing with symptoms is some of them are very common (i.e. pain). They are present in multiple diagnosis and the same symptom may mean different things in different circumstances.

Let me illustrate this point to you. Consider a headache. It is a very common symptom. Many people take a pill or two to alleviate this unpleasant symptom. Often headaches disappear and we don't think about it anymore. However, sometimes headaches may indicate a brain problem such a tumor. I am not implying that everybody with a headache needs CT scan of their brain, I just want to point out that the same symptom may have different meanings in a different context. Subtle differences may mean the difference between a common problem and a potentially life-threatening problem. That's why physicians spend a significant amount of time to learn how to interpret the various symptoms and signs. This is also a reason why taking a history (talking to the patient to learn about symptoms) and a physical examination (getting all of the signs that the physician can detect) are key elements of the process of determining the nature of the diseased condition (diagnosis).
Even with years of training physicians face situations when we can't clearly explain all of the symptoms.

2 SYMPTONS

I also believe that a lack of understanding how things are diagnosed and what we, physicians, need from a patient in order to help them, is source of misunderstanding and communication problems. I often face a challenge to get a patient to tell me what symptoms he or she is experiencing instead of hearing about every possible interpretation and speculation. I address these elsewhere, but I can't emphasize it enough, we need our patients to tell us about their symptoms. Without this information, it is often very difficult if not impossible to make a correct diagnosis.

That said, lets look at the symptoms frequently associated with back or neck pain. I will not be able to teach you all of the combinations and their meaning, but I think I can share with you some general rules that will help you to decide when to seek help immediately and when to wait and see.

The human spine is an essential organ and a place where musculoskeletal and neurologic systems interact. Hence, besides investigating specifics aboutback or neck pain (location, intensity, radiation, and timing) we look for specific symptoms and signs indicating a change in function of those systems. Specifically, we check muscle strength, coordination, ability to stand and walk, balance, control of sphincters (bladder and bowel) and changes in sensation.

In general, any time when you experience back or neck pain and pain is associated with any dysfunction in neurologic or musculoskeletal systems, it is wise to seek medical attention within the next 12 hours. Dysfunction means an abnormally functioning organ or an organ not functioning at all. The examples of such dysfunction include: a loss of muscle strength or muscle mass in the upper or lower extremities, an inability to stand, walk, or

2 SYMPTONS

keep balance (dizziness may often be caused by compression the cervical spinal cord),a loss or change in the sensation of extremities such as tingling, numbness, or burning pain, Loss of bladder and or bowel control is particularly concerning as it may indicate a true medical emergency.

In addition, if the pain is associated with fever, chills, or unintended weight loss, you may be experiencing an infection around your spine or cancer.

If your back or neck pain is the only symptom you are experiencing, it is safe to take an over the counter pain pill and wait for a day or two to see if the pain subsides. I encourage my patients to call my office or their PCP so that we can help them get through this.

Not every patient needs to immediately drive to my office as this is not only unnecessary but also very unpleasant. Some simple advice of what meds to take and also knowing that help is only a phone call away should anything change, certainly helps.

In addition to the two extremes I have described above, there are many patients with less clear symptoms. Those include patients with pain in their upper or lower extremities and patients with pain radiating to the buttocks from the lower lumbar area or pelvic joints.

These patient will have difficulty walking as their legs feel tired and heavy. These symptoms are subtle and require more intellectual work from a treating physician to determine the nature of the problem and establish a correct diagnosis. In these situations, my advice to you is that if the symptoms affect your quality of life, seek medical attention.

3 WHEN BACK OR NECK PAIN MAY BE A MEDICAL EMERGENCY

Back or neck pain symptoms are rarely a sign of a medical emergency. However, if they are associated with a specific neurologic symptom they may become life threatening or result in severe disability if not handled promptly by an experienced physician.

