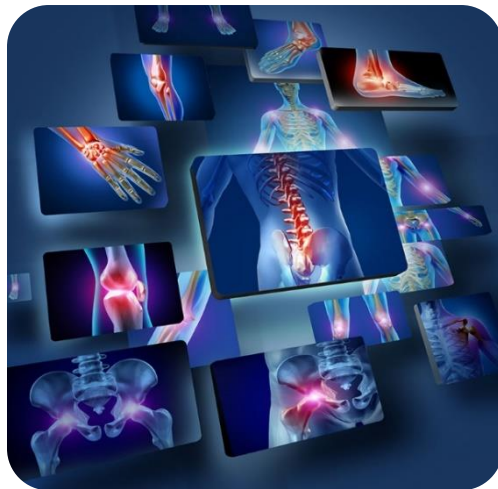




HOMEOPATHY BENEFITS IN TREATMENTS WITH MUSCULOSKELETAL DISORDERS

Via Holistic & Conventional Methods



(www.msfp.com.au)

**Canadian College of Homeopathic Medicine
Independent Research Paper**

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HOMEOPATHY

What is Homeopathy?

Homeopathy is a natural medicine science that has been used worldwide and continues to increase in popularity. It is a safe and effective treatment for acute and chronic illnesses and can improve your immune system to help balance and restore health. It provides effective treatment for mental, emotional and physical ailments. In addition, it is beneficial for all ages ranging from pre-natal to post-natal, children, adults and seniors.

The natural law of homeopathy dates back to ancient Ayurveda (founded 5000 years ago), Paracelsus (1493-1541) and Hippocrates (5th century B.C.), the father of western medicine. Homeopathy was founded by a German physician Dr. Samuel Hahnemann (1755-1843) over 200 years ago. The word Homeopathy is derived from the Greek origin Homöopathie where '*homoios*' means 'like' and '*pathos*' means 'suffering'. During Hahnemann's discovery, he based his principles on the Law of Similars, "*like cures like*" or '*Similia Similibus Curentur*'. It was Samuel Hahnemann that reestablished and shaped this philosophy into a science of healing and made him father of Homeopathy. The Law of Similars implies that a remedy can cause certain symptoms in a healthy person and if the same substance is administered to an unhealthy person with similar symptoms, it will cure the ailment. For example, a homeopath often prescribes *Allium cepa* as a remedy for a cold. This remedy is comprised of the cold virus. It is derived from red onions, which mimics cold-like symptoms (watery, itchy eyes, sneezing, profuse nasal discharge and/or congestion).

Another principle of Hahnemann is to give the least amount of medicine to initiate a healing response. This process is called the "*Minimum Dose*". Hahnemann began to success dilutions of the medicine where by it became therapeutic and non-toxic. Today, individuals appear to be concerned with the safety of prescription drugs. In other words, prescription medications can create internal and external problems within the body creating side effects that are overlooked and may cause serious issues.

INTRODUCTION

Definition of Musculoskeletal Disorders

Musculoskeletal disorders (MSDs) “are injuries or pain in the body's joints, ligaments, muscles, nerves, tendons, and structures that support limbs, neck and back. MSDs are degenerative diseases and inflammatory conditions that cause pain and impair normal activities (Wikipedia, 2016)”. It typically affects areas of the neck, shoulders, upper and lower extremities and back.

The following paper will examine musculoskeletal disorders, the cause and effects and signs and symptoms associated with this condition. In addition, this report will outline the benefits of homeopathic treatment and its gentle approach to stimulate healing as well as explore other alternative and conventional treatments available.

Disorders of MSDs can result from repetitive strain, postural strain, sudden exertion of the body such as lifting a heavy object, car accidents, falls, fractures, sprains or direct impact to the muscle. These may cause pain and discomfort that may eventually lead to interference with daily activities. Moreover, the signs and symptoms can vary from mild to severe debilitating pain. In time, MSDs may develop into other diseases like osteoarthritis, rheumatoid arthritis, back pain, fibromyalgia, tendonitis etc...

MSDs are a major concern in our society as it can progress from minor incidents to severe disability. It has many causes like age, occupation, activity level and lifestyle. Some questions we can ask include:

1. Could this be from genetic predispositions?
2. Does stress play a role in our everyday lives and contribute to musculoskeletal problems?
3. Is it our daily routines whether its work or home related?
4. Are we really eating a healthy and nutritious diet?
5. How often do we engage in exercise?
6. How long has our body been communicating to us but only to ignore the symptoms until it sends a direct message?

Unfortunately, there will never be a convenient time for us to take appropriate action for pain. We place a lot of pressure on ourselves to do more and keep busy. Our jobs are demanding, we have family responsibilities to attend to and society places a lot of emphasis on money. Sometimes our body will force us to take appropriate measures to obtain the help that we so desperately require. Regrettably, most people wait until it's the last resort before seeking attention for their problem. It would be easier to obtain the assistance one needs before circumstances worsen. Life is not perfect nor should we expect people to be. Hence, each individual experiences pain differently. What works best for one person will not necessarily work for another. According to Hahnemann the founder of Homeopathy, he believes that each individual's symptoms should be tailored to their own unique specifications. In other words, every person should be treated according to their condition as we are all different and should not be grouped under only one similar umbrella.

UNDERSTANDING MSDs

In order to understand MSDs and how it impacts an individual, we need to comprehend the basic fundamentals of the human body. The human body contains tissues made up of a group of cells. There are four types that include epithelial, connective, muscle and nervous tissues. Epithelial tissue covers the body, lines the cavity, organs and forms certain glands. The function of the tissue is to protect the structures from dehydration, both chemical and mechanical damage, and assist in secretion and absorption. The next tissue is called connective tissue and is spread farther apart as compared to the epithelial tissue that is grouped closely together. It consists of bone, cartilage and adipose tissue, loose and dense connective tissues. The function of connective tissue consists of binding and structural support, protection, transport and insulation of the body. The third tissue includes muscle tissue that contracts and relaxes and allows for movement within the body. Muscle contraction requires blood supply to deliver oxygen, calcium and nutrients to the body. Lastly, are nervous tissues, which receive, conduct, communicate information as well as support neurons.

It is also important to understand other parts of the body as they play a vital role. The body consists of an axial and appendicular skeleton. The axial skeleton contains the skull, vertebral columns, sternum and ribs. The vertebral column is made up of the cervical, thoracic, lumbar, sacrum and coccyx. Next is the appendicular skeleton this includes the upper and lower extremities.

Upper Extremities is comprised of:

- a. Humerus
- b. Radius
- c. Ulna
- d. Carpals bones
- e. Metacarpal bones
- f. Phalanges

Lower Extremities is comprised of:

- a. Femur
- b. Tibia
- c. Fibula
- d. Patella
- e. Tarsal bones
- f. Metatarsal bones
- g. Phalanges

MSDs SYSTEM

The musculoskeletal system is made up of muscles, tendons, ligaments, bones, cartilage, joints and bursae. These structures make up the body giving shape and ability for movement. The skeletal muscles provide support and movement of the body. They are controlled by voluntary movements of the nervous system. Tendons are fibrous tissues that connect muscle to bone. When the muscle contracts it pulls on the tendon, thus causing bone movement. Ligaments are bands of fibrous connective tissues, which bind two or more bones, cartilage, protects the coverings of some organs or supports muscles. There are 206 bones of the human body, 80 are from the axial skeleton and 126 are from the appendicular skeleton. Functions of bones include support of the skeletal structure, and attachment to muscles and bones. In addition, it forms boundaries for the protective organs, moves the entire body and individual parts through joint formation moved by muscles, produces red blood cells in the bone marrow and stores minerals especially calcium phosphate. Cartilage is a dense connective tissue that consists of fibers. It is found in the auditory canal, larynx and in the intervertebral discs. A joint is two or more bones that articulates it allowing for flexibility and movement of the skeleton.

TYPES OF MSDs

According to Statistics Canada (2006), these descriptions are the first step in measuring how living with a disease and its treatment impact health-related quality of life in terms of physical, mental, and social well-being (p. iv).

In order to be able to understand musculoskeletal disease and how it impacts a person's physical, mental and social life, a system was developed to measure functional health. Eleven classifications were implemented to determine the "years of life lost to premature mortality and year-equivalents of reducing function due to the disease" (Murphy, 2006, p. iv).

(Refer to Appendix A for the Eleven Classifications).

