CONQUERING NECK & SHOULDER PAIN

YOUR STEP-BY-STEP GUIDE TO REDUCING OR ELIMINATING NECK & SHOULDER PAIN

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CHAPTER 1: THE NECK

How It Works

The human body is the most intricate and complicated piece of engineering in both the natural and the man-made worlds. While it is a little more in-depth than a nursery rhyme, the anatomy and functions of our bodies are definitely worth getting to know. It is only when we understand the root of a problem that we can begin to know how to solve it.

For such a small part of the body, the neck accomplishes an amazing amount of work. The average human head weighs nearly 15 pounds. That’s the equivalent of three small bags of potatoes. How long could you hold out your arm and keep three bags of potatoes suspended?

Not only does the neck support the weight of the head and allow us to stay upright, but it also allows the head to move from side to side, up and down, and to rotate from left to right. This is called mobility. The neck offers mobility like no other place in the body.
How does the neck do it? Not unlike the children’s song, the neck is made up of connections. The neck bones connect to the ligaments. The ligaments connect to the muscles, and all of it adds up to accomplish the neck’s amazing feats.

The bones, muscles, and ligaments of the cervical spine work a little like the domino effect seen in viral videos. Its seven vertebrae interact, and depend on each other, with incredible precision and mechanical interaction.

**Bones**

The seven bones of the neck are aptly named the cervical vertebrae. Each vertebra is named for the position of the neck. For instance, C6 means that it is the sixth vertebrae in the cervical region of the spine. Naturally, the first vertebra in the neck is called C1.

C1 is special for a couple of reasons. It holds the distinction of being the first bone at the top of the spine – the bone that allows us to nod our heads in agreement. Because of its location, it is also referred to as the Atlas bone. Just as Atlas was ordered by Zeus to hold the heavens on his shoulders, C1 has the important task of holding up our heads. In fact, C1 is the sole support for the skull.

C2 also is also a bone of distinction. Often given the name of Axis bone, it allows us to pivot our heads in disagreement. C1 and C2 are dependent upon one another. Working together, they control the movements of our head, much like the mechanical axels and joints control the steering of our vehicles.

Bearing similarities with the vertebrae of the lower spine, C3 – C6 are not quite as special as their mates, but are important nonetheless. When working together, C3 – C6 allow side-to-side rotation, as well as the forward and backwards movement of the head. They produce limited movement individually, but together they are a powerhouse of neck stability.

C7 is also a little different. Its Latin name, vertebrae prominens, gives away its secret. The structure of C7 carries more similarities to spine beneath (thoracic spine) it than the cervical vertebra above. It has two very important jobs. First, it is the vertebra that makes the transition from cervical spine to the thoracic spine. Second, it supports the entire weight of the neck and head. If you reach back to the base of your neck, right where your shoulders start to form, you can feel C7 through your skin.

It has been mentioned several times that all seven of the cervical vertebrae work together to allow our movements. But, it also has another function – to protect and give a path to our vertebral canal, which is also known as our spinal cords.
Each vertebra is made up of two has two very distinct parts. The first part is bony and rounded on one end. This part of the vertebra lines up towards the front (anterior). In other words, it points the same direction as your chin. The second portion is oriented towards the back (posterior). It is bony and arched and forms a hole-like structure. This hole is called the vertebral foramen or vertebral foramina. This vertebral foramina line up throughout the neck to form the vertebral canal.

Openings on either side of the cervical vertebrae match up and coordinate with their neighboring bones. It is through these openings that eight pair of cervical nerves emerge. The nerves from these openings stretch from the neck, to the upper body -- all the way down to the fingers.

**How Can Bones Cause Neck Pain?**

While your bones don’t have feelings, your bones are interconnected with nerves. When those nerves become pinched or irritated through overuse, degeneration, or sudden trauma to the vertebrae -- neck pain can be quite significant.

**Disks And Facet Joints**

In addition to the bones that make up our cervical spines, there is also a series of vital parts called disks and facet joints. These disks and facet joints protect the vertebrae and allow for fluid neck movement.

**Intervertebral Disks**

If you are reading about neck pain, it is possible that you have heard the terms herniated disk, bulging disk, or ruptured disk, more times than you can count. These terms are commonly used to describe problems that can occur within intervertebral disks.
Intervertebral disks are gel-like pillows that lie between the individual vertebrae throughout the spinal column. When the disk is normal and functioning, the disks add a separating cushion between the bones. In a sense, the intervertebral disks prevent the vertebrae from bumping into one another and causing that horrible grinding sound. Comprised of cartilage, the outer covering of the disk (annulus) connect and hold the vertebrae together.

**How Can Intervertebral Disks Cause Neck Pain?**

In one word – aging. It happens to the best of us. Much like the rest of our bodies, when intervertebral disks begin to age, changes start to occur. As we get older and as a result of certain traumas, the disks start to thin, stiffen, and dry out. This naturally occurring process can sometimes lead to severe neck pain as nerves become pinched and bones begin to collide.

**Facet Joints**

The bones of the vertebrae form a chain by using facet joints in the arched, posterior (back) portions of the bones. Though not at all large in size, each facet joint is suspended in joint capsules filled with fluid. The medical term for the suspension fluid is called synovial fluid.

**How Can The Facet Joints Cause Neck Pain?**

The Facet Joints contain a high concentration of nerve endings. The nerve endings act as alarms to send pain signals when they have been suddenly traumatized by repetitive use, or holding the neck in one position for too long. The facet joints are susceptible to the rheumatoid and osteo forms of arthritis.

**Muscles, Tendons And Ligaments**

Now that we know about the basic skeletal and disk system architecture of our necks, it’s important to spend some time getting to know what holds it all together. The three primary parts that accomplish this difficult task are called muscles, tendons, and ligaments.

**Muscles:**

The neck, shoulders, and upper body contain 24 different muscles. Ranging in size from small to large, these muscles control the stabilization, alignment, and mobilization of the cervical spine.
Two of the largest of these muscles groups are called the trapezius and the sternocleidomastoid. The trapezius muscles are the largest in the upper body, and lie in the posterior region of the upper shoulders. The anterior flexor muscles, the sternocleidomastoids, are smaller in size than the posterior muscles. However, like the trapezius, the sternocleidomastoids also help stabilize the neck and balance the head. Another lateral group of muscles controls balancing and side-to-side movements.

**How Do Muscles Cause Neck Pain?**

Muscles are a common reason for complaints about neck pain. It is easy to strain your neck playing sports, badly sitting in one position at a desk, or with repetitive movements, such as with piano playing. Overuse and poor posture are two major culprits of muscle-based neck pain. When one muscle group starts hurting, it is not uncommon to have problems in a nearby neighbor.

**Tendons And Ligaments**

Think of the tendons and ligaments of the neck like rigid rubber bands. Tendons, the more pliable of the two, are flexible. They attach the muscles of the cervical region to the bones. Moving without them would be like a marionette without strings.

Not to be outdone, the ligaments work side by side with the tendons. Ligaments don’t allow as much movement as tendons; they are responsible for joining cervical vertebrae and stretching all the way to the collarbone (clavicle). Ligaments do their best to try to prevent the neck from excess movement.
How Can Tendons And Ligaments Cause Neck Pain?

Just like all the muscles that make up our necks, tendons and ligaments can be strained and sprained. They are susceptible to most anything that affects the muscles. The pain of tendonitis in the neck is something that thousands of people experience each year.

Other Parts Of The Neck

One of the most fascinating aspects of the neck’s ability is collaborating every move with the shoulders. The trapezius muscles are a huge help, as they stabilize the neck and support the head. The trapezoids link the muscles of the arms and pectoral region to the shoulder blades, arms, and neck.

Another important, and often problematic, structure is called the brachial plexus. The brachial plexus is a network of nerves that runs from the cervical nerve root to the shoulders. The nerves from this region provide feeling to the upper back and the arms.

Problems With Other Neck Structures

Problems with the brachial plexus and with the trapezius muscles are no walk in the park. If an injury occurs really close to the nerve root in the spine, it can cause a whole litany of issues, such as pain that radiates and burns all the way to my fingers, and causes knots in the nerve endings found in the trapezius muscles.
CHAPTER 2: EVALUATING NERVE PAIN

If neck pain seems to be sticking around and doesn’t resolve itself within a few days, or if becomes worse, it is important to seek medical attention. Although it is one of the most common complaints occupying doctor’s offices across the world, neck pain is hard to describe. Still, it should be taken no less seriously. It can impact every aspect of your life.

How do you know it’s time to see a doctor? The Mayo Clinic offers the following guidelines about when to get checked out by a professional:

- If numbness, tingling, and radiating pain are present, it may indicate a problem with the nerves, bones, or muscles in your neck.