Back or neck pain associated with any of the following symptoms should be considered as a medical emergency and the patient should seek medical attention as quickly as possible:

1. *Progressive leg weakness and/or a loss of bowel or bladder control.*
2. *Unexplained weight loss accompanied by pain and neurological impairment.*
3. *Acute, severe abdominal pain along with low back pain preventing the patient from standing straight.*
4. *Fever and increasing back or neck pain which does not respond to common fever medication especially in diabetics or patients with impaired immune system.*

Progressive Leg Weakness, Loss of Bladder or Bowel Control

Any patient who experiences sudden bladder and/or bowel dysfunction such as inability to hold urine in or inability to empty the bladder, the loss of rectal control, or the feeling of progressive weakness or numbness in the hips, groin, and legs should seek immediate medical attention. These symptoms may be caused by severe compression of lumbar spinal nerves (aka: cauda equina syndrome).

3 WHEN BACK OR NECK PAIN MAY BE A MEDICAL EMERGENCY

Left untreated, cauda equina syndrome can result in paralysis, or loss of sensation in perineal area and loss of bladder/bowel control if the nerves become permanently damaged.

Pain, especially during the night, neurological dysfunction and unintended weight loss or loss of appetite,

Adult patients who notice unintended weight loss (e.g. more than 5 pounds a week for a couple of weeks) or lose their appetite for even favorite foods should consult with their doctor. Rapid, unexplained weight loss can indicate a serious medical condition, such as cancer.

Severe Lower Back Pain spreading into abdomen

Low back pain from a spine condition rarely radiates to the abdomen. However, abdominal disorders can often extend to the low back and can be experienced as acute low back pain.

Acute lower back pain radiating to the abdomen can be a symptom of an enlargement of the aorta in the abdomen, called an *abdominal aortic aneurysm or triple A (AAA).* This condition may become a serious medical emergency if the blood vessel ruptures resulting in significant intraabdominal bleeding. The ruptured AAA is a life-threatening condition that often presents as an unremitting sharp pain in the low back and abdomen. The pain is often so severe that the patient is unable to stand up straight.

3 WHEN BACK OR NECK PAIN MAY BE A MEDICAL EMERGENCY

Fever, Chills and Increased Neck or Back Pain

Fever (defined as a sustained temperature of more than 101.5° in adults) can indicate an infection. As spinal column is well vascularized, any infection may spread quite quickly into adjacent segments. Although spine infections are rare, it can occur especially in patient with weakened immune system such as diabetics, alcoholics, people with history of taking illicit drugs or after major surgery. The danger of spine infection lays in its ability to destroy affected tissues and turning them into thick viscous puss that may exert significant pressure on spinal cord or nerves especially in closed spaces such as spinal canal. The end result of this process is rapid decline of neurologic function and para or quadriplegia.

4 20 MEDICAL TERMS YOU SHOULD KNOW

1. **Anterior**–The front aspect of the spine or body.

2. **Posterior**–The back aspect of the spine or body.

3. **Disc**–A tire-like structure laying between the vertebral bodies. It consists of an outer layer called the annulus fibrosus and an inner gel-like substance called the nucleus pulposus. It functions as a shock absorber.

4. **Degenerated disc disease** - A disc that shows a loss of height, water content, and structural damage (such as cracks or tears).

5. **Herniated Disc** - A condition when the fragment of the inner part of the disc (nucleus) comes out through the outer part of the disc (annulus fibrosus).The condition may not be painful until the fragment presses on an adjacent spinal nerve.

6. **Bulging disc** - If the inner part of the disc pushes out the outer layer but does not penetrate it. Most often the result of aging, but may indicate early structural damage.

7. **Discectomy** – The removal of a portion of the disc that is pressing on an adjacent spinal nerve or decreases the space for the spinal cord.

8. **Spinal Stenosis** – The narrowing of the spinal canal causing pressure on the spinal nerve(s) which results in pain and neural dysfunction such as weakness, numbness and tingling, or the inability to stand or walk.

4 20 MEDICAL TERMS YOU SHOULD KNOW

9. **Vertebral Body** - The cube-shaped bony structure in your spine. Identified by a letter, referring to section of the spine (Cervical, Thoracic and Lumbar), and number (referring to the level). i.e. C5 - referring to 5th cervical vertebral body.