A. Back Pain

There are two main issues that arise from back pain. Biomechanics is the first referring to “the study of the action of external and internal forces on the living body, especially on the skeletal system” (“Biomechanics,” 2002). An incident would be lifting a heavy object improperly and sustaining an injury due to this movement. The second, back problem that can arise is from inflammation in the spine, due to trauma and/or other conditions such as degenerative disc disease. One common area where people experience back pain is in the lumbar region, which can occur anywhere along the vertebral area, also known as the spine.

As outlined by Statistics Canada (2006), it reports that back pain is a chronic epidemic in our society. Four out of five individuals will experience back pain at some point throughout their lives. The age ranges between 30 to 50 years of age and can occur in both females and males (p. 7).

Lumbar Pain

The term lumbar comes from the Latin word “lumbus” meaning lion. The lumbar region consists of five vertebrae, L1 to L5. It’s designed for flexibility, function, lifting, twisting and bending. L1 to L5 are the largest unfused vertebrae in the spinal column allowing it to support the weight of the entire body. The L4-L5 to L5-S1 includes the vertebrae and discs. The main purpose of the spine is to withstand the body’s weight leaving it prone to weakness and injury. As we go further down the spine, the lumbar region meets the sacrum at the lumbosacral

junction L5 to S1. It permits the hips and pelvic movement when walking and running. (*Refer to Appendix B for diagram*).

Many individuals who experience back pain cannot be given a specific diagnosis. Back pain in general can occur from muscle, ligament or other soft tissues. However, there are critical stipulations to consider with lumbar pain. These are:

- 1. *Cauda equina syndrome.*** This occurs when there is a large herniation or blockage in the lumbar spinal canal and occurs in about 2 % of patients with disk herniation's [3]. This is a true surgical emergency, since unless the obstruction is removed quickly (in less than 24–48 h), permanent fecal or urinary incontinence or saddle numbness may occur. It is imperative to inquire about saddle area numbness and incontinence when evaluating a patient with low back pain. When this condition is suspected, CT or MRI and immediate consultation with a spine surgeon are indicated.
- 2. *History of malignancy or systemic symptoms*** (weight loss, fever, multiple joint, or multisystem involvement). These patients may have recurrent malignancy or systemic conditions that warrant more aggressive investigation than the average patient with back complaints [4].
- 3. *Age greater than 50.*** Patients who present with the low back pain at advanced age warrant also aggressive investigation to rule out nonmechanical causes including cancer [5].

4. **Progressive neurologic deficit.** These patients need more detailed evaluation for their complaints, often involving urgent imaging and/or referral [6]. (Daniel, 2015, p. 68)

Three Typical Complicates of Lumbar Pain

1. Mechanical Low Back Pain

This is the most common complicate of back pain. If the exam proves to be negative, usually the physician concludes that it is not serious. Clearly though, the pain may come about from a muscle strain, joint irritation, joint pathology or core muscle weakness. If symptoms do not improve within a few months than additional tests should be performed.

(Refer to Appendix C for a list of Allopathic Medications).

Medications & Treatments for Back Pain

MEDICATIONS & TREATMENTS FOR BACK PAIN	
MEDICATIONS	
•	NSAIDs
•	Analgesic

MEDICATIONS & TREATMENTS FOR BACK PAIN	
MEDICATIONS	
•	Muscle relaxants
TREATMENTS	
•	Exercises:
○	Strengthening core muscles
•	Techniques for:
○	Proper lifting correctly, postural improvements
•	Physical Therapy Program

2. Disc Herniation (DH)

DH occurs in the L5 and S1 levels of the spine. Posterolateral is a common DH that can happen. An individual will experience pain in the lumbar region or buttocks area, sensations of tingling, prickling known as paresthesias is felt. If this radiates below the knee than it's a cause of concern for neurological matters. Hence, symptoms that prove positive in basic testing or no improvements after one month will modify the way the physician is handling the situation and investigate further to conduct sensory and motor examinations of those specific nerves, and other testing such as an x-ray followed by an MRI.

Medications & Treatments with No Neurological Findings

MEDICATION & TREATMENTS WITH NO NEUROLOGICAL FINDINGS	
MEDICATIONS	
•	NSAIDs
•	Analgesic
•	Muscle relaxants
TREATMENTS	
•	Exercise Program
•	Physical Therapy Program

3. Spinal Stenosis

Spinal stenosis is caused by narrowing of the spinal canal. The complaints are pain and/or numbness in the legs, which is relieved by rest and flexion and worsen by back extension. Some other aggravations (agg) are; bilateral buttock or leg pain, priapism a condition related with men whereby they experience painful erections, this can occur intermittently during walking or urination. Normally, spinal stenosis is not associated with neurological disorders, but in severe incidences this is present.

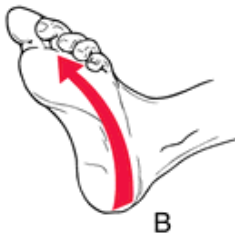
Individuals who have weakness, acute bowel or bladder complaints are immediately referred to a neurologist/surgical specialist. In chronic situations, it may be necessary to undergo surgery although not always a successful option.

Tests completed are Babinski reflex. In a normal examination, the toes extend inward in adults as *shown in diagram B* and an abnormal test is the opposite as *shown in diagram C*.

Babinski Reflex Exam



Line of stimulation:
Outer sole, heel to little toe.



Plantar (normal) reflex.



Positive Babinski reflex
(always abnormal). Great
toe bends upward;
smaller toes fan outward.

(Babinski reflex, 2003).

Medication & Treatments for Lumbar Pain

MEDICATIONS & TREATMENTS FOR LUMBAR PAIN	
MEDICATIONS	
•	NSAIDs
•	Analgesic
•	Muscle relaxants
•	Injections:
○	Epidural steroid injections
RECOMMENDED TREATMENTS	
•	Educational Programs
•	Physical Therapy Programs

Symptoms of Back Pain

Generally, symptoms of back pain develop as muscle tension and stiffness, but can progress into sensations of tingling, burning and/or numbness. The muscles and ligaments of the spine become stressed due to the physical force and pressure sustained. Mild symptoms of back pain eventually develop into muscle tension and stiffness. Thus, ultimately progressing to more chronic discomfort such, as sensations of tingling, burning and/or numbness.

Symptoms of Acute Lumbar Pain

SYMPTOMS OF ACUTE LUMBAR PAIN
<ul style="list-style-type: none">• Sharp, dull pain
<ul style="list-style-type: none">• Severe more in one area than in another
<ul style="list-style-type: none">• Limited range of motion, flexibility & standing straight

Factors that Arise from Acute Muscle Spasm & Pain

FACTORS OF ACUTE MUSCLE SPASM & PAIN
<ul style="list-style-type: none">• Activities reduced or avoided because it may increase pain
<ul style="list-style-type: none">• Daily tasks are difficult to perform due to decrease range of motion
<ul style="list-style-type: none">• May be unable to work or less productive as a result of pain
<ul style="list-style-type: none">• Pain may interfere with sleep resulting in fatigue

Symptoms of Chronic Lumbar Pain

SYMPTOMS OF CHRONIC LUMBAR PAIN
<ul style="list-style-type: none">• Deep, aching, dull &/or burning pain in the low back
<ul style="list-style-type: none">• Pain possibly travelling down the legs
<ul style="list-style-type: none">• Pain is agg by:<ul style="list-style-type: none">○ Sitting long in one position○ Driving○ Staying in a stooped position for a period of time○ Lifting○ Doing demanding physical work○ Not exercising

The Goal towards Treatment of Chronic Lumbar Pain

GOALS FOR TREATMENT OF CHRONIC LUMBAR PAIN
<ul style="list-style-type: none">• Alleviate pain
<ul style="list-style-type: none">• Strengthen muscles
<ul style="list-style-type: none">• Prevent any sort of agg

Factors of Chronic Lumbar Pain

FACTORS OF CHRONIC LUMBAR PAIN
<ul style="list-style-type: none"> • Moderate to severe decreases in function such as; <ul style="list-style-type: none"> ○ Walking ○ Dressing ○ Lifting & moving objects
<ul style="list-style-type: none"> • Discomfort
<ul style="list-style-type: none"> • Fatigue
<ul style="list-style-type: none"> • Frustration
<ul style="list-style-type: none"> • Depression
<ul style="list-style-type: none"> • Avoidance of social relationships may be exhibited from constant pain

Causes of Back Pain

The cause of back pain may be from stress on muscles and ligaments that support the spine. Back conditions involve the entire spine including the cervical and lumbar region.