- If after your best efforts, the neck pain doesn’t improve or hangs around for more than a few weeks, it can also indicate damage to one of the structures of the neck.
They also recommend that if any of the following symptoms are present; please call 911, or head to the nearest Emergency Department. They can be serious indicators of problems that require immediate attention:

- Traumatic injury such as a diving accident or car crash.
- Muscle weakness or trouble walking.
- If high fever is present, it may indicate of meningitis. Meningitis is a condition that infects the spinal cord and brain membranes. It can cause permanent brain damage and death. Every year, there are approximately 4,000 cases of bacterial meningitis reported in the United States.

Another helpful way to determine if a visit to the doctor is necessary is to conduct a movement test on your neck. Your neck should be able to move fluently and without pain to six different positions. Knowing the direction(s) that cause you the most pain can help a physician to find the problematic area. Limited movement or painful movement could indicate a troubling neck problem lurking beneath the surface.

Though there are many effective treatments for neck pain, it is important to note that surgery is usually the last option. It is only put on the table after several other treatments have been exhausted.

The problem with the diagnosis of neck pain is that the human body can be quite tricky. A pain-free person may present things such as ruptured intervertebral disks and live their lives undeterred. Other folks may show no reason for neck problems, but present with severe neck pain.

Nevertheless, it is important to know when to head to the doctor. If it is so intense that it makes you cry, seek treatment right away.

**Types Of Neck Pain:**

When you do seek medical advice and expertise, it is good to make a list of the problems and types of pain you have been having. This will help your care provider to zoom in on specific problems that cause neck pain. Though it may be difficult to describe, explaining your symptoms to your doctor can save a lot of time and expensive testing. If you can, try to pinpoint what type of pain you are having.
**Muscle Pain**

The first type of pain is, muscle pain. Muscle pain can be a dull ache, or it can be a searing nightmare that affects both your neck and shoulders. Several factors can cause muscle pain – repetitive stress, emotional stress, and even overextension, are amongst the biggest offenders. In some cases, muscle pain can be unbearable. Especially if the muscles are bound together so tightly they have formed trigger points – or, in plain terms, knots.

**Muscle Spasm**

Another type of pain is called a muscle spasm. Have you ever had a Charlie Horse? Muscle spasms are a bit like a Charlie Horse because both are violent contractions of the muscle. When muscles become agitated or overused enough to spasm, it can cause painful, tight muscles and rigid muscle knots. Sometimes, the cause of muscle spasm cannot be located despite testing’s best effort. Other times, it can be directly attributed to problems with cervical nerves or intervertebral disks.

**Headache**

There are many types of headaches – migraines, tension, and sinus are three that immediately spring to mind. You may have not heard of cervical headaches, but they are very real. Usually felt at the convergence of the skull and C1, cervical headaches are usually felt in the back of the head. These sorts of headaches are often manageable and not as intense as other forms of headaches. However, the irritation of movement can cause the headache. It may result in neck stiffness and neck muscles that are painful to the touch.

**Facet Joint Pain**

If pain is affecting both your neck and your shoulders, it could be sign that you may be experiencing facet joint pain. Although it is possible for that neck pain and shoulder pain to occur without the other. Facet joint pain will often through pain signals when the head is leaned toward the injured side. Both osteoarthritis and rheumatoid arthritis can also cause facet joint pain. If your neck and shoulders are stiff or feel worse in the morning, it is possible that arthritis is present in your neck.

**Nerve Pain**

Nerve pain is a challenging pain that usually requires routine medical attention. Nerve pain can occur when the nerve roots become crushed or pinched near the cervical spine. As a result, nerve pain is sharp and extremely painful. Often times, it radiates to the arms and to the hand with a burning pins and needles type feeling. Though nerve pain may or may not happen all the time, when it does occur it should be examined.
**Referred Pain**

Referred pain is a term used to describe pain that occurs in a separate region of the body, other than where the source of the pain is located. An example of referred nerve pain is one generated by a crushed nerve in the neck that goes all the way down the arm and into the fingers. Interestingly, there are also other forms of referred pain that can cause pain in the neck and shoulders. For instance, people with gallbladder or digestive issues will often feel back and shoulder pain. Even heart disease can cause referred pain.

**Symptoms That Do Not Cause Pain**

**Stiffness**

Though pain is often the first and most obvious sign of trouble, your body may be sending other signals that a problem exists. The most major non-pain related symptom is stiffness. Waking up with stiff necks and shoulders could be as simple as sleeping the wrong way. But, it could also mean that injury, arthritis, or meningitis may be present.

**Limited Range Of Motion**

Range of motion refers to the extent that your neck is capable of moving. Are you able to move your neck normally, or have you lost the ability to look up, down, or side to side like you used to? For the lucky ones, this prevention of normal movement is only temporary. For others, it can become a chronic condition. The primary reason for limited range of motion is aging. As we age, all parts of our bodies start to lose the youthful flexibility we once had. Beyond normal aging, limited range of motion could indicate that a problem has occurred somewhere in the nerve, bone, or muscular regions of the cervical spine.

**Dizziness**

The fancy name for another non-pain symptom is cervical vertigo. This dizzy, light-headed feeling often plagues older patients and those suffering from arthritis. Roughly 35% of all whiplash patients also experience some form of vertigo. The dizziness is caused because the nerve roots are being irritated by a problem with the neck’s vertebrae or intervertebral disks. When the nerves are being used up by the irritation, they cannot function properly. The nerves become confused and send signals that are not always received or sent properly. This confusion can cause instability, dizziness, nausea, and bodily trauma caused by falling.
Your First Appointment

Now that you’ve made it to the doctor’s office, you may be wondering what to expect. Don’t worry; it’s not that bad.

The first thing that usually happens is like any other appointment. You are required to fill out paperwork. Then, you’ll have vitals, such as blood pressure and weight, taken by a nurse or other medical professional. You will be taken to an examination room where you will wait – hopefully not long – for your doctor to arrive.

Medical History

You might think it is odd when your doctor starts asking you questions about your past medical history, rather than getting to the point and helping you out of misery. But, this helps the doctor to understand what may be at the heart of your pain issues. Even if medical problems from the past do not seem to be relevant to the current issue, a thorough history can also eliminate potential causes.

After discussing past illnesses, surgeries, and medications, your doctor will have tons of questions for you regarding your neck pain symptoms. Here are some of the questions you may be asked:

- Have you been in any accidents? Any accidents years ago?
- How long has it been hurting?
- Can you show me where the most pain is coming from?
- Does it radiate down into your hand or shoulder?
- Any burning, tingling, or numbness?
- Has the pain been present for a long time or did it start recently?
- Is it worse during certain times of the day?
- Do you experience stiffness? Does stiffness happen in the morning?
- Are you receiving any other sort of medical treatment?
- Any addiction or alcohol abuse problems?
- Any emotional stressors?
- Does the pain keep you awake?
It is a lot of questions, but they are questions that must be asked when determining the root cause of neck pain. Your answers will help your physician to understand what you are currently experiencing. You are guiding him/her down the path to your diagnosis. Try to stay patient and answer each question in as much detail as you can.

**Physical Exam**

After the medical inquisition, you will undergo a physical examination. Your doctor will test your range of motion, the shape and size of your muscles, and your posture will be observed. Often the doctor will have you stand up so that problems with posture can be more easily seen.

Your doctor will also closely examine your arms and hands. During this part of the exam, they will follow the nerve track from your neck, into your shoulder, and down your arm to your fingers. The doctor will check for poor reflexes and any sensitivity you may be experiencing.

Another thing your doctor may be looking for is muscle weakness. One of the tests involves the doctor giving a thumbs up. Then, he will ask you to wrap your hands his thumbs and pull them back towards you, to test your strength. Muscle weakness is a huge indicator that there may be a problem with arthritis, injury, or stressed cervical nerve roots.

There are only a few more things that will happen at this initial visit. You will also have your shoulder muscles examined for knots. Or, as they are also known – trigger points.

Finally, your doctor will perform a basic check to determine if there are any underlying medical conditions that could be causing, or aggravating, your neck pain. Illnesses such as cancer, infection, thyroidism, and arthritis could be contributing factors. It is best to rule them out before beginning any sort of treatment.

**Images and Tests**

Based upon your doctor’s findings during your visit, they will determine whether or not further testing is necessary. Your doctor will classify your neck pain according to four established levels (grades) of pain.

Most clinicians and physicians use a pain grading scale created by the Neck Pain Task Force. The scale consists of four grades – each with different qualifying factors. Your doctor will base the treatment or diagnosis upon the grade level your pain is placed.
The four grades are:

- **Grade One** – no signs of serious illness or injury, able to function with little or no problems with daily activities
- **Grade Two** – no signs of serious illness or injury, has problems with normal activity
- **Grade Three** – signs of nerve damage are present
- **Grade Four** – signs of significant damage or condition

Those that fall in the grades three and four require more extensive treatment than those with pain in the lower grade categories. Grades one and two can often be treated with exercise, medications, and manipulation.

