

Appendix 31 - Ten High-impact Chronic Pain Conditions

The term “high-impact” refers to persistent pain with substantial restriction of life activities lasting 6 months or more.² This classification of chronic pain significantly and negatively affects all biopsychosocial aspects of a person’s quality of life. High-impact chronic pain demands a team approach from talented practitioners specifically trained in pain management, anesthesiology, pharmacology, psychiatry, physical therapy and counseling/social work. The descriptions below are but brief overviews, each requiring thorough study and professional medical attention if you are affected by these. Diagnosing yourself is risky business at best. Seek professional help and expect, or demand, a multidisciplinary involvement addressing each biopsychosocial area of life.

Ten conditions presenting higher levels of pain and lowest degrees of function in life activities include:

1. Trigeminal Neuralgia
2. Complex Regional Pain Syndrome
3. Fibromyalgia
4. Migraine (hemiplegic, cluster, tension, etc.)
5. Arthritis
6. Back and neck pain
7. Post-Herpetic Neuralgia
8. Peripheral Neuropathy
9. Chronic Pelvic Pain/Interstitial Cystitis
10. Irritable Bowel Syndrome

High-impact pain is difficult to treat. The patient is not the only one to experience hardship. This class of pain touches those close to the patient, including spouses, children, caretakers and friends. It is not unusual for some outside the family to withdraw from the patient because it is hard to see someone close suffer. As such, it takes a very special person to care for and work in pain management, as the entire biopsychosocial aspects of the patient’s life suffers.

Trigeminal Neuralgia (or TN) —TN is one of the most painful conditions known. It is most common in people over 50, but can occur at any age. They estimate the incidence of TN at 4.3 individuals per 100,000. If people have TN for an average of 8 years, then a general approximation of occurrence in the United States is 108,000. The definition of a rare disease in the United States is one that affects fewer than 200,000 at any one time. Thus, we classify TN is a rare disease.

TN affects the fifth cranial (trigeminal) nerve. The two forms of the disease are TN1 and TN2. TN1 causes sudden intense burning or shocking sensations in areas of the face and neck where the branches of the nerves reach the lips, nose, eyes, forehead, scalp, and both lower and upper jaws. These attacks can last from a few seconds to a couple minutes. TN2, which is less frequent than TN1, is characterized by constant aching, burning, stabbing pain that is less intensive than TN1. Sadly, both conditions can occur in the same patient at the same time.

The trigeminal nerve is one of the 12 pairs of nerves attached to the brain. It has three branches that conduct signals from the mid, lower and upper regions of the face. Sometimes multiple branches can be affected. While it is rare, it can affect both sides of the face. One cause of TN is a blood vessel pressing on the trigeminal nerves as it exits the brainstem and wears away the myelin sheath (the protective coating around nerves). Pressure from cysts or tumors as well as injury to the nerve from head trauma, surgery or a stroke can cause TN.

Vibration and contact can trigger an attack. Common activities such as washing your face, applying makeup, shaving or brushing your teeth can trigger excruciating pain episodes. Wind across the face, talking and even eating or drinking can also case a flare. Life with TN could be comparable with CRPS, because TN is progressive, meaning the attacks typically intensify over time, with fewer and shorter pain-free periods before recurrence. Eventually, the pain-free intervals disappear and medication to control the pain becomes less effective.

Drug therapy options include anticonvulsant medications used to block nerve firing and tricyclic antidepressants used to treat pain. Common analgesics and opioids are not usually helpful in treating the pain.

² Von Korff M, Scher A, et al., *United States National Pain Strategy for Population Research: Concepts, Definitions, and Pilot Data*, The Journal of Pain, Vol 17, No 10 (October), 2016, pp 1068 – 1080.

Patients can opt to have surgery, but the surgery may or may not be effective. Pain-free periods after surgery vary. Sometimes surgery exacerbates the pain.