However, pain can vary in intensity and frequency with every individual. According to Statistics Canada (2006), 85% to 90% of people experience back pain with no specific cause that can be identified (p. 7).

CAUSES OF CHRONIC LUMBAR PAIN
<ul style="list-style-type: none">• Poor posture
<ul style="list-style-type: none">• Obesity
<ul style="list-style-type: none">• Heavy or improper lifting
<ul style="list-style-type: none">• Physiological factors such as stress or depression
<ul style="list-style-type: none">• Sedentary life style
<ul style="list-style-type: none">• Weak muscle tone especially in the back & abdomen
<ul style="list-style-type: none">• Biomechanical, ankylosing spondylitis, degenerative disc disease, herniated disc etc.

Medications & Treatments for Back Pain

MEDICATION & TREATMENTS FOR BACK PAIN
MEDICATIONS
<ul style="list-style-type: none">• NSAIDs & muscle relaxant medications
<ul style="list-style-type: none">• Analgesic medications for pain may be taken in combination with NSAIDs drugs

TREATMENTS FOR BACK PAIN	
•	Bed rest for a couple of days
•	Apply <ul style="list-style-type: none">○ Ice &/or heat to alleviate inflammation
•	Exercise

Diagnosis of Back Problems

As stated by Daniel (2015), he suggests that when assessing a patient for back pain there are three questions a physician should ask:

1. Any evidence of a systemic disease?
2. Any evidence of neurological compromise?
3. Are there any psychological factors that may contribute to disabling the pain?

In addition, a thorough history should be taken, including asking about medical conditions, medications, any traumas, infections, previous injuries, surgeries. As well as, a thorough back examination must be performed and noted for any deformities. These include:

- Palpitation of the spine
- A straight leg rise (SRL) is completed in a supine position
- A neurological exam, which occurs in the L5 and S1 nerve root levels

Other Types of Examination include:

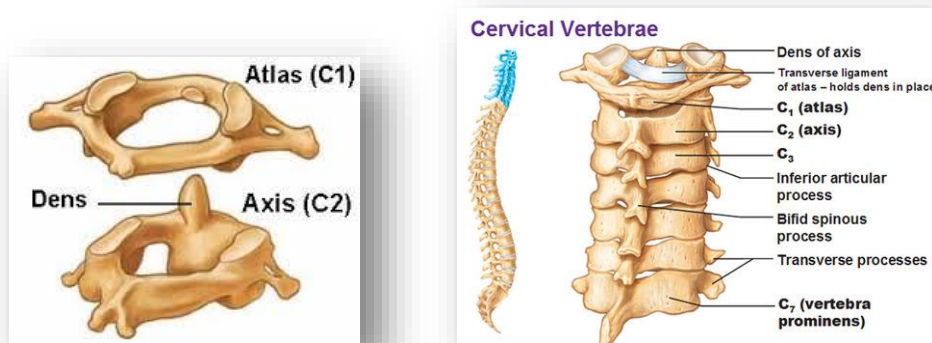
1. Motor L5: Have the patient raise (dorsiflex) the great toe
2. Sensory L5: Medial foot and webspace between first and second toes
3. Motor S1: Ankle jerk reflex (may be absent in the elderly even without pathology)
4. Sensory S1: Posterior calf and lateral foot (Daniel, 2015, p. 69).

B. Neck Pain

The cervical spine or C-spine consists of 7 vertebrae, C1 to C7. The first two vertebrae are called axis and atlas. They do not have a disc between them and are bound by ligaments. The atlas supports and balances the head and the axis allows shaking of the head.

C1 atlas rotates around the odontoid. “The **dens**, also odontoid process or peg, is the most pronounced feature, and exhibits a slight constriction or neck where it joins the main body of the vertebra. The dens is a protuberance (process or projection) of the **axis** (second cervical vertebra)” (Wikipedia, 2015).

Diagrams of the Odontoid Process



(spineuniverse.com)

The cervical spine consists of two structures, a foramina and nonsynovial joint. The foramina is located bilaterally and allows passage of the vertebrae arteries. Whereas, the nonsynovial joint or the uncovertebral joint is primarily to prevent disc ruptures from pressing

onto the nerve root in the cervical spine. A DH typically happens posteriorly in the neck. (*Refer to Appendix D for diagram of the Cervical Spine*).

Daniel (2015), states that neck pain is common and nearly 70% of people will experience it. Neck pain occurs half as often as low back pain and women are more affected than men (p. 7).

Causes of Neck Pain

Neck pain disorders can involve tissue damage in the neck. These consist of:

NECK PAIN DISORDERS CONSIST OF
• Degenerative disc disease (DJD)
• Neck strains
• Injuries such as whiplash
• Herniated disc
• Pinched nerve
• Occupational injuries

In addition, cervical pain can arise from viral infections of the throat, rare infections like tuberculosis, infections of the spine bone osteomyelitis or septic discitis and meningitis.

Degenerative disc disease (DJD) is a deterioration of the disc and it is a chronic condition that can happen in either the low back or neck area. In between the vertebrae you have intervertebral discs that act like pads or a cushion between the vertebrae as the spine moves.

A diagram of the Vertebrae



(www.spineuniverse.com)

Whiplash and Occupational Injuries:

Whiplash injuries are usually from automobile accidents. During a collision the neck will automatically hyperextend moving backwards and forwards followed by a sudden halt. This damages the anterior muscles, ligaments and discs in the cervical spine. In occupational injuries it arises from repetitive uses of the upper extremities. This includes individuals whose occupations are office workers, machine operators, hair dressers, carpenters etc. It involves pain associated with nerve impingement.

Symptoms Associated with Nerve Impingement

SYMPTOMS ASSOCIATED WITH NERVE IMPINGEMENT
<ul style="list-style-type: none">• Numbness
<ul style="list-style-type: none">• Tingling
<ul style="list-style-type: none">• Tenderness
<ul style="list-style-type: none">• Sharp shooting pain
<ul style="list-style-type: none">• Fullness
<ul style="list-style-type: none">• Difficulty swallowing
<ul style="list-style-type: none">• Pulsation
<ul style="list-style-type: none">• Swishing sounds in the head
<ul style="list-style-type: none">• Dizziness or lightheadedness
<ul style="list-style-type: none">• Lymph node (gland) swelling

Diagnosis of the Cervical Region

DIAGNOSIS OF THE CERVICAL REGION
1. A complete history of the patient
2. Asking questions as to the nature, duration & location of pain
3. If any numbness or tingling exists in any particular side or bilaterally
4. A neurological evaluation

Four Types of Cervical Disorders

1. Myofascial (Mechanical) Neck Pain

The most common type of neck pain is myofascial Pain. This type of pain is described as not localized, its nonspecific and worsens with any neck movements. Areas that are primarily affected are shoulders and upper extremities. Other individuals may encounter headaches radiating to the frontal area of the head.

Medications & Treatments for Myofascial Pain

MEDICATIONS & TREATMENTS FOR MYOFASCIAL PAIN	
MEDICATIONS	
<ul style="list-style-type: none"> • Injections for trigger points in the cervical and peri-scapular musculature <ul style="list-style-type: none"> ○ “2 cc 0.5 % bupivacaine or 1 % lidocaine into the trigger point can be both diagnostic and therapeutic” (Daniel, 2015, p. 9). 	
<ul style="list-style-type: none"> • NSAIDs 	
<ul style="list-style-type: none"> • Muscle relaxants 	
<ul style="list-style-type: none"> • Opioids 	
RECOMMENDED TREATMENTS	
<ul style="list-style-type: none"> • Physical therapy 	
<ul style="list-style-type: none"> • Activity & posture modification 	

2. Cervical Spondylosis

Is degenerative spinal changes, a term used to describe neck pain of spondylosis with joint cervical radiculopathy and cervical myelopathy.

3. Spondylosis with Joint Pains

Are degeneration changes in the foraminal narrowing or spurring and is a chronic condition.

Medications & Treatments for Spondylosis with Joint Pains

MEDICATIONS & TREATMENTS FOR SPONDYLOSIS WITH JOINT PAINS	
MEDICATIONS	
•	NSAIDs
TREATMENTS	
•	Gentle exercises
•	Physical therapy

4. Cervical Spondylosis with Radiculopathy

Is nerve root irritation also called ischemia, it occurs at the interval foramina and many other levels. In this situation pain tends to be nonspecific, but with symptoms of weakness, numbness, tingling in at least one of the upper extremities.