**Imaging**

One of the next steps your doctor may make is to send you for imaging tests. Though regarded as an overused tool for spinal pain diagnosis in some circles, imaging allows doctors to confirm and to rule out possible causes. Depending upon the severity of your neck pain and your grade classification, your doctor will send you for one of the following imaging tests:

- **X-Ray**: X-rays allow doctors to see the bones and spaces by taking a snapshot of the inside of your neck. There is great debate about the effectiveness of X-rays being an effective diagnostic tool for nerve pain. Over 30% of adults present with an abnormal X-ray. Many feel no pain at all. Conversely, those who are in pain may have an issue that can go undetected by an x-ray.

- **Computed Tomography (CT/CAT Scan)**: CT Scans use more radiation than x-ray machines. But, they are able to show bones in more detail. Another way that a CT Scan can be helpful is by using dye to highlight or contrast problem areas. Using dye makes the image easier to read.

- **Magnetic Resonance Imaging (MRI)**: MRI machines provide the most definition of all three machines. Using a magnetic field that reads the body’s electromagnetic signals instead of radiation, the MRI is able to create 3D images of our body’s interiors. Taking up almost an entire room, MRI machines are also the largest of the three imaging machines. MRI use is best for diagnosing nerve pain or disk issues, but it is only used after conventional treatment has not provided any relief.
A note about radiation: When we hear about any of the tests mentioned, we tend to let our minds wander to how much radiation exposure we might experience? The truth is, radiation occurs naturally in our world. We are exposed extremely low levels of it every day. Though high levels of radiation can cause cancer, the low-level exposure of both the X-ray machines and the CT machines carry little risk. Studies have shown that the diagnostic benefits of the radiation exposure, with either machine, far outnumbe of radiation-related risks.

Other Tests

There are several other tests that your doctor might order to help determine an accurate diagnosis and treatment plan. First and foremost, your doctor will likely order lab tests. A blood test will help rule out other possible causes of neck pain, like infection. If an infection called meningitis is suspected, your doctor may order a lumbar puncture. By gathering spinal fluid, your doctor can rule out tumors, meningitis, and a host of other infections.

After completing lab tests, your doctor may request any of the following tests to assist with a diagnosis:

- **Electrodiagnostic Test**: The EMG test may involve measuring the electrical activity of muscles and nerve tracks. If the function reads as abnormal, it may suggest that something is pressing on a nerve root.

- **Diagnostic Nerve Block**: Though reserved as last option, diagnostic nerve blocks can also be used for treatment. When used diagnostically, local anesthetic is injected into problem areas and trigger points to help pinpoint the cause of cervical nerve pain. Once the correct nerve has been found, nerve blocks can then be used to lessen the everyday pain.

- **Diagnostic Facet Joint Injections**: Much like a nerve block, facet joint injections involve having an anesthetic or a cortical steroid injected in the facet joint to find the source of pain. It can also be used as a treatment in severe cases.
Choosing The Right Doctor

After your diagnosis, your primary doctor may send you to see a specialist. There are many different doctors that treat neck pain. Some of them include:

- **Neurologists** – a doctor that specializes in treating disorders of the spinal nerves.
- **Orthopedic Surgeon** – a doctor that treats musculoskeletal disorders.
- **Osteopath** – a doctor that treats, often with manipulation techniques, disorders of the nerves, muscles, ligaments, and the way the entire body interacts.
- **Physiatrist** – a doctor that specializes in treatments plans that include physical therapy to relieve the pain of musculoskeletal disorders.
- **Spinal Surgeon** – Often a last resort, a spinal surgeon specializes in the correction of the root causes of musculoskeletal disorders of the spine.
CHAPTER 3 – CAUSES OF NECK PAIN

Though there are many common causes of neck pain, it can often be difficult to determine the exact causes. Sometimes patients will have pain, but the problem cannot be found. Other times, patients will have obvious problems, but no real sign of a pain source.

For this reason, doctors classify causes of neck pain in two different ways – diagnosable neck pain and general neck pain. Most strains and sprains of the neck are labeled with the category general. If general neck pain persists past initial treatment and lasts for weeks, further investigation of the issue may be necessary. Disorders such as spinal stenosis, degenerative disk disease, and fibromyalgia fall under the category of diagnosable.

No matter what the source of the neck pain, the goal of your physician will be to provide relief and comfort. Fortunately most neck pain – around 80% -- will diminish with exercise, over the counter medications, and ice therapy. This sort of neck pain most often comes from strains and sprains. Let’s take a closer look.
**Strains and Sprains of the Neck**

Neck strains and sprains are closely related. Strains occur when the neck muscles have been overused, held in one position for too long, or with sudden moves like that which occurs during a car accident (Whiplash). Sprains, on the other hand, involve strain of the neck’s ligaments. However, neither are always a result of injury. Approximately 85% of these cases involve and injury or strain that occurs over time.

**Symptoms**

Symptoms of neck strain and sprain can be mild, or they can be outright agonizing. Sometimes, symptoms can be made worse through usual movements. Sometimes, the doctor will call these symptoms “nonspecific neck pain.” Under that category we find stiffness and tightness of neck and upper back, muscle spasms, headache, and limited range of motion.

**Treatment**

Most instances of neck strain and sprain will heal within two or three weeks. Usually, all neck pain is initially treated the same way. Using ice packs, moist heat, over the counter medications like ibuprofen, and stretching are usually the treatments that will be prescribed at first. These treatments are designed to simply provide relief. After these tricks have been used and the neck pain starts to ease, gentle stretching is next. If the pain does not resolve, your doctor may advise taking muscle relaxers like cyclobenzaprine (Flexeril).

**An Exercise for the Neck** –If you are feeling tension in your neck and shoulder regions, try shoulder shrugs. Yes, that same movement you make when you are using your body to say “I don’t know.” There’s only one little difference. When you shrug your shoulders, don’t let go. Hold up as high as possible for at least ten seconds. When you relax them, hold them down for at least ten seconds. After about ten repetitions, you will feel some welcome relief. The contracting and relaxing of the muscles helps to relieve tightness and stiffness that may occur in the mornings or after sitting at a desk all day. Please be aware that you should discontinue this exercise if it makes you feel worse.

**Degenerative Conditions**

If your neck strain or sprain has not resolved with the self-care treatments recommended by your doctor, you will likely be evaluated for a degenerative neck condition. The very definition of degenerative is deterioration that occurs with age, causing a loss of function.
There are four major degenerative diseases that affect the neck, including Cervical Osteoarthritis, Spondylolisthesis/Spondylolysis, Degenerative Disk Disease and Spinal Stenosis. However, your doctor may also send you for testing to rule out other, less frequent, causes like tumors that affect the spine, infection, or other medical related factors.

**Cervical Osteoarthritis**

Often called Degenerative Arthritis, Degenerative Joint Disease, or Cervical Spondylolysis, Cervical Osteoarthritis is responsible for the grinding and crunching in the neck. The grinding happens when the cartilage in the invertebral disks begins to break down.

Without the cushioning and protection of the disks, vertebra can begin to rub together. Over time, this rubbing causes the shape of the bones to wear and to become distorted. Once this happens, the nerve roots can become severely irritated or pinched by the bones adding another layer of pain.

**Symptoms**

Symptoms of Cervical Osteoarthritis include morning stiffness and that horrible crunching and grinding sound. The stiffness and grinding are non-pain symptoms. The pain can radiate from the neck to the shoulders and beyond. Sometimes, pain can be eased with rest, but it’s harder than you might think to avoid moving your neck and shoulders.

**Treatment**

In addition to physical therapy, over the counter medication, and preventative movements, medical treatment for Cervical Osteoarthritis can be approached in a few different ways. Symptoms can sometimes be alleviated through facet joint injections.

Facet joint injections are administered under a special X-ray machine. The machine helps the doctor to find the correct place to place the injection of anesthetic and corticosteroid medication. The combination numbs the affected joint and shrinks any inflammation that is occurring near the nerve endings of the facet joint. If the patient is presenting with symptoms of nerve compression or the injections are not helping, surgery may be an option.
Spondylolisthesis/Spondylolysis

Spondylolisthesis and Spondylolysis involve the slipping of disks. Sometimes called Subluxation of the Vertebra, it is known to occur more often in the lower portion of the back. Though it is most often caused by degenerative disk conditions and arthritis, it can also occur if the neck is fractured, injured, or overused.

Slipping is a term used to describe what happens when a vertebrae becomes worn down. The vertebra can no longer hold its position, and it sort of “slips” over the disks or the surrounding bones.

Symptoms

Subluxation of the vertebra is one of the few neck disorders that can be detected with an x-ray. Patients often complain of pain that radiates to the back of their heads. Other symptoms can include weakness and tingling all the way down to the fingers.

Treatments

One of the most prominent treatments for Spondylolysis is physical therapy. If you ever have to have physical therapy, you can plan to learn movements and exercises aimed at strengthening the muscles around the affected area. You will also learn to avoid movements that can worsen symptoms or increase pain.