CRPS—Complex regional pain syndrome is a rare type of neuropathic pain. It is also known as reflex sympathetic dystrophy (RSD), causalgia, sympathetically maintained pain, and several other names. Type 1 and Type 2 are the classifications of CRPS. Type 1: An apparently trivial injury, such as a fractured or sprained ankle, has occurred, but with no confirmed nerve damage. This type was previously known as reflex sympathetic dystrophy. Type 2: This may emerge after breaking a bone, having surgery, or after a serious infection. This serious pain disorder may result from a major injury, but a relatively minor trauma can likewise induce it. Why CRPS occurs remains unknown. Regardless of what caused the sensitized area so much pain remains a mystery. We associate CRPS with severe, unceasing and debilitating pain. The sensitization can be so extreme that even lightest touch is excruciating. In addition, the affected limb can show symptoms of:

- Abnormal circulation
- Temperature change
- Sweating (all associated with abnormal function of the sympathetic nervous system, hence the name reflex sympathetic dystrophy)
- Loss of function
- Eventually atrophy of muscles
- Changes in the hair and skin

Diagnosing CRPS is difficult because a patient's symptoms and physical findings often mimic other disorders. Sadly, there is no specific test for CRPS. The diagnosis is possible if the patient meets particular criteria based on the pain they experience, and the symptoms accompanied with their pain. The use of a block of the sympathetic nerves using local anesthetic can help with the diagnosis, but CRPS can be present even if there is no pain relief after procedures such as sympathetic nerve blocks.

CRPS can sometimes be cured in the early stages with physical therapy, sympathetic nervous system blocks and medication. The longer it remains untreated, however, the less likely the chances of reversing the symptoms. Recognition and treatment should take place as early as possible in the syndrome's course. The most important treatment at any stage of CRPS is physical therapy to assist with pain control and to preserve function.

Fibromyalgia Pain—Fibromyalgia is one of the most common chronic pain conditions. Worldwide it affects different ethnic, monetary and medical communities in the same proportion. It is a disorder characterized by widespread musculoskeletal pain accompanied by fatigue, sleep, memory and mood challenges. Researchers believe that fibromyalgia amplifies painful sensations by affecting the way your brain processes pain signals. Symptoms sometimes begin after a physical trauma, surgery, infection or significant psychological stress. In other cases, symptoms gradually accumulate over time with no single triggering event. Women are more likely to develop fibromyalgia than are men. Many people who have fibromyalgia also have tension headaches, temporomandibular joint (TMJ) disorders, irritable bowel syndrome, anxiety and depression.

While there is no cure for fibromyalgia, a variety of medications can help control symptoms. Exercise, relaxation and stress-reduction measures also may help.

Migraine—Just about everyone has headaches. But contrary to popular belief, migraine is much more than just a bad headache. There are headaches, and then there are migraines. Actually, migraine is a neurological disease, not an event. It is not correct to say, “I’m having an arthritis today,” likewise, it is incorrect to say, “I have a migraine today.” If you experience migraine, your debilitation symptoms are referred to as a “migraine attack” or a migraine flare. The medical community thought episodic migraine events were a product of the dilation and constriction of blood vessels in the head. We now believe migraine is a neurological disorder involving nerve pathways and brain chemicals. We know that migraine often runs in families. But genes aren’t the only answer – studies show that environmental factors play an important role, too. It’s an extremely incapacitating collection of neurological symptoms that usually includes a severe throbbing recurring pain on one side of the head. However, one third of migraine attacks affect both sides of the head.

Arthritis — Arthritis is the swelling and tenderness of one or more of your joints. The major symptoms of arthritis are joint pain and stiffness and typically worsen with age. The two most common types of arthritis are osteoarthritis and rheumatoid arthritis.

Osteoarthritis causes cartilage (the hard, slippery tissue that covers the ends of bones where they form a joint) to break down. Rheumatoid arthritis is a disease in which the immune system attacks the joints, beginning with the lining of joints. There are several other types of arthritis, but the manifestations include pain, swelling, stiffness, redness resulting in a reduced range of motion.

Uric acid crystals, which form when there's too much uric acid in your blood, can cause gout. Infections or underlying disease, such as psoriasis or lupus, can cause other types of arthritis.

Treatments vary depending on the arthritis. These may include medications, physical therapy, weight loss, surgery and assistive devices. The primary goals of arthritis treatments are to reduce symptoms and improve quality of life.