A clinical method developed to diagnosis nerve root impingement has been described by Dr. Weiner et al. he “identified a test item cluster. In this study, the authors found that there were four predictable variables that most likely identified

patients with cervical radiculopathy” (Daniel, 2015, p. 10).

(Refer to Appendix D for Description of Cervical Radiculopathy).

Acute Neck Pain

Both acute and chronic neck pain are similar to low back pain.

ACUTE & CHRONIC CERVICAL PAIN
<ul style="list-style-type: none"> • Moderate to severe pain
<ul style="list-style-type: none"> • Moderate to severe limitation in physical function
<ul style="list-style-type: none"> • Moderate to severe limitation in range of motion in neck. Difficulties are; <ul style="list-style-type: none"> ○ Driving ○ Working ○ Sleeping ○ Social relationships
<ul style="list-style-type: none"> • Discomfort
<ul style="list-style-type: none"> • Fatigue

Causes of Neck Pain

CAUSES OF CERVICAL PAIN
<ul style="list-style-type: none"> • Smoking
<ul style="list-style-type: none"> • Aging
<ul style="list-style-type: none"> • Occupational risks

C. Repetitive Strain Injuries (RSI)

Repetitive Strain Injury (RSI) is a constant repetitive movement or an awkward posture position, which may lead to pain and limited function. According to Statistics Canada (2006), over two million people experience RSI, which causes serious limitations to their daily functions (p. 10).

Causes of RSI

CAUSES OF RSI
• Repetitive
• Agg motion
• Forceful movements
• Awkward positions
• Ergonomic hazards from work related incidents

Symptoms of RSI

There is persistent pain in the muscle, tendon, joints and soft tissues. It effects the; hands, elbows, shoulders, back, legs. Unfortunately, there are no standard guidelines to test for RSI.

SYMPTOMS OF RSI
<ul style="list-style-type: none">• Pain
<ul style="list-style-type: none">• Numbness
<ul style="list-style-type: none">• Tingling
<ul style="list-style-type: none">• Heaviness
<ul style="list-style-type: none">• Restriction in movement of the affected area &/or muscle

In the early signs the affected area begins to ache and becomes weak. Eventually, the pain escalates causing the muscles and tissues to become tender developing into severe pain and debility of the area in chronic situation. Disturbance of sleep patterns is also common.

Medications & Treatments of RSI

TYPES OF MEDICATIONS & TREATMENTS FOR RSI	
MEDICATOINS	
•	NSAIDs
•	Cortisone injections
RECOMMENDED TREATMENT	
•	Therapies
○	Physiotherapist
○	Massage
○	Acupuncture
•	Support equipment
○	Splinting
○	Casting
•	Apply ice
•	Elevate
•	Compression
•	Corrective surgery as a last resort

D. Osteoarthritis (OA)

Osteoarthritis is comprised from the Greek origin *osteo* meaning the bone, *arthr* means joint and *itis* meaning inflammation. “It is a degenerative joint disease (DJD), a progressive disorder of the joints caused by gradual loss of cartilage and resulting in the development of bony spurs and cysts at the margins of the joints” (Osteoarthritis, n.d.). The synovial fluid provides a protective barrier to the joints and allows the cartilage to move freely. Overtime, the cartilage may wear down and joints end up rubbing against one another thus, affecting the breakdown of the structure. OA is the most common form of arthritis. According to Statistics Canada (2006), OA occurs in 10% of the population and by the age of 70 it is present in most individuals (p. 13).

Symptoms of OA

SYMPTOMS OF OA
<ul style="list-style-type: none"> • Begins gradually <ul style="list-style-type: none"> ○ With deep aching joints & mild stiffness in the mornings
<ul style="list-style-type: none"> • Pain is worsen by constant use of the joint, but seems to improve after rest
<ul style="list-style-type: none"> • Overexertion causes agg such as stiffness exertion
<ul style="list-style-type: none"> • Increased pain

SYMPTOMS OF OA
<ul style="list-style-type: none">• Swelling
<ul style="list-style-type: none">• Limitation of joint movement, affects;<ul style="list-style-type: none">○ Upper extremities○ Hip○ Knees○ Spine○ Lower extremities
<ul style="list-style-type: none">• As symptoms progress there is;<ul style="list-style-type: none">○ Diminished range of motion○ Significant tenderness○ Pain escalates becoming constant even during rest periods, at night &/or while sleeping

Eventually, this leads to difficulties in daily tasks like opening a jar, walking up/downstairs etc. In advanced stages, ability to perform fine motors skills is a challenge such as brushing hair.

Causes of OA

CAUSES OF OA
• Trauma
• RSI
• Being overweight creates stress on the joints & increases the likelihood of OA
• Mechanical stress
• Endocrine & metabolic disease
• High bone density
• Hereditary

Treatments, Diagnostic Tests & Medications for OA

Bronner, Farach-Carson and Bronner, (2008), state in the book of Bone and Osteoarthritis that primary emphasis for therapeutic treatment of OA is to alleviate the signs and symptoms contributing toward pain and joint function. When evaluating these improvements the mainstream focus mainly pertains to medications (p. 181).

TREATMENT FOCUS
<ul style="list-style-type: none"> • Decreasing pain & improving mobility
<ul style="list-style-type: none"> • Regular exercise
<ul style="list-style-type: none"> • Muscle strengthening
<ul style="list-style-type: none"> • Reducing weight & eating a healthy diet
<ul style="list-style-type: none"> • Bracing & hot/cold applications are beneficial
<ul style="list-style-type: none"> • Patient education in self-management <ul style="list-style-type: none"> ○ Learning how to cope & function
<ul style="list-style-type: none"> • Surgery in chronic symptoms that do not improve
DIAGNOSTIC TESTS
<ul style="list-style-type: none"> • X-rays
<ul style="list-style-type: none"> • Blood count
<ul style="list-style-type: none"> • Fluid test
MEDICATIONS
<ul style="list-style-type: none"> • NSAIDs <ul style="list-style-type: none"> ○ Cyclooxygenase II (COX-2) selective inhibitors
<ul style="list-style-type: none"> • Analgesic <ul style="list-style-type: none"> ○ tramadol & opiates

MEDICATIONS	
•	Cortisone injections
•	Nutritional supplement

E. Rheumatoid Arthritis (RA)

Rheumatoid Arthritis (RA) is a chronic autoimmune disease where the immune system attacks the joints and tissues resulting in inflammation. The inflammation causes pain, stiffness and swelling of the joints. After a while, damage to joints progress leading to deformities and reduces the ability of movements. Typically, RA could affect any body part, but is generally symmetrical.

Symptoms & Causes of RA

SYMPTOMS OF RA
<ul style="list-style-type: none"> • Ranges from mild to severe impairment of daily activities & tasks. These are; <ul style="list-style-type: none"> ○ Ability to bath ○ Get dressed ○ Brush their teeth ○ Cooking etc.
<ul style="list-style-type: none"> • If symptoms are not under control it will further damage the; <ul style="list-style-type: none"> ○ Joints ○ Cause severe deformities, loss of mobility of joints & physical function
<ul style="list-style-type: none"> • Pain
<ul style="list-style-type: none"> • Swelling
<ul style="list-style-type: none"> • Fatigue

SYMPTOMS OF RA
<ul style="list-style-type: none"> • Pain & stiffness are worse upon rising & after rest
<ul style="list-style-type: none"> • Duration & intensity of the complaints increase as it advances
<ul style="list-style-type: none"> • Systemic effects involved like; <ul style="list-style-type: none"> ○ Weight loss ○ Anemia ○ Possible fever
<ul style="list-style-type: none"> • RA is known to affect other organs such as; <ul style="list-style-type: none"> ○ Eyes ○ Skin ○ Nerves ○ Lungs
CAUSES OF RA
<ul style="list-style-type: none"> • Is unknown, but <ul style="list-style-type: none"> ○ Genetic & environmental factors play a role

Unfortunately, the long term prognosis of RA is poor. Although, the goal is to help individuals achieve remission during the early stages of RA. As the disease progresses this becomes impossible to control and it can occur at any age. According to Statistics Canada (2006), women are three times more likely to develop this condition than men. Nearly 1% of Canadians are affected and with incidences increasing as one ages. 80% of people experience a reduction in functional abilities within 20 years of the onset of the disease. Hence, the life

expectancy is reduced between 5 to 10 years for individuals with RA because of rheumatoid complaints and an increase in non-specific causes of death (p. 16).