Most doctors will recommend over the counter medication like ibuprofen (Advil, Motrin) or acetaminophen (Tylenol) to help reduce inflammation and pain. However, if your pain is severe and does not respond to these medications, your doctor may prescribe a stronger, opioid painkiller. Please note that opioid painkillers carry the risk of addiction and the use of them should be kept to a minimum.

If neither of the medication nor physical therapy is providing much relief, you may be asked to undergo facet joint or spinal injections. Spinal injections are similar to facet joint injections; however, they are administered to the regions between the disks rather than the facet joints. Spinal injections also contain an anesthetic and a corticosteroid.

The last resort to relieve the pain of Spondylolysis is surgery. Typically, one of two types of surgery can be performed. In a procedure called spinal fusion, surgeons will fuse two or more vertebrae together to prevent disks and nerves from being further injured by bones slipping into one another. The other surgical option is called a laminectomy.
A laminectomy is generally performed when space needs to be made for nerves. The back part of the vertebra in the affected area will be cut away, or shaved down to create extra room. In the case of less common cervical fractures, bone can be transplanted from the lower body to repair the broken vertebra.

**Degenerative Disk Disease**

Degenerative Disk Disease can happen as a result of trauma or injury. But the most common reason for degenerative disk disease cannot be prevented – aging. Just as the name implies, degenerative disk disease happens naturally as we age in 25%-40% of humans. However, many doctors insist that it is a symptom of the natural human aging process rather than a disease.

Degenerative disk disease occurs when the cartilage of the intervertebral disks begin to wear down. Parts of the facet joints or vertebrae become malformed from grinding and begin to wear down. Often the wear and tear will cause nerve roots or the sensitive nerve bundles in your facet joints to send pain signals.

**Symptoms**

The symptoms of degenerative disk disease are varied. While you may simply be uncomfortable, your neighbor may be in agony. The other tricky thing about degenerative disk disease is that the pain can come and go. And, when the pain makes an appearance, it can stay for a matter of days or months. Sometimes, the pain can be chronic. Pain can usually be felt in the neck and upper with normal movement. If a nerve has become trapped, degenerative disk disease can also cause numbness and weakness of the extremities.

**Treatment**

As with most neck pain conditions, the treatment for degenerative disk disease will start with medication, gentle exercise, and hot or cold application. In more severe cases, narcotics may be prescribed and surgery will be recommended. The surgery for degenerative disk disease is one of the more complicated ones. The neck is entered through the front and the offending disk is taken out to prevent further damage to the nerve it was impacting. It is replaced with surgical steel rods to support the neck. Other times, the disk will be removed and replaced with a smaller prosthetic.
**Spinal Stenosis**

The last of the degenerative neck conditions we are going to take a look at is called Spinal Stenosis. Though spinal stenosis can be present at birth, it is most likely caused by the same degeneration that causes all of the other degenerative diseases of the neck. In medical circles, stenosis means the narrowing of a body cavity. In the case of the neck, it is referred to as cervical spinal stenosis. It is caused when degeneration has narrowed the canal that holds our nerves and our spinal cord. Each year up to 500,000 people in the United States will be diagnosed with spinal stenosis.

**Symptoms**

Spinal stenosis can have debilitating symptoms. Pain that radiates from the neck to the arms, legs, or shoulder is a huge indicator that something is pressing on the nerves of the spine. It can even affect the bladder by causing a more frequent need to urinate, and may even cause dizziness. The slow progression of spinal stenosis can often make treatment more difficult because symptoms often occur periodically and increase with time. It is important to seek medical attention for any severe symptoms.

**Treatment**

After conventional measures have been exhausted, the best options to conquer the pain of spinal stenosis, are spinal and facet joint injections. However, should the compression of the nerves lead to myelopathy, it may be necessary to for surgical intervention. During surgery, the cervical spinal canal is approached from the front or back of the neck, depending on the area of compression. In order to create space and to decompress the nerves, a laminectomy is performed. The same procedure is performed for spondylolysis.

**Nerve Pain**

Nerve pain is one of the most common types of neck pain. Fortunately for the majority of sufferers, nerve pain is rarely a permanent problem. The usual over-the-counters, heat/cold therapy, and gentle exercises can work miracles. In some cases, more aggressive treatment is necessary.
**Cervical Myelopathy**

There are two prominent names for neck nerve pain. The first is called myelopathy. Simply put, myelopathy is spinal cord damage. When myelopathy happens in our cervical region, it can cause chaos. Most often, cervical myelopathy is caused when the nerves near our disks or facet joints become compressed.

**Symptoms**

Symptoms of cervical myelopathy can be quite alarming. From instability and dizziness, to weakness and burning in the limbs, myelopathy is not to be ignored. Other unpleasant symptoms include the need to urinate more frequently and less bladder control. Because myelopathy is the result of a disruption in the spinal cord, nerve signals become interrupted. This interruption is like static on a radio dial, and the nerves begin to malfunction without clear communication channels.

**Treatment**

If you are experience symptoms of cervical myelopathy, an x-ray will not be able to show the place where the nerves are compressed. In order to get a better look, your doctor will likely order and MRI or a CT (Computed Tomography) Scan. Once your compressed nerve has been located, your doctor will again recommend either facet joint or spinal injections. If the injections fail, it is time for surgery. Using either fusion techniques or a disk replacement, more room will be made for your spinal canal.

**Cervical Radiculopathy**

Here we are another part of neck pain – cervical radiculopathy. The more popular, and easier to say, name for cervical radiculopathy is “pinched nerve.” For most people, a pinched nerve will go away with time, relaxation, and ibuprofen. For some of us, nothing short of medical intervention can help. Sometimes cervical radiculopathy can be caused by injury. It is more commonly caused by degeneration over a period of time.

**Symptoms**

Symptoms of cervical radiculopathy are not easy to ignore. Pain often radiates from the neck, into the shoulders, and down to the arm. Some people experience weakness and numbness, or even burning and radiating pain from the neck to the hand. It can appear gradually over time, or it can happen suddenly.
**Treatments**

**Pro Tip:** If you need immediate relief, put your hands up in the air. Putting your arms over your head sometimes provides temporary relief. It is thought that this simple gesture releases pressure on the offending nerve root. In most cases, the pinched nerve will respond well to physical therapy, neck collars, and over-the-counter medications. Cervical radiculopathy also responds well to corticosteroids used to decrease inflammation. The corticosteroids can be taken orally, or they can be injected with anesthetic into the area where the pinched nerve is occurring. Surgery is the very last option and can involve fusion, realignment, or a laminectomy.

**Whiplash**

We have all heard the term whiplash, but what does it mean? Whiplash most often happens when the head is jerked back and forth in a violent manner. Usually associated with car crashes, Whiplash can also occur during physical altercations. During this jerking, any given structure – bones, disks, nerves, ligaments – can be injured.

**Symptoms**

Symptoms of whiplash usually appear within 24 hours of the injury. You might notice a lessened ability to move, pain in your neck that radiates, and headache. Many symptoms of whiplash will lessen if given time.

**Treatment**

Other times, the injury is so severe physical therapy and medication may be prescribed. Your doctor may recommend the standard conservative treatment, or they may recommend pain management techniques, such as wearing a cervical collar and performing certain stretching exercises.
Neck Pain from General Pain Syndromes

Fibromyalgia

Neck pain can also be an indicator of other disorders and syndromes. Fibromyalgia causes general widespread pain, including neck pain. Thought to be the result of overactive nerves, it can also mimic conditions related to neck pain. A great majority of people who suffer from fibromyalgia are women.

Symptoms

Non-pain symptoms of fibromyalgia include fatigue, anxiety, and memory problems. When it comes to the pain aspect of fibromyalgia, pain can be felt in the entire body. Often times, the same trigger points associated with neck pain are bothersome in fibromyalgia patients, except that the radiating pain of fibromyalgia is usually spread throughout the body.

Treatment

Although there is no absolute cure for fibromyalgia, relief is available. In addition to physical therapy, doctors have found high success with a medication normally used to treat seizures. This medication, Lyrica (pregabalin), calms the nerves and tames the pain. Doctors may also prescribe over the counter medications, like ibuprofen or an anti-depressant.

Myofascial Pain Syndrome

Another problem that can cause neck pain is Myofascial Pain Syndrome. Myofascial pain is felt by most people at some point in their lives. For those that suffer chronic myofascial pain syndrome, trigger points cause referred pain and can be quite serious. Treatment includes pain medication, therapy, and trigger point injections.
CHAPTER 4: MANAGING YOUR NECK PAIN

Hopefully by now, you are on your way to a diagnosis, or you are coordinating with your doctor to make a plan that will provide you with some relief. While there is no magic bullet, and sometimes no absolute answer to neck pain, there are several ways to manage your neck pain so that you can live your life to its fullest.

It is likely to be a long road to learn what works best for you. Just remember one thing – when it comes to neck pain managing IS conquering. Whether the condition will be chronic or you have temporarily injured yourself, it’s important to learn the best ways to deal with your neck pain, so that it doesn’t interfere with your life.
**Recommend Relief Tactics**

There are four rather easy tactics to addressing your neck pain that you can do at home. The first two may sound silly, but they are very effective when it comes to alleviating neck pain.