Back and Neck Pain—There are many causes for neck and back pain, including poor posture, injury from a fall, contact sports or repetitive use. Most the time neck or back pain is not a serious medical condition and will resolve itself within a few days or a week. However, if you experience pain existing for more than a week accompanied by other symptoms, seek professional medical attention immediately. Treatment of neck pain depends on the diagnosis. Besides a thorough history and physical exam by your physician may require one or more of the following imaging studies and tests to determine the cause and cure of your neck pain: x-rays, MRI scan, CT scan or EMG (electromyogram) to assess your nerves controlling your muscles. Expect that physical therapy will be part of your treatment plan. Remember, movement is your best pain killer.

Post-herpetic Neuralgia (PHN)—Post-herpetic neuralgia is a painful complication arising from a shingles infection, cause by viral damage to nerve cells. An outbreak starts with lesions or blisters that crust over and heal but may still occur with no lesions. PHN may last for one or two months, but some experience pain for more than a year. Treatment often requires multiple pain-reducing medications. Older people and those with relatives who get shingles are at greater risk. Complications may include extreme pain, and in rare cases cause paralysis.

We think the damage or alteration of nerves that register pain, pressure, and other sensory nerves (for example, touch) that occur when the reactivated HZ viruses travel down nerves to the skin to cause postherpetic neuralgia. This process first begins when the virus causes chickenpox in an individual; the viruses can infect various dorsal root ganglia (nerve cells) as the chickenpox subsides. These viruses activate, usually decades later, and produce shingles lesions. We think the reactivation of HZ to be due to a stress on the body from either another infection or an immunocompromised state (for example, some patients undergoing treatments for leukemia) that allows the HZ to escape the dorsal root cells.

Peripheral Neuropathy—Weakness, numbness, and pain from nerve damage, usually in the hands and feet. A common cause of peripheral neuropathy is diabetes, but it can also result from injuries, infections, and exposure to toxins. Symptoms include pain, a pins-and-needles sensation, numbness, and weakness. Treatments include antidepressants like amitriptyline, pain medications like oxycodone, anti-seizure medications, and pain-relieving creams. The underlying condition must be identified and treated.

Chronic Pelvic Pain/Interstitial Cystitis—Interstitial cystitis is a chronic condition causing bladder pressure, bladder pain and sometimes pelvic pain. The pain ranges from mild discomfort to severe pain. The condition is a part of a spectrum of diseases known as painful bladder syndrome.

Your bladder is a hollow, muscular organ that stores urine. The bladder expands until it's full and then signals your brain that it's time to urinate, communicating through the pelvic nerves. This creates the urge to urinate for most people.

With interstitial cystitis, these signals get mixed up — you feel the need to urinate more often and with smaller volumes of urine than most people. Interstitial cystitis most often affects women and can have a long-lasting impact on quality of life. Although there's no cure, medications and other therapies may offer relief.

Cancer Pain—Cancer pain differs from other types of pain for several reasons. There are special considerations that pain management specialists need to be aware of with cancer patients. Pain associated with cancer can actually arise from many causes. A tumor can be painful and as it spreads, it can injure other tissues, causing increased pain. Bone pain in particular can be especially severe. Cancer can also affect nerves, resulting in the shooting, burning, or aching characteristics of neuropathic pain. Some cancer treatments such as chemotherapy, radiation, or surgery may cause pain. Complications from cancer such as infection, bone fractures or even bruises from multiple intravenous lines can cause additional pain. Weakness and fatigue (which may occur with chemotherapy) may make any pain worse. This can be especially true for cancer patients.

Unlike many chronic pain syndromes, cancer pain will often progress, sometimes rapidly. Therefore, treatment must be adjusted frequently, and opioids (like morphine) are prescribed at higher and higher doses. Unfortunately, patients may develop tolerance to these pain medications, making them less effective at the same time that their pain is increasing. When this happens, interventional techniques such as spinal pain pumps or destroying pain nerves may offer significant relief for some cancer patients while allowing lower dosages of pain medicines. This can help avoid side effects of opioid medicines, such as nausea, sedation or confusion.

Ultimately, the pain specialist and primary care physician should work as a team. They should not limit their focus to pain control. Helping patients maintain dignity, quality of life and the ability to be with family and friends contributes to a person's wellbeing.

FBSS (failed back surgery syndrome) is a misnomer, as it is not actually a syndrome – it is a very generalized term that is often used to describe the condition of patients who have not had a successful result with back surgery or spine surgery. There is no equivalent term for this in any other type of surgery (e.g., there is no failed cardiac surgery syndrome, failed knee surgery syndrome, etc.).