Medication & Treatments for RA

The main priority in treatment for RA is to reduce pain, inflammation, prevent any further damage to the joints and improve function.

THREE CLASSES OF MEDICATIONS USED FOR RA	
I. Anti-inflammatories to lessen;	
<ul style="list-style-type: none">○ Pain○ Swelling○ Stiffness	
	Anti-inflammatories cannot prevent damage to the joints
II. Disease modifying anti-rheumatic drugs (DMARDs).	
	This type of drug inhibits the destruction of the autoimmune whereby it reduces inflammation in the joints.
III. Corticosteroids are used in between periods of flare-ups in conjunction with DMARDs drugs	

RECOMMENDED TREATMENTS FOR RA
<ul style="list-style-type: none"> • Rest
<ul style="list-style-type: none"> • Regular exercise to strengthen muscles
<ul style="list-style-type: none"> • Physiotherapy
<ul style="list-style-type: none"> • Apply ice/heat
<ul style="list-style-type: none"> • Support equipment <ul style="list-style-type: none"> ○ Splints ○ Orthotics ○ Assistive devices to improve function
<ul style="list-style-type: none"> • Self-management education techniques <ul style="list-style-type: none"> ○ To learn how to cope & function with RA
<ul style="list-style-type: none"> • Surgery to correct deformities & dysfunction

Three Phases of RA

1. Acute Episodes

In acute episodes or flare ups the joints are painful, swollen and stiff with a decrease in range of motion. The pain is constant from moderate to severe. Fatigue is present as is lack of sleep and daily tasks require effort to complete. The emotional

state of a person while experiencing an acute episode may be irritability, anger and/or anxiousness.

2. Chronic Episodes

In chronic stages flare ups are less intense than in an acute episode although, mild pain and stiffness are still present. Inflammation is usually controlled by taking DMARDs drugs and chronic episodes of pain can exacerbate with over use of the joints and daily tasks/activities are limited.

3. Advanced RA

In the final phase or advanced stages severe deformities, loss of mobility and loss of function have occurred. As a result from physical changes there are limitations in ability to work, and enjoyment of everyday fulfillments. As with daily tasks they become a challenge or nearly impossible to complete. Consequently, if an individual loses hope because the disease is continuing other issues arise such as depression, anxiety, the feeling of helplessness and even low self-esteem.

F. Fibromyalgia

Fibromyalgia is another common MSDs similar to osteoarthritis. It is a chronic syndrome that affects the muscles, soft tissues of the joints, and organs. This is accompanied by pain, fatigue and exhaustion. Generally it involves the areas of the cervical, lumbar region, upper and lower extremities, but can develop in any area of the body. The difference between osteoarthritis and fibromyalgia is that fibromyalgia does not cause damage to any joints or muscles whereas osteoarthritis does. Similarly, fibromyalgia can occur at any age however, it's more common in women and develops around early to mid-adulthood. Moreover, the intensity and frequency of pain varies in individuals as some may be incapacitated while others have mild to moderate discomfort.

According to Statistics Canada (2006), there are approximately 900,000 Canadians, 3% of the population affected by fibromyalgia. Women are three times more likely to develop this disease than men (p. 23).

Symptoms of Fibromyalgia

SYMPTOMS OF FIBROMYALGIA
<ul style="list-style-type: none">• Pain & tenderness<ul style="list-style-type: none">○ Symptoms tend not to progress & possibly can improve over time
<ul style="list-style-type: none">• Sleep difficulties
<ul style="list-style-type: none">• Restless leg syndrome
<ul style="list-style-type: none">• Numbness
<ul style="list-style-type: none">• Morning stiffness
<ul style="list-style-type: none">• Exhaustion
<ul style="list-style-type: none">• Irritable bowel syndrome
<ul style="list-style-type: none">• TMJ problems
<ul style="list-style-type: none">• Headaches, migraines
<ul style="list-style-type: none">• Impaired memory, cognitive function
<ul style="list-style-type: none">• Anxiety, depression
<ul style="list-style-type: none">• Symptoms increase & decrease overtime

Chronic Fibromyalgia Symptoms

CHRONIC FIBROMYALGIA SYMPTOMS
<ul style="list-style-type: none">• Pain varies in severity from day to day & changes location
<ul style="list-style-type: none">• Burning, aching, soreness especially in parts of the body used consistently IE: feet
<ul style="list-style-type: none">• Fatigue
<ul style="list-style-type: none">• Limited function & endurance capacity
<ul style="list-style-type: none">• Memory & concentration difficulties
<ul style="list-style-type: none">• Anxiety, depression
<ul style="list-style-type: none">• Urinary incontinence
<ul style="list-style-type: none">• Constipation, diarrhea
<ul style="list-style-type: none">• Migraines

Causes of Fibromyalgia

CAUSES OF FIBROMYALGIA
<ul style="list-style-type: none"> • Unknown
<ul style="list-style-type: none"> • Infections, trauma
<ul style="list-style-type: none"> • A physical, mental or emotional stress
<ul style="list-style-type: none"> • Genetics
<ul style="list-style-type: none"> • Sleep disturbances
<ul style="list-style-type: none"> • Chemical imbalance may amplify pain in the brain due to abnormal sensory functions

Diagnosis of Fibromyalgia

Patients with fibromyalgia are diagnosed when they experience chronic widespread pain and multiple muscle tenderness points in several areas upon examination. In the article from Statistics Canada (2006), The American College of Rheumatology developed a criterion to assess patients pain symptoms. Fibromyalgia pain consists in all four quadrants of the body, the upper right, lower right, upper left and lower left regions as well as below and above the waist. They evaluate a patient based on their symptoms, on the duration of pain for at least three months

and in combination with response to low level pressure in 11 out of 18 tender points in the body (p. 24). *(Refer to Appendix E for diagram of the 18 Tender Points).*

Medications & Treatments for Fibromyalgia

The purpose of a treatment is to ease pain and improve sleep in patients. Generally speaking the following medications are not effective in alleviating pain.

MEDICATIONS FOR FIBROMYALGIA
<ul style="list-style-type: none">• NSAIDs
<ul style="list-style-type: none">• Muscle relaxants
<ul style="list-style-type: none">• Anti-depressants such as<ul style="list-style-type: none">○ Tricyclic
<ul style="list-style-type: none">• SSRIs prescribed for both fibromyalgia condition & for depression
<ul style="list-style-type: none">• Opioid such as<ul style="list-style-type: none">○ Tramadol

TREATMENTS FOR FIBROMYALGIA	
<ul style="list-style-type: none">• Alternative therapy<ul style="list-style-type: none">○ Acupuncture○ Massage therapy	
<ul style="list-style-type: none">• Physical therapy	
<ul style="list-style-type: none">• Self-management tools	

G. Sciatica

The sciatica nerve is located in the lower portion of the spine. It travels through the pelvis and buttocks down the leg, behind the knee and then to the feet. Basically, when an individual encounters pain there is pressure applied on the sciatica nerve. In other words, the sciatica nerve has been pinched causing discomfort.

Sciatica is a symptom rather than a specific diagnosis... In ~ 90% of cases, sciatica is caused by a herniated disc with nerve root compression, but lumbar canal or foraminal stenosis and (less often) tumors and cysts are other possible causes. (Valat, Genevay, Marty, Rozenberg & Koes, 2010, p. 243)

Moreover, the associated pain may actually begin from the lumbar region, thus resulting in referred pain. In this circumstance, it is difficult to distinguish where it is developing from. Sciatica discomfort is aggravated by prolonged standing, sitting, straining, twisting, lifting, coughing and sneezing

There are four signs and symptoms to distinguish if pain is related to either sciatica or lumbar region:

1. If the pain is one sided.
2. If unilateral pain is greater than the lumbar pain.
3. Does the pain radiate to the foot or toe?

4. Is there numbness and paraesthesia sensations of tingling, pins and needles?

Acute Sciatica

In acute situations diagnostic images are only suggested if there are underlying pathology reasons such as infections, malignancies, but no herniation is involved. Only after a few months if conditions worsen are images of MRI or CT scans taken.