One of them is to wear properly fitted bras. 50% of you do not have this issue, but for women, it’s extremely important. If we are wearing the wrong bra size, particularly larger sizes, it can cause pain to the upper back, shoulders, and neck. The straps can press into the shoulders sometimes causing deformity. The weight of the breasts causes the muscles to contract and spasm. Often, trigger point pain is present.

Also, pay attention to your posture. It’s not easy to remember to monitor your posture. Just remember to pull those shoulders back, stand up straight, and balance your head between your shoulders. It gets easier to remember with time, and but it’s a great way to ease tension anywhere in the spine.

Also easily accomplished at home, therapy using hot and cold treatments can be effective. Ice is really great for an injury that has just happened. It’s great for reducing swelling, too. Ice should be wrapped in a protective towel and placed on the painful muscles for up to 15 minutes every hour. After the first 48 hours, it is also okay to use heat. Heat is great for helping sore muscles relax. Make sure not to stay on the heating pad for more than 20 minutes at a time.

Rest. We have talked a lot about degeneration; on the flipside of that coin is regeneration. Our bodies need rest and sleep to regenerate. It is especially important to rest muscles that may be strained or sprained.

*A note about rest techniques --* Our muscles work really hard to make our bodies move. Sometimes, they need rest. In some instances, the use of a foam cervical collar can help. The collar immobilizes neck muscles allowing them to take a breather. Another great method of letting neck and back muscles rest is to lay flat on your back. Place a rolled up towel or a chiropractic foam roller to under your neck. Place a rolled up towel under your knees, and stare straight at the ceiling. After 25 minutes or so, you will feel a lot less tense.

**Physical Therapy – Active and Passive**

Physical therapy is hard work, but it is worth it. The overall purpose of physical therapy is to provide relief. Called active therapy, the exercises learned at physical therapy will help to stay on top of the pain. By strengthening weakened or related muscle groups, neck pain can be subdued to a reasonable level.
For instance, it might not seem smart for you to do leg lifts, but therapists will recommend them, as it strengthens the core. The core helps stabilize both the upper and lower portions of our bodies; thereby, providing relief.

The other type of physical therapy is called passive physical therapy. Passive therapy involves using medical devices to alleviate pain. There are three major passive treatments that are currently utilized or recommended by physicians: Ultrasound, TENS Units, and Traction.

- **Ultrasound** – Using similar technology that allows pregnant mothers to view their unborn babies, therapeutic ultrasound (ultrasound diathermy) is one of the latest treatments in pain medicine. Ultrasound converts sound waves into heat. This heat gets delivered deep into the body’s tissues and provides relief from tightness, stiffness, and nerve pain. Ultrasound therapy is usually administered for a few weeks in a row.

- **Transcutaneous electrical nerve stimulation (TENS) unit** – a TENS unit can be used by medical professionals, or it can be used at home. Though debate rages about the effectiveness, many people that use TENS units find relief. It is not dangerous, so there is no harm in trying. The unit has little electrodes that are placed as close to the painful site as possible. Low dosage electrical waves are use to stimulate the nerves. Instead of feeling pain, a sensation similar to goosebumps occurs. TENS units are most effective when applied for at least 20, but no more than 60, minutes.

- **Traction** – Though not in practice as much these days as it was in days gone by, traction therapy can reduce pain and muscle spasms. Each of the two versions can be used for 20 – 30 minutes a day. Version one involves the therapist conducting a prolonged stretching of the muscles using either weights or special medical machines. The other version (inversion therapy) involves being strapped to a device that flips you upside down. The theory is that it releases all the weight off of your spine. However, little research has been done about the effectiveness of traction, and it should only be practiced with the assistance of an experienced physician.
Choosing A Physical Therapist

When choosing a physical therapist for your neck pain, you should take a few things into consideration. Make sure that your insurance will provide coverage for your chosen therapist. It will save money to choose a therapist that is within your network. Next, consider if you would rather attend therapy at a private practice, hospital setting, or a group setting. Most importantly, always make sure your therapist is licensed by your state.

Exercise for Neck Pain

Perhaps your best ally in defeating neck pain is exercise. Strengthening and stretching your neck can provide great relief. Both movements help to lessen pain by loosening muscles. Studies have shown that employing exercise techniques can have a dramatic effect in shortening the length of time it takes to heal.

The other advantage to learn these “gentle exercises” is that they can be done at home. Though it is highly encouraged that you consult with your doctor before beginning any exercise regimen, it is a good DIY method of reducing your pain.

Gentle Exercises

It may feel counterintuitive to exercise an injured or aching part of the body, but practicing gentle exercise is an essential in Book of Know How for folks with neck pain. Gentle means just that – be gentle, take it easy, and don’t force it. Gentle exercises are easy and designed to perform the strengthening and stretching associated with neck pain relief. Stretching of the muscles can help to increase range of motion and improve posture. Strengthening exercises can alleviate strain my releasing pressure resting on the facet joints.

If you are feeling especially tight, spend a few moments on the heating pad before beginning. Make sure that you do not stretch beyond the point of comfort. As with any activity, if it makes pain worse—STOP IMMEDIATELY!

An exercise that you can do on your own to stretch your shoulders is called The Corner. Walk yourself over to a corner of the room, place one hand on the wall on each side of you, and aim your nose toward the corner, lean in like a pushup and hold for at least 30 seconds. Repeating this exercise 3 to 5 times a day can help to stretch and soothe muscles that become painful, such as after hours of writing eBooks on a laptop.
Another great exercise for strengthening is also very easy. Place your hand on the back of your head; now try to move your head back with your hand providing resistance. Can you feel that stretch in the back of your neck? Can you believe how simple that was? Hold for 10 seconds. Release and repeat 10 times.

Something that really works is a foam roller that you can purchase at any fitness store. First, lay on the foam roller so that your neck is cradled by the roller. Next, place your hands behind your head help your neck. Then, raise your hips to make your spine level and parallel with the floor. Slowly and gently roll your spine up and down the roller. Repeat about 20 times.

**Working The Shoulders**

While you are doing your neck exercises, don’t leave out your shoulders. Since so many problems of the neck manifest in the shoulders, and since our shoulders balance our heads, having strong shoulder muscles has many benefits. Plus, shoulder exercises are just as easy to do at the neck exercises.

One of the best is also the easiest to do. Simply squeeze your shoulder blades together for 10 seconds. Repeat at least 5 times and you should start to feel them loosen. Or, if they are not hurting – it will keep them from tensing up.

Another exercise requires the use of a resistance band. Also available at sporting goods stores, this long, flexible band is fun to use. A good exercise to do with the band is another one that you can do at home or at the office. Place the band around a waist high railing or other sturdy structure. Almost like picking up a hand weight, pull back on the band, while bending your elbow towards the ceiling. This exercise really helps to ease pain found in the neck, shoulders, and the upper body.

**Basic Guidelines For All Exercise**

As mentioned earlier, it is extremely important to discuss any exercise you are considering with your doctor or therapist. They are part of your neck pain conquering team. If your exercises are helpful, and they usually provide moderate relief, it can help your doctor to develop an overall treatment plan tailored to your specific needs.

When you do start exercising, never over do it. Please keep the following exercise tips in mind:
- Never lift more weight than is comfortable. Make sure to start small and then progress to heavier weights as you get stronger.

- If exercise is painful, stop. Apply ice to the affected area and be sure to call your doctor if it doesn’t go away within a couple of days, or if your pain is severe.

- Go slow. This is not a race. Racing through your exercises increases the chance of injury. It is important to take your time and to take slow, planned movements. Moving too suddenly could lead to more neck pain or reinjuring yourself.

- Getting the blood flowing with aerobic exercise before beginning your stretches is also advantageous. The warmer your muscles are before you start stretching, the easier they will be to stretch.

- If you are feeling pain after a workout, apply ice to the area. Ice will reduce swelling and it will aid in pain relief.
CHAPTER 5: PREVENTING FURTHER NECK PAIN

As you know, living with neck pain or managing temporary neck pain is a challenging road to walk. Now that you have become an old hat at ways to conquer your pain, it’s important to remember how to prevent further neck pain.

Neck pain is almost like a snowflake – we all experience it and feel relief in different ways. While the great majority of you are now pain free, it’s still good to know how to avoid your previous predicament. For the rest of us who have frequent or recurring neck pain, it’s good to know how to keep it at a level that lets us live our normal lives.

No matter what works best for you, it is important to listen to your own body. If something hurts, don’t do it. If something helps, use it. There is no one-size-fits-all solution to neck pain. But there are a few universal things we can try to find our individual relief.

As mentioned earlier, being aware of your posture is of the utmost importance. Posture has a huge role in neck pain prevention. In fact, posture is so important it stands as the top principal in the field of Ergonomics.
**Ergonomics**

Ergonomics is a scientific field that studies how to create harmony between the worker and the working environment. In other words, ergonomics looks for the best ways to limit workplace pain from work-related movement, while still allowing workers to be as efficient as possible.