10. **Spondylolisthesis** –A shift in one vertebral body in respect to another one causing mal-alignment of the vertebral bodies. This condition is often present as a back pain radiating to lower extremities.

11. **Discectomy** – The partial or complete removal of a disc that is pressing on an adjacent spinal nerve.

12. **Laminectomy or Decompression** – A removal of the back portion of the vertebral body and sculpting of the spinal canal to enlarge the space available for the spinal cord and spinal nerves.

13. **Fusion or Arthrodesis** –A Procedure that immobilizes two adjacent vertebral segments through a bony bridge created between them by a surgeon. The fused segment is immobilized with screws and hardware to the keep segment stationary until the bony bridge heals.

14. **MRI (Magnetic Resonance Image)** –An advanced imaging technique depicting bone, discs, spinal cord and spinal nerve and their spatial anatomy using a magnetic field.

4 20 MEDICAL TERMS YOU SHOULD KNOW

15. **Pain Block or Steroid Injection** – An injection of a mixture of local anesthetic agent and steroid around the spinal nerves or spinal cord to suppress pain and identify the source of the pain. An Epidural Steroid Injection or Transforaminal Injection are referring only to a different anatomic placement of the solution.

16. **Spine Surgery** – Surgical procedure to either relieve pressure on spinal nerves (decompression) and/or to stabilize the segment (fusion). Each spine procedure has 2 parts: approach (getting to the affected segment or pathology) and the procedure (often a combination of decompression or fusion).

17. **Minimally Invasive Surgery (aka MIS)** – A spine procedure that uses a smaller incision and a specialized retractor system to access the pathology. It is often associated with less pain, blood loss and a quicker recovery as "collateral damage" is limited. The treatment of the pathology is often same.

18. **Endoscopic or Microscopic Spine Surgery** –These are procedures during which the surgeon visualizes the spinal canal and pathology using either a microscope or endoscope. Again this is another modification of the approach. The treatment of the pathology remains the same. These techniques allow the surgeons to further minimize the incision and collateral damage of healthy tissues and further decrease postop pain, blood loss, and speed up the recovery. An advanced visualization technique allowsthe surgeon to use a more precise cutting tools such as lasers or radiofrequency probes and further refine the procedure and minimalize collateral damage to healthy tissues.

4 20 MEDICAL TERMS YOU SHOULD KNOW

19. **Robotic Spine Surgery** – An advanced technology that allowsthe surgeon a more precise and safer placement of hardware (i.e. screws)

20. **Artificial Disc** - A mechanical device that is placed between the two adjacent vertebral bodies preserving motion between them.

5 WHO SHOULD I SEE WHEN I EXPERIENCE BACK OR NECK PAIN?

Back or neck pain is one of the most common problems affecting almost every adult world-wide. The pain is only a symptom and it can be a result of several conditions. Fortunately, most episodes of back or neck pain are self-limiting. However, if pain persists or is associated with other neurologic problems such as numbness, tingling, and/or weakness in extremities, it requires professional help.

Despite the fact that back or neck pain represents the second most common problem affecting humans after the common cold, we have very few spine specialists. We do have a lot of generalists who see patients with back or neck pain and triage them to an army of proceduralists. The result is assembly line care for back or neck pain. What do I mean by this?

Let's look at the traditional journey of a patient with back or neck pain. The journey usually starts with a visit to a primary doctor or chiropractor. Back or neck pain is rarely a life-threatening problem, but it can put your life on hold.

After the initial visit and prescription of pain meds or a steroid pack, the patient goes to get an MRI. Unfortunately, very few patients receive a thorough neurologic and musculo-skeletal evaluation. It is a sign of our times that we rely more and more on other studies than the history and physical exam. Some doctors don't even see a patient initially and their nurse practitioner or physician assistant perform the initial encounter.

The MRI scan is performed by a radiology technologist, who submits the images to a radiologist. The radiologist describes the images without ever seeing or talking to the patient. In a majority of the cases the only information the radiologist receives is "diagnosis: back pain or neck pain".