Chronic Sciatica

In chronic cases where a herniated disc is placing pressure on the sciatica nerve and symptoms have not improved than surgery will be recommended. The indications for potential surgery include presence of bladder function problems, progressive muscle weakness and opioid resistant pain.

Symptoms of Sciatica

SYMPTOMS OF SCIATICA
<ul style="list-style-type: none">• A mild ache
<ul style="list-style-type: none">• Sharp burning sensations
<ul style="list-style-type: none">• Weakness
<ul style="list-style-type: none">• Numbness
<ul style="list-style-type: none">• Tingling

Diagnosis for Sciatica

HOW SCIATICA IS DIAGNOSED
1. A medical history & physical examination is performed
2. With sciatica there are no standards physical tests when assessing an individual. Some physician will incorporate the same methods used as in lumbar diagnostic evaluation.

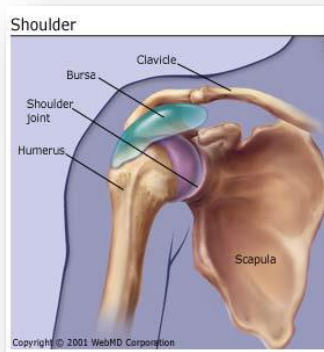
Medications & Treatments for Sciatica

MEDICATIONS & TREATMENTS FOR SCIATICA
MEDICATIONS
• NSAIDs
• Analgesics
• Muscle relaxants
• Anti-depressants
• Injections of <ul style="list-style-type: none">○ Epidural corticosteroid○ Transforaminal corticosteroid

TREATMENTS FOR SCIATICA
<ul style="list-style-type: none">• Patient education
<ul style="list-style-type: none">• Exercises, staying active
<ul style="list-style-type: none">• Physical therapy
<ul style="list-style-type: none">• Apply hot/cold packs
<ul style="list-style-type: none">• A referral to a physiatrist if symptoms persist

H. Bursitis

Bursitis is inflammation of the bursae that contains fluid. The bursae act as a cushion to protect the bones, tendon and muscles. The primary purpose is to help diminish the amount of friction, rubbing and irritations. Some common sites where bursitis occurs are the shoulders, elbows, hips, knees, tendons and even the big toe. Bursitis is common amongst adults. Hence, if symptoms do not improve within a few months, a physician will recommend surgery to correct the damage and relieve pressure from the bursae. Below is a diagram of a shoulder with bursitis.



An individual should consult a physician immediately if any of the following occur as it may signify other problems:

1. A fever over 102°F
2. Swelling
3. Redness and warmth
4. Unable to move the affected area

5. Increased pain followed by general illness

Causes of Bursitis

CAUSES OF BURSITIS
<ul style="list-style-type: none">• Age
<ul style="list-style-type: none">• Overuse or injury to a joint such as;<ul style="list-style-type: none">○ Gardening○ Tennis○ Golf○ Throwing○ Scrubbing○ Shoveling○ Painting
<ul style="list-style-type: none">• Improper posture at work &/or home<ul style="list-style-type: none">○ like kneeling
<ul style="list-style-type: none">• Abnormal bones places stress on a joint
<ul style="list-style-type: none">• Disorders such as;<ul style="list-style-type: none">○ Thyroid disease○ Rheumatoid arthritis○ Gout○ Inflammation

Diagnosis for Bursitis

DIAGNOSIS FOR BURSITIS
<ul style="list-style-type: none">• A physical exam
<ul style="list-style-type: none">• X-rays & perhaps other images

Symptoms of Bursitis

SYMPTOMS OF BURSITIS
<ul style="list-style-type: none">• Most common is pain. Pain can be<ul style="list-style-type: none">○ Gradual○ Sudden○ Severe

Medications & Treatments for Bursitis

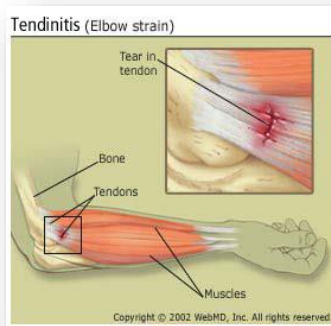
MEDICATIONS & TREATMENTS FOR BURSITIS
MEDICATIONS
<ul style="list-style-type: none">• NSAIDs
<ul style="list-style-type: none">• Corticosteroids if symptoms worsen & helps reduce inflammation
<ul style="list-style-type: none">• Injections<ul style="list-style-type: none">○ Steroid injected into the site. This may not be effective

TREATMENTS FOR BURSITIS	
•	Resting the injured area
•	Apply ice
•	Avoid activities that cause agg
•	Physical therapy
•	Surgery <ul style="list-style-type: none">○ If worsens & does not respond to other treatments

I. Tendinitis

Tendonitis is inflammation of the tendon that attaches bone to muscle. It creates movement of the muscle to push and pull the bone in different ways. Tendonitis may affect any individual, but it's more common in adults. It can occur anywhere in the body where a tendon connects a bone to muscle such as the elbow, shoulder, hip, knee, achilles tendon and even the base of the thumb. For example, children/teenagers who constantly text on their cell phones using their thumbs end up with tendonitis also known as thumbitis.

A goal in effectively treating tendonitis is to reduce pain and swelling around the joints before it becomes chronic. In chronic conditions where there have not been any improvements within a few months a physician will recommend surgery to correct the damage and relieve pressure from the tendon. Below is a diagram of tendonitis.



In serious circumstances, the same steps apply with tendonitis as in bursitis. An individual should consult a physician immediately if any of the following occur as it may signify other problems:

1. A fever over 102°F
2. Swelling
3. Redness and warmth
4. Unable to move the affected area
5. Increased pain followed by general illness

Symptoms of Tendonitis

SYMPTOMS OF TENDONITIS
<ul style="list-style-type: none">• Pain & tenderness near the joint such as the;<ul style="list-style-type: none">○ Shoulder○ Elbow○ Wrist○ Ankle
<ul style="list-style-type: none">• Stiffness that restricts movement of the area
<ul style="list-style-type: none">• Swelling

Diagnosis for Tendonitis

DIAGNOSIS FOR TENDONITIS
1. Medical history & examination
2. Ask questions such as; <ul style="list-style-type: none">○ The description of the pain○ Its location○ What triggered the pain
3. Palpitations of the area
4. Images <ul style="list-style-type: none">○ X-rays○ MRI

Causes of Tendonitis

CAUSES OF TENDONITIS
• Repetitive injuries because tendon become less flexible as one ages & causes damage
• Outdoor work like; <ul style="list-style-type: none">○ Gardening○ Raking○ Shoveling
• Painting

CAUSES OF TENDONITIS	
<ul style="list-style-type: none">• Cleaning, scrubbing	
<ul style="list-style-type: none">• Sports such as;<ul style="list-style-type: none">○ Tennis○ Golf○ Skiing	
<ul style="list-style-type: none">• Abnormal bone/joints	
<ul style="list-style-type: none">• Disorders like;<ul style="list-style-type: none">○ Rheumatoid arthritis○ Psoriatic arthritis○ Thyroid disease○ Gout	
<ul style="list-style-type: none">• Overuse & over straining the tendon	
<ul style="list-style-type: none">• Infection from an animal bite	

Medications & Treatments for Tendonitis

MEDICATIONS & TREATMENTS FOR TENDONITIS	
MEDICATIONS	
<ul style="list-style-type: none">• NSAIDs<ul style="list-style-type: none">○ Naproxen○ Ibuprofen	
<ul style="list-style-type: none">• Injections of corticosteroids	

TREATMENTS
<ul style="list-style-type: none">• Rest & elevate the area
<ul style="list-style-type: none">• Apply ice
<ul style="list-style-type: none">• Physical therapy
<ul style="list-style-type: none">• Strengthening & stretching exercises
<ul style="list-style-type: none">• Massage of the soft tissue
<ul style="list-style-type: none">• Electrical current pulses &/or ultrasound wave vibration
<ul style="list-style-type: none">• Support equipment for the affected area;<ul style="list-style-type: none">○ A band○ Brace○ Splint
<ul style="list-style-type: none">• Removing fluid from the affected site
<ul style="list-style-type: none">• Surgery followed by an exercise program

J. Gout

Gout develops from too much uric acid known as hyperuricaemia in the blood levels. Once hyperuricaemia levels build up eventually it begins to form crystals in the joints. These crystals are deposited into affected areas of the wrists, fingers, elbows, knees, feet and ankles. It causes pain and swelling around the joints. Gout is said to be a common form of arthritis, and if treated in the mild stage and with proper dietary precautions, symptoms can subside although, flare ups are possible. In addition, gout and hyperuricaemia are noted to have a relationship between hypertension (high blood pressure), diabetes, metabolic syndrome, cardiovascular and renal (kidney) disease.