Think about your posture throughout the day. How many times today have you found yourself slouching over the computer? How many times have you lifted with your back and not with your knees? These are the questions that ergonomics examines -- how to live a normal and productive life and not cause yourself pain.

**Using Ergonomics In Your Life**

Ergonomics takes a step-by-step look at the things we do throughout the day and examines how to do those things while using good posture. When we are uncomfortable, we are not performing at our best. Not only does the use of ergonomics help with preventing pain, but it also helps us to be our most industrious selves.

**Things You Can Try:**

**Watching TV:** As a society, we spend a lot of time watching television – nearly 1700 hours a year. To make sure you are not stressing your spine while watching TV, always make sure to sit directly in front of the TV, but a distance away enough that you don’t have to bend and hold your neck in one position for a long time.

**Carrying a Bag:** Carrying a heavy bag over on one shoulder is a sure fire way to make your neck and shoulders hurt. If you have a lot of stuff to carry, use a wheeled bag. Consider using a backpack, rather than a bag designed with one strap. The backpack evenly distributes the weight between both your shoulders. Other backpacks are made to allow your waist and hips to help support the weight.

**Using the Telephone:** With the invention of mobile technology, it is easier than ever to avoid straining our necks when using the telephone. With Bluetooth and speakerphone, text, and email, we do not use telephones the way we used to use them. Still, it’s important to know that if you find yourself cradling the phone between your ear and your neck, you might be causing yourself damage. Always try to use a headset or the speaker.

**Reading:** Whether you are reading at work or reading from the comfort of your bed, it’s good to think of your posture. We can get lost in a book or research and forget to move for long periods of time.
The use of slant boards or wedge pillows are is great for reading and practicing good form. They allow you to keep your neck in a steady midline position rather than looking down.

**Writing and Using the Computer:** It’s not often that we handwrite documents these days, but we do spend a lot of time composing masterpieces on our computers. When writing, make sure that your arms are level with your writing/typing surface. Stretching or aligning our bodies in unnatural positions can cause strain. When looking at the monitor, the monitor should be positioned at eye level. If the monitor is too high or too low, it can cause neck strain. A couple of old textbooks can make a great stand in a pinch.

**Driving:** If you frequently drive long distances, it is a good idea to take breaks and stretch. This will help you avoid getting a stiff neck. When sitting in the driver’s seat make sure that your buttocks is resting at the back of the seat. Another thing to keep in mind when driving is the positioning of the headrest. In a crash, the headrest is your best defense against whiplash. Make sure the back of your seat brings the headrest about 3 inches from your head. The headrest should be positioned so that it easily comes into contact with the place where your atlas (C1) meets your skull.

**Walking:** The way you walk can play a big part when it comes to neck pain. Though it feels like the most natural thing to do, take a moment to get into the correct position:

- Give your shoulders one good shrug and let them settle back into place. Make sure they are not hunching forward or too far backward.

- Lift up your chin. Your chin should be raised so that it is parallel with the floor. Look straight forward hold your head squarely between your shoulders.

- Tuck in your stomach. Your hips should be slightly tucked in so that your stomach is brought back to line up with your shoulders and hips. This will keep the larger back muscles aligned and it will help you avoid another neck injury.
• Stand up straight, it avoids a litany of back and neck problems. Doctors recommend imagining a straight rope that runs from your head to your feet. Imagine pulling the rope straight up from your head and allow your body to align with it.

• Another thing to be mindful of is your smart phone. In general, it’s not a good idea to stare at your phone while walking. You could stumble into traffic, miss a step, or bump into something fragile. When we’re talking posture, using the phone while walking forces you to look down. When you look down, everything you’ve just set up comes apart. Walk when walking. Phone with phoning.

**Sitting at a Desk:** When you hear the word ergonomics, you may automatically think of an ergonomic chair. There’s a good reason for that – ergonomics studies how we work. Unfortunately, having the right chair doesn’t mean anything if we are using it improperly. Follow these tips to have a more comfortable workday:

• Make sure to put those feet on the floor. Leg crossing is a horrible thing to do. It twists and pulls our spines to one side and it can cause the back muscles to rebel.

• Make sure you backside and lower back come in contact with the back of the chair.

• Your monitor should be at eye level.

• Armrests are meant to rest arms. Use them to support your forearms while you work.

• Keep your favorite office supplies and necessities close at hand. Forcing yourself to stretch to reach anything carries a risk of overextension.

• Your shoulders should not be tense. You should keep them relaxed. The shoulders should allow your arms to meet your armrest at a 90 degree angle. Anything more and you are stretching.
Wearing Bifocals or Trifocals: People that wear progressive lenses tend to look down a lot. The enhanced part of the glass is towards the bottom of the lens, so many look down to walk or to read. To correct the problem, special glasses for walking and for reading can be purchased. However, most people generally adjust over time.

Wearing the Right Shoes: If you’ve ever taken a long walk in flip-flops, you already know the importance of wearing the right shoes. Most physicians advise against high heels. Wearing heels can force your hips into a strange position. Through the chain reaction in the back, looking good can cause serious problems.

Working Overhead: You can cause serious damage or strain to your neck when working overhead. If you find yourself having to paint your ceiling, take a few precautions. Make sure to keep moving your ladder so that you do not have to strain to reach areas where you are working. Most importantly, make sure to stretch your neck as much as you can. Take at least 5 minutes every half an hour to switch your neck position and to stretch.

Lifting: Stop lifting with your back. You must always lift with your knees. Let them do the work. When we use our backs to lift, we are in danger of causing injury to both the muscles and the spine. Our back muscles are simply not meant to move that way. Always keep your spine lined up and your focus straight ahead when lifting.

Sports

There is no better medicine for neck pain than staying in shape. Activity is great for so many reasons, but having toned muscles means additional support for our necks. However, there are certain athletics that require a little attention by those of us that have neck pain.

Bicycling: Bicycling is a great way to get some low impact exercise. The problem is the way we sit on the seat. Racing bikes might go fast, but they can also cause neck strain. The way the body is leaned forward is not ideal for avoiding injury. If you love biking, consider an bike that has an upright steering column. These bikes allow you to sit up straight and look forward while maintaining good posture.

Running: Just like its counterpart, you should take time to make sure your body is properly lined up before going for a jog. Running causes more impact on the spine and forces our disks to absorb extra shock. Remember to use good form and remember to stop if it hurts.

Swimming: Water exercise is great for back pain. Water is soothing and provides great resistance for building strong muscles.
However, swimming relies upon the shoulders to do a lot of work. Take caution to make sure that you warm up before getting in the pool. When you are there, make sure to avoid overextending and overusing muscles.

**Golfing:** Golfing is also a great, low impact way to get fit. Even though there seems like little chance of injury playing golf, think about your swing. Are you whipping your head around when you swing, or is it in a relaxed and stationary position? Never strain your neck while swinging. Many amateurs have found this out the hard way.

**Sleep**

Sleep is the most underrated healer on the market. When we sleep our bodies rejuvenate and repair, ready us for the day ahead, and allow us to turn everything off and relax. Sleep is wonderful. Sleep can also, unfortunately, present opportunities for us to injure our necks. Sleeping in the wrong position can force us to wake up with stiff, painful muscles. Not getting enough sleep leads to more pain. So, what are we to do?

First, stop sleeping on your stomach, as it causes your neck to spend time in an unnatural position. Stomach sleepers have been found to complain of neck pain more often than back or side sleepers.

Back sleeping is the best position. Sleeping on the back allows the spine to relax and the neck to rest. It is important to use the right pillow for back sleeping. Use a pillow that provides more support to your neck than your head.

For all you side sleepers, it’s better than stomach sleeping. One thing to watch out for when sleeping on your side is to keep your arms down. Get yourself a pillow especially designed for side sleeping. They are a little firmer, but they conform to the curve of the neck nicely. Never use a pillow that doesn’t support your neck or a pillow that is too high.
CHAPTER 6: PAIN MEDICATIONS

At some point during your journey with neck pain, you will most likely need to enlist the assistance of medication. Whether it is prescribed for a small amount of time or on an as-needed basis, medications can be a helpful addition to your plan of action.

**Acetaminophen**

One of the most popular over the counter medications for pain, acetaminophen is known by the brand name Tylenol. Acetaminophen affects the way the brain perceives pain by raising the pain threshold. It is often the first medication that doctors recommend for neck pain.

Although acetaminophen does not have anti-inflammatory properties, it can be taken alongside an NSAID (non-steroidal anti-inflammatory drug). In fact, some doctors recommend alternating between acetaminophen and NSAIDs, stating the combination can be just as effective for pain relief as stronger, prescription medications.
Found on drug store shelves everywhere, acetaminophen is not without risks. Recent studies have indicated that the drug lowers the ability to feel empathy in long-term users. Another issue with acetaminophen is liver damage. When taken at high dosages or for long periods of time, acetaminophen can lower the functionality of the liver. As a result, dosage guidelines have been changed. It is now recommended that no more than 2,000 milligrams of acetaminophen be taken per day.