Chronic cases of individuals that undergo years of flare ups may build up hyperuricaemia crystals in the joints. The joints form a nodule called tophi resulting in pain, pressure and deformities. Medications can be of some assistance with pain management, but once deformities have developed and worsen it causes limitations and disability. Once this stage has progressed a physician's recommendation will be surgery.

Gout has become a prevalent disease in the western society mainly because of poor dietary factors and obesity. It mainly affects men, but can occur in woman. According to Richette and Bardin (2010), in their article it states that:

England, rates of gout increased from 0.3% to 1.0% of the total population between 1970 and 1990, and a similar trend was reported in

the USA during the 1990s-especially for men older than 75 years in whom rates nearly doubled from 2.1% in 1990 to 4.1% in 1999. (p. 318)

Causes of Gout

CAUSES OF GOUT
<ul style="list-style-type: none">• Hyperuricemia
<ul style="list-style-type: none">• Hereditary factors
<ul style="list-style-type: none">• Diet• Eating rich foods such as;<ul style="list-style-type: none">○ Meat○ Fish○ Alcohol
<ul style="list-style-type: none">• Obesity
<ul style="list-style-type: none">• Certain types of medications such as;<ul style="list-style-type: none">○ Aspirin○ Niacin○ Diuretics
<ul style="list-style-type: none">• Illness like<ul style="list-style-type: none">○ Hypertension

Diagnosis of Gout

DIAGNOSIS OF GOUT
1. Medical history & examination
2. Questions such as; <ul style="list-style-type: none">○ The description of the pain○ Its location○ What triggered the pain
3. Palpitations of the area
4. Images <ul style="list-style-type: none">○ X-rays

Symptoms of Gout

SYMPTOMS OF GOUT
• Warmth
• Pain
• Swelling
• Tenderness
• Usually affects the big toe called podagra
• Skin is red & purplish

SYMPTOMS OF GOUT
<ul style="list-style-type: none">• Limited mobility
<ul style="list-style-type: none">• After illness, surgeries
<ul style="list-style-type: none">• As symptoms improve there is peeling & itching around the joint

Medications & Treatments for Gout

MEDICATIONS & TREATMENTS FOR GOUT
MEDICATIONS
<ul style="list-style-type: none">• NSAIDs
<ul style="list-style-type: none">• Colchicine
<ul style="list-style-type: none">• Oral corticosteroids
TREATMENTS
<ul style="list-style-type: none">• Rest the affected area
<ul style="list-style-type: none">• Apply ice
<ul style="list-style-type: none">• Patient education in<ul style="list-style-type: none">○ Lifestyle & dietary changes
<ul style="list-style-type: none">• Surgery

THE MECHANISM OF MUSCLE PAIN

Pain is not objective, rather it's a subjective matter. We cannot see how much pain a person is experiencing. In other words, pain is not visible by the human eye. It is the person's perception, sensation and/or description of what is/has happened. Pain is defined as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage" (Mense & Gerwin, 2010, p. 2).

An example describing pain includes, two individuals have injured their backs while lifting a bag of potatoes. The likelihood of both people explaining their injury identically is highly unlikely. One person may be screaming of pain and must lie down. While the other individual is stooped over, cannot straighten up and is having extreme difficulty walking. Both of these individuals rate the intensity of their pain eight (8). The scale of pain measurement is represented by a number system ranging from 1 to 10. 1 stands for very minor pain and 10 refers to pain that makes you pass out, unconscious. Meaning the worst pain ever experienced. Below is the pain scale rating.

Pain Scale Rating

PAIN SCALE RATING	
NUMBER REPRESENTATION	DESCRIPTION
0	Pain-free
1	Very minor annoyance; occasional minor twinges
2	Minor annoyance; occasional strong twinges
3	Annoying enough to be distracting
4	Can be ignored if you are really involved in your work, but still distracting
5	Can't be ignored for more than thirty minutes
6	Can't be ignored for any length of time, but you can still go to work & participate in social activities
7	Makes it difficult to concentrate; interferes with sleep. You can still function with effort
8	Physical activity severely limited. You can read & converse with effort. Nausea & dizziness set in as factors of pain.
9	Unable to speak. Crying out or moaning uncontrollably; near delirium.
10	Unconscious. Pain makes you pass out.

(Pohl, 2011, 130).

When seeking medical attention, these individuals provide detailed information as to how this injury occurred and what they are experiencing by means of their own perception. According to Mense and Gerwin (2010), subjective pain cannot be proved or disproved and therefore the examiner must believe the person (p. 3).

Too many individuals suffer in silence with pain as well as, have difficulty maintaining relationships with family and friends. The phrase “Pain is inevitable, suffering is optional” (unknown). Is a metaphor statement signifying that at some point we may deal with pain, but how we choose to handle it is totally up to ourselves. Suffering with pain implies how the individual perceives their ordeal mentally and emotionally and does not measure the degree of pain a person experiences. We all encounter pain at some point throughout our lives. This does not necessarily reflect an injury or illness, but can be simple pain such as a lost love, a paper cut, stubbing your toe against an object etc. We can comprehend and understand the symbolism when the word ‘pain’ is heard or spoken. It is impossible to understand what one struggles with when a disorder arises, unless we have experienced the exact incident in the same manner as the individual. In other words, pain is perceived differently by each individual and their circumstances. In this situation, empathy is all that we can offer to a person.

Billions of dollars per year are expended on pain treatment, primarily physical and pharmaceutical related. Not enough is spent on understanding those who are experiencing the pain, the circumstances under which they live, their backgrounds, their stresses and their actual lives. Certainly, many psychologists and sociologists study pain, and many excellent research projects have resulted from their work. However, integration of their findings into mainstream medicine is lacking. (Finestone, 2009, p. 1)

There is a purpose to pain, as it informs the body that damage has occurred. Simply described, when a door slams on your finger the pain leaves the pain receptor, it travels along the sensory nerve to the spinal cord and in many areas in the brain. The brain then detects the signal. Your finger being slammed by the door and the concisions mind interprets the message thus, translating the unpleasant incident to 'pain', 'Ouch! That hurts'. Your finger may ache, tingle, throb, is sensitive and your fingernail be have turned black etc. You're mental and emotional state could be irritability, anger, screaming, crying etc. Depending on the severity of the accident these symptoms could last awhile, this will vary with each individual.

Moreover, there are numerous diagnostic tests and pharmaceutical medications available to individuals who have pain disorders. Medical doctors prescribe these in hope for their patients to achieve some sort of tranquility, but cannot understand the impact of MSDs and how it relates to their patients. Some individuals go through invasive tests, take many different types of drugs to assist in their pain and/or have surgery. At times, it is necessary to proceed with these treatments. Although, conventional doctors must realize that other implications could arise with medications such as side effects and/or addiction causing other problems down the road. Nevertheless, individuals with MSDs may achieve aide in a gentle non-invasive manner by using homeopathy and other combination treatments such as alternative therapies and/or conventional methods.

PAIN

How one feels when they are experiencing pain is described differently for everyone.

Pain also has the capability to change from moment to moment leaving one feeling frustrated, irritated etc. Also, there are standard types of descriptor words used by individuals to explain how pain is felt. These are:

(Refer to Appendix F for Short-Form McGill Pain Questionnaire given to patients)

Standard Descriptor Words used to Describe Pain

PAIN LABELS		
DIFFERENT TYPES OF PAIN		
• Sharp	• Stinging	• Pounding
• Throbbing	• Intermittent	• Constant
• Electrical	• Aching	• Stabbing
• Hot	• Cutting	• Tight
• Squeezing	• Crushing	• Tugging
• Dull	• Burning	• Itchy
• Radiating	• Severe	• Mild

(Stein, 2015, p. 15).

DEFINITION OF ACUTE & CHRONIC PAIN

There are two types of pain, acute and chronic. Acute pain is a warning sign, it tells us that a problem has occurred in a specific location in our body.