**Non-steroidal Anti-Inflammatory Drugs (NSAIDS)**

Medications that both reduce pain and decrease inflammation are called non-steroidal anti-inflammatory drugs (NSAIDS). Some of the NSAIDS you may have heard about are: Ibuprofen (Advil, Motrin), Naproxen Sodium (Aleve, Anaprox), Asprin and Inomethcin (Inodcin). All available without a prescription, NSAIDS can be extremely effective at alleviating neck pain when combined with one or many forms of physical therapy.

NSAIDS are fascinating. They work with the body’s chemistry by blocking two enzymes, Cox-1 and Cox-2. The reduction of these enzymes in the body means reduced pain and inflammation.

One of the stronger medications that is often prescribed for neck pain is Celecoxib (Celebrex). Celecoxib is a Cox-2 inhibitor that drastically lowers the presence of the enzyme. Though celecoxib is often used in the treatment of arthritis, it is important to note that it is not an option for everyone. It is not recommended for long-term use because of the cardiovascular side effects it may have. Patients who have experience cardiovascular events are cautioned against using the drug.

Like any medication, NSAIDS also have a few side effects to keep in mind. If you are taking an aspirin and ibuprofen combination, be sure to space out the time between the medications. Ibuprofen can slow the absorption rate of aspirin. Long-term use of NSAIDS may also lead to kidney damage. It is important to discuss any concerns you may have with your physician.

Studies have recently pointed to naproxen sodium as the safest of all the NSAIDS, but there’s an even safer option for those with increased sensitivities to medications. Topical creams such as Bengay and Icy Hot utilize the same ingredient found in aspirin, (salicylate). When applied to a painful area, the medication absorbs and directly minimizes pain.
**Muscle Relaxers**

Muscle relaxers make up another medication group often prescribed to neck pain sufferers. Unlike their name implies, muscle relaxers actually work on the brain by sending signals through the central nervous system. The central nervous system tells the muscles to relax.

**Cyclobenzaprine**

Flexeril (cyclobenzaprine) is one of the most commonly prescribed muscle relaxers. Often used to help reduce pain and to help with sleep, Flexeril can cause drowsiness. Flexeril should be avoided by those over the age of 65, or by men with enlarged prostates.

For those over the age of 65, a drug called Soma is often used in place of Flexeril. Soma is a very powerful medication that can be habit forming. It is usually only prescribed as a short-term solution and should not be mixed with other depressants such as alcohol or benzodiazepines.

**Valium**

Valium is a benzodiazepine often prescribed for anxiety. In addition to its anxiolytic properties, Valium can also provide relief for pain and muscle spasms. It is yet another medication that can create a dependence, and so should not be used for long-term relief.

**Baclofen And Tizanidine**

Also called Lioresal and Zanaflex, these muscle relaxants are a little like Flexeril. The biggest difference is that these medications can cause marked drowsiness and confusion. Both Lioresal and Zanaflex interact with blood pressure medications, medication for Parkinson’s disease, and medication used to treat bipolar disorder. Please discuss your current medications with your doctor before beginning either of these medications.

**Opioids**

Often prescribed as a last resort or when severe pain is present, opioids are the most powerful medications used to treat neck pain. The body naturally produces opioids (endogenous opioids). Opioid medications approach the opioid receptors, essentially flooding the brain, spinal cord, and nerves with pain relief.
Opioid medications include: Oxycodone, hydrocodone, codeine, and morphine. As you know, they are highly addictive and should be taken with caution. A non-opioid based medication, Ultram, is gaining popularity for its opioid like properties. Ultram carries a lower risk of addiction and is often given to the elderly that have difficulty tolerating opioids.

**Anti-depressants and Anti-convulsants**

There are certain anti-depressant and anti-convulsant medications that have been found effective for treating neck pain.

**Tricyclic Anti-Depressants**

Tricyclic anti-depressants like amitriptyline and nortriptyline are helpful for neck pain. They have properties that help to increase a patient’s pain tolerance. In fact, tricyclic anti-depressants have been shown to decrease pain before they begin to work on depression. However, the side effects can include drowsiness, weight gain, and dry mouth.

**SSRIs**

SSRIs, or selective serotonin reuptake inhibitors, like Prozac (fluoxetine) and Zoloft (sertraline) have also been shown effective for the treatment of neck pain. Though they carry less side effects than tricyclic antidepressants, they are not easily tolerated by some.

**SNRIs**

SNRIs, or Serotonin–norepinephrine reuptake inhibitors, like Cymbalta and Savella, are also commonly prescribed as part of a pain relief regimen. SNRIs work by blocking the reabsorption of serotonin and norepinephrine. Savella has also gained popularity for the treatment of fibromyalgia.

**Anti-Convulsants**

Another class of medication frequently prescribed for neck pain and the associated nerve pain is anti-convulsants. Gabapentin has shown great success in the relief of cervical radiculopathy. Although a fairly new medication, the FDA has approved another anti-convulsant, Lyrica, for the treatment of fibromyalgia.
**Corticosteroids**

Corticosteroids (prednisone) are prescribed for a number of conditions. From asthma to a bad poison ivy infection, they reduce inflammation in the body. Once widely prescribed for rheumatoid arthritis, it has since been discovered that long-term use of corticosteroids can have damaging side effects. Overuse can lead to weakened bone, compressional spinal fractures, diabetes, and high blood pressure. Currently, prednisone is reserved for selective use.

Corticosteroids can also be used in an injectable form. Often used in conjunction with an anesthetic, corticosteroid injections can be placed within the facet joint to provide relief. Long-term use has been shown to thin disk cartilage and to weaken neck ligaments. This type of therapy should be kept to a minimum.

**Injections**

Injections go directly to the source of pain. They can be placed in muscle tissue, in facet joints, or in the epidural portion of the spine.

**Facet Joint Injections**

Facet joint injections are usually performed with the patient under sedation. Using the assistance of a special x-ray machine called a fluoroscope, the doctor locates the offending facet joint. Sometimes, the physician will place dye into the neck before beginning the procedure. The dye allows for precision needle placement.

An injection containing pain-relieving anesthetic (usually lidocaine) and a corticosteroid is administered to facet joints. Though the procedure can cause some discomfort, the anesthetic provides some relief. Facet joint injections are sometimes used as a diagnostic tool. If pain relief is felt fairly immediately, it is an indication of which particular facet joint causes the underlying issue of neck pain.

**Trigger Point Injections**

Trigger points are painful, sensitive knot-like structures that can occur as a result of a neck pain issue. They pop up in the fascia of the musculoskeletal system and can cause a lot of discomfort. However, injections have been found to be a very effective means of treating this sort of pain.
Unlike facet point injections or epidural injections, trigger point injections do not always require the use of a fluoroscope. Often times, my doctor with manually feel for trigger points and determine where to place the injections. Injections can be performed in one of two ways. The first way is referred to as the dry needle technique. Using only saline, the trigger points are injected. The second method is carried out using an anesthetic and a corticosteroid. Often, when an injection is placed into an aggravated trigger point, the muscle with jump and twitch. After about 48 hours, real relief is felt as the trigger points loosen up and relax.

**Epidurals**

Much like facet point injections, epidural injections are performed in a specialist’s office under the use of a fluoroscopy machine. During an epidural injection, patients are sometimes sedated to prevent movement. Very carefully, the doctor places the needle in the epidural space between the disks and the vertebras.

Often used for temporary relief so that therapy can be practiced or performed, epidurals are designed to decrease pain levels. After the procedure, patients are monitored for a few minutes to make sure there are no ill side effects. Patients are not permitted to drive home after the procedure and should take caution to use ice and gentle stretches for the first 24-48 hours after the injection.

**Nerve Blocks**

From chapter one, the intervertebral foramen is the space between the disks and the vertebrae of the neck. From these points, those 8 pairs of nerve immerge. This is where a physical administers nerve blocks. Sometimes used as a surgical alternative, nerve blocks can significantly reduce neck pain and its related woes. Performed under a CT (Computed Tomography) machine or a fluoroscopy machine, the physician carefully finds the appropriate space to inject the intervertebral foramen.

Nerve blocks contain an anesthetic, usually lidocaine or a close relative, that provides almost immediate relief to the nerve root. Some patients experience soreness and tenderness at the injection site, but it usually goes away within two days time. Post-injection care should involve cold therapy and gentle stretching.

Recent studies have shown that nerve blocks are one of the most effective treatments for Whiplash. If all other methods have not provided relief and if the patient is presenting with arm pain, nerve blocks can be administered on an as-needed basis. Nerve blocks can help relieve the heads, stiffness, and pain related to a whiplash injury.
CHAPTER 7: COMPLEMENTARY AND ALTERNATIVE TREATMENTS

More and more, doctors are recommending and experimenting with alternative treatments. If you are one of those people who doesn’t respond well to medication, or if you are looking a more natural form of relief, there are a lot of effective alternatives that can be explored.

There are several different categories of alternative therapies. Though most do not carry any scientific validation, many people experience relief from them. One of the most popular versions of alternative therapies is called mind-body therapy.

Techniques include cognitive behavioral therapy (CBT), biofeedback, breathing exercises, and Qigong.
**Cognitive Behavioral Therapy (CBT)**

Often called talk therapy, cognitive behavioral therapy can have enormous benefits for those who suffer with chronic or recurring neck pain. CBT focuses on the thoughts and actions of the patient -- the way that they perceive their pain. It seeks to change the negative behaviors or thoughts often brought up by our own minds or by those close to us.

It can often be difficult for those who do not have pain issues to understand the support and encouragement that those with pain issues need to have. Though loved ones mean no harm and they just want us to be healthy, it can still affect our mindset. When our mind is affected, our body will follow.

No matter what environment surrounds the patient, it is up to them to find ways to rearrange their thoughts. This is the focus of cognitive behavioral therapy. CBT therapists work with patients not to change their pain, but to focus upon healthy thinking regarding managing it. Therapists may suggest journaling, reframing negativity, and they will often walk patients through finding another way to think. Studies have shown that neck pain sufferers who participate in CBT are less likely to need long-term medical leave.

**Biofeedback**

There is not enough scientific evidence to support or deny the effectiveness of biofeedback. Biofeedback is a practice that involves learning to control the body’s automatic functions through the use of electronic monitoring. During a session, a therapist will place small electrodes on problem areas, such as a muscle that frequently seizes.

The therapist will guide patients through a series of exercises designed to focus the mind upon releasing the muscles. The electrodes provide a visual or auditory reference (the feedback) by reading the electrical activity of the body. This feedback can help patients to learn valuable relaxation techniques. Through the electrodes, therapists and patients are able to immediately know whether an exercise is effective or ineffective. Many patients report relief from this practice.

**Breathing Exercises**

Many disciplines, including yoga, focus on breathing techniques to enhance the mind-body connection. Conditions such as anxiety cause us to breathe in a shallow manner. However, learning to breathe deeply from the diaphragm can trigger the central nervous system to release tense muscles and to calm the mind.

It’s very simple to learn and to try breathing exercises. Find a quiet spot and try this one on for size:
• First, lie flat on your back with your hands placed on your abdomen.

• Next, take three normal breaths through your nose. Inhale and exhale as you normally do.

• Then, take three deep breathes. Breathe in slowly and try to fill your lungs to the very bottom. Feel you abdomen expanding. Slowly exhale all the air out, and feel your abdomen returning to normal.

• Again, take three normal breaths.

• Repeat the entire process for up to 10 minutes.

**Qijong**

One of the better-known forms of Qijong is Tai Chi. An ancient Chinese practice that focuses upon slow breathing, meditation, and deliberate movements. Studies have found Qijong to be one of the most effective of the alternative therapies. Qijong pays a lot of attention to posture. It also requires practitioners to work toward progression. When practicing Qijong, pain is somewhat encouraged. Qijong advises us to stretch to the point of pain and hold it for a few seconds. Though pushing yourself past your pain threshold is discouraged, trying to go a little further the next time is the idea.

**Yoga**

Much like Qijong, Yoga is a practice that encourages breathing, meditation, and stretching. Yoga is a 4,000-year-old Indian methodology that uses the mind and the body together. One of the best benefits of yoga is that it, like so many of the other techniques, forces us to be aware of our body’s movements and our breathing.

Unlike Qijong, yoga does not focus upon fluid motion. Yoga focuses upon posture-based stances designed to stretch, relax, and strengthen muscles. Poses are designed to teach our bodies how to be flexible and to teach our minds to relax.

Please note – it is important to discuss any alternative treatments, including yoga, with your doctor. There were certain poses that you will simply not be permitted to try. Another thing you should remember with yoga is that it should not be painful at any point. Always be aware of overextending yourself.
Additional Treatments For Neck Pain

In addition to mind-body therapies, there are other treatments you may find effective. Every neck pain sufferer is different, but it is worth exploring what works for you. It is only through your own self-discovery that you will find relief.

Acupuncture

Often used for the treatment of anxiety, depression, and other types of pain, acupuncture is a 2,500-year-old method from China. The idea is to place needles in specified places throughout the body to control the flow of energy (chi). Though not as popular in the Western world, acupuncture can have wonderful benefits for neck pain sufferers.

For patients with a high medication tolerance, acupuncture can be beneficial as a stand-alone treatment, or as part of a combination of therapies. You should always look for a certified and experienced practitioner, but for the most part acupuncture is safe, with very few side effects. But, if you are taking blood thinners or have a bleeding disorder, it is best to avoid acupuncture.

Massage

For a lot of pain sufferers, massage therapy is a welcome and praised form of neck pain relief. Many doctors recommend massage therapy as part of an overall treatment plan. Tension and excess toxins can build up in our muscles. Not only does massage help to relax tense muscles, but it also releases the body’s natural endorphins. Endorphins, the feel good hormone, can relieve pain.

Some neck pain sufferers, particularly those with trigger point issues, should use massage as a preventative action. If massage is performed when the trigger points are swollen, it can cause more pain for the patient.
**Chiropractic Intervention**

Many studies have found that chiropractic intervention is not helpful for those with neck pain; however, nearly 20% of all neck pain sufferers will visit a chiropractor for care. Some folks do find relief from it.

Chiropractors practice the art of alignment. Using manipulation, either strong or subtle, a chiropractic doctor will attempt to realign the spine of sufferers. Often times, stiff muscles can pull a the back out of alignment. It is the aim of the chiropractor to restore the alignment; thereby providing relief.

*A note about chiropractic manipulation* – Chiropractic care is not for every patient that suffers from neck pain. Those who suffer from tingling, numbness, arthritis, or osteoporosis, should avoid seeing a chiropractor. The sometimes-intense movements performed by chiropractors can cause more harm than good for these sufferers.

**Dietary Supplements**

Although there are many dietary supplements on shelves claiming to provide pain relief, many are not FDA approved nor have they been properly studied. Two such supplements, glucosamine and chondroitin sulfate, are found to naturally occur in our cartilage. Users should discuss taking any supplements with their doctor. Some may carry risks of interactions with medications.

**Glucosamine And Chondroitin Sulfate**

Though both supplements occur naturally in our bodies, there are certain risks to take into consideration. Glucosamine can cause diabetics to have a reaction. It can elevate their blood glucose levels and cause a reaction that can be as serious as diabetic coma or shock. Chondroitin is created from shellfish. Those with shellfish allergies are advised against taking the supplement. Even though some users claim relief from these supplements, there is little scientific research to validate the claims produced by supplement makers. Some doctors believe that the placebo effect takes place with supplements.
CONCLUSION

Congratulations! You have graduated from the University of Conquering Neck Pain. Now that you are armed with new knowledge and techniques, you can find a plan of attack that offers you some relief. In case you are overwhelmed with information, here's a quick recap.

Your neck is a delicate system of vertebrae, facet joints, disks, muscles, tendons, ligaments and nerves. Damage, overuse, or irritation to any of these components can cause mild to severe neck pain.

Once you have discovered the root of your neck pain, it is important to find the right treatment. In order to find the most effective treatment for you, you must work with your doctor. Your doctor will assist you through imaging, medications, and possibly even a referral to a specialist depending upon your specific issue.
The most common of all neck injuries comes from strain and sprain, but neck pain can have several degenerative sources that should be examined. Conditions such as osteoarthritis, fibromyalgia, and myofascial pain syndrome can present as normal neck pain, but can have much more serious implications, such as pain disorders.

Arm yourself with the ability to manage your pain through several techniques. Ice and heat therapy, rest and over-the-counter medications can provide comprehensive relief. However, more serious cases may need the assistance of physical therapy and mind-body techniques.

It is also imperative to know how to prevent further neck pain from occurring. Make sure to monitor your posture and to use good ergonomics at all times. Give some thought to the way you sleep and use the proper pillow to support your neck.

If you cannot manage your pain on your own, your doctor may recommend medications. Opiate-based medications should be used for short periods of time and should be a last resort because of their habit-forming nature. Generally, the use of acetaminophen and a NSAID medication can alleviate a lot of pain. If absolutely necessary, injections of the facet joints, trigger points, epidurals, and nerve blocks can be quite effective for those suffering a chronic neck problem.

Remember that alternative therapies are great when used alone or when combined with other forms of treatment. CBT, breathing exercises and qijong have been shown to dramatically decrease pain levels. Other forms of alternative therapy, such as massage and acupuncture, can also provide relief. Dietary supplements should be discussed with a physician before beginning any sort of new regimen.

There you have it! Your comprehensive guide to conquering your neck pain. You now have the tools needed to find the right combination of treatments to lead a pain-free life. Good luck on your journey.
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