According to O'Reilly in the Organon of the Medical Art (1996), she outlines that Hahnemann states in Aphorism (§) 72 that:

With respect to the first item [§71], the following serves first of all as a general overview. The diseases of humanity are in part acute and in part chronic. *Acute diseases* are rapid illness-processes of the abnormally mistuned life principle which are suited to complete their course more or less quickly, but always in a moderate time. *Chronic diseases* are those which (each in its own way) dynamically mistune the living organism with small, often unnoticed beginnings. They gradually so remove it from the healthy state [i.e., they gradually remove it from the healthy state in such a way and to such an extent] that the automatic life energy (called the life force, life principle) which was ordained to sustain health, opposes them. It does so, both in the beginning and in their continuance, with only imperfect, inexpedient, useless resistance. The life force, which cannot extinguish these diseases by its own power, in and of itself, must allow them to proliferate and it must allow its tuning to be more and

more abnormally altered up to the final destruction of the organism.

Chronic disease arise from dynamic infection by a chronic miasm. (p. 118)

In summary, Hahnemann is explaining that acute pain appears suddenly, completes its action in a quick manner, but is short in duration. Acute pain can last anywhere from six weeks or less ending in a recovery, whereas, chronic pain continues anywhere from more than six months. It lingers usually without an end period and effects one’s entire life including physical, mental and emotional well-being. This implies that a chronic illness has altered the body’s chemistry slowly and often without any warning.

According to Dr. Pohl (2011), in many cases chronic pain evolves into chronic pain syndrome (CPS), a constellation of several detectable symptoms and characteristics that occur together. A list of chronic pain syndrome is provided below and includes, but is not limited to:

Chronic Pain Syndrome

CHRONIC PAIN SYNDROME
• Pain that has lasted for more than six months
• Feeling of depression, anger, worry, discouragement, irritability & fear
• Sleep difficulties
• Monetary problems
• Problems relating to others, causing significant disturbance in relationships
• An inability to tolerate activities
• Inability to concentrate

CHRONIC PAIN SYNDROME
• Poor memory
• A decrease in sexual activity or performance
• A decrease in self-esteem
• Secondary physical problems
• Misuse of pain medications and/or alcohol
• Avoiding work & leisure activities
• Negative attitudes concerning everyday life

(p. 19)

HOW A HOMEOPATH ASSESSES A CASE

According to O'Reilly (1996), Hahnemann states in §3, protocols that all practitioners are required to follow. He states:

To be a genuine practitioner of the medical art, a physician must:

1. clearly realize what is to be cured in disease, that is, in each single case of disease (*discernment of the disease, indicator*),
2. clearly realize what is curative in medicines, that is in each particular medicine (*Knowledge of medicinal powers*),
3. be aware of how to adapt what is curative in medicines to what he had discerned to be undoubtedly diseased in the patient, according to clear principles. (p. 61-62)

Hahnemann further discusses the important fundamental cause of disease in §5 and what a practitioner should determine.

It will help the physician to bring about a cure if he can find out the data of the most probable *occasion* of an acute disease, and the most significant factors in the entire history of a protracted wasting sickness, enabling him to find out its *fundamental cause*. The fundamental cause

of a protracted wasting sickness mostly rests upon a chronic miasm. In these investigations, the physician should take into account the patient's:

1. discernible body constitution (especially in cases of protracted disease),
2. mental and emotional character (character of the Geist and the Gemüt),
3. occupations,
4. lifestyle and habits,
5. civic and domestic relationships [relationships outside and with-in the home],
6. age,
7. sexual function, etc. (p. 62)

The phases of diseases vary from simple acute symptoms, such as a sore muscle, to more chronic severe symptoms such as disc herniation. Homeopathy is an ongoing healing process to discover the patient's unique status of health. We also need to uncover any hidden obstacles from the individuals' life, determine the signs and symptoms and incorporate the understanding of their physical, mental and emotional status. As cited by O'Reilly (1996), Hahnemann states in §7 the definition of disease and cure.

In cases of disease where there is no obvious occasioning or maintaining cause (*causa occasionalis*) to be removed,^{7a} we can perceive nothing but the disease signs. Therefore, it must be the symptoms alone by which

the disease demands and can point to the appropriate medicine for its relief, along with regard for any contingent miasm and with attention to the attendant circumstances (§5).

The totality of these symptoms is the *outwardly reflected image of the inner wesen of the disease, that is, of the suffering of the life force*. The totality of symptoms must be the principal or the only thing whereby the disease can make discernible what remedy [curative means] it requires, the only thing that can determine the choice of the most suitable helping-means. Thus, in a word, the totality^{7b} of symptoms must be the most important, indeed the only thing in every case of disease, that the medical-art practitioner has to discern and to clear away, by means of his art, so that the disease shall be cured and transformed into health.

7a. It goes without saying that the intelligent physician would immediately clear away any occasioning or maintaining cause, after which the indisposition usually gives way of its own accord. For example, the physician would:

1. remove from the room the strong smelling flowers that are arousing faintness and hysterical plights,
2. extract from the cornea the splinter that is arousing inflammation of the eye,

3. loosen the overtight bandage on a wounded limb that is threatening to cause gangrene, and apply a more suitable one,
4. lay bare and tie off the injured artery that is inducing faintness,
5. seek, through vomiting, to expel belladonna berries, etc. that have been swallowed,
6. extract foreign substances from the orifices of the body (nose, throat, ears, urethra, rectum, genitalia),
7. crush bladder stones,
8. open the imperforate anus of the newborn infant, etc. (p. 63-64).

When assessing a patient's symptoms, there are important issues to consider in recover. Homeopaths need to look at the whole person on a physical, mental and emotional level, gathering all of the information as part of the totality of the patient's symptoms. The pain or disease the person is experiencing is a reflection of how they are coping with stress. Disease rests on the level of what is known as the vital force or life force. We cannot see the vital force but it exists in our bodies, just like we cannot see oxygen but we know that it exists. Homeopathic remedies are able to cure disease by bringing the individual's energy back into balance and harmony, functioning at a level which the body was at prior to the on-set of the illness.

Homeopathic remedies are based on the signs and symptoms of a patient, which provides the practitioner with a clear picture of what the individual's defense system requires. This is important as it is required for proper case taking. As it ensures that the homeopath is

gathering the totality of symptoms and matching the correct frequency of medicine to the person's own set of symptoms, which is specifically tailored for that particular individual. This is critical in gathering a holistic view of the patient. By understanding the patient holistically it allows the homeopath to determine and provide the proper remedy.

In §71 Hahnemann explains what a physician needs to know to cure the sick.

It is now no longer a matter of doubt that human disease consist merely of groups of certain symptoms which are only annihilated and transformed into health by means of medicinal substances capable of artificially engendering similar disease symptoms. Such is the process in all genuine cures.

Therefore, the medical pursuit limits itself to the following three points:

- I. How does the physician investigate what he needs to know [be aware of] about a disease for curative purpose? [Chapter 2-3]
- II. How does the physician investigate the implements ordained for the cure of natural disease, the morbidic potency of medicines? [Chapter 4]
- III. How does the physician most expediently employ these artificial disease potencies (medicines) for the cure of natural diseases? [Chapters 5-11]

Different Types of Symptoms

Symptoms are expressions of the vital force, an alteration of feeling and function. It is a change in the physical, emotional, psychological state of the organism that is produced by the vital force to indicate disharmony or disease, which is good. The body is fighting and trying to

return to its homeostasis state. Furthermore, homeopaths use symptoms to help them decide what is most similar in the patient’s case, which guides them to the most similar remedy.

Five Different Types of Symptoms

FIVE DIFFERENT TYPES OF SYMPTOMS	
SYMPTOM	DEFINITION
1. Presenting Symptom’s or Chief Complaint	<ul style="list-style-type: none"> • The reason for the visit <ul style="list-style-type: none"> ○ IE: eczema • As a homeopath you are trying to find the disturbance of the vital force
2. Characteristic Symptom’s	<ul style="list-style-type: none"> • If it’s eczema, what kind of a rash is it? • What is characteristic of the individuality susceptibility of the patient? • Characteristic symptoms of the way he gets his allergies and characteristic symptoms of a remedy used for allergies & colds
3. Objective Symptom’s	<ul style="list-style-type: none"> • What is observed other than the patient • Hahnemann mentions that these are very valuable especially for people if they are not very communicative. You need to gather information from family & any attendance as this is also very important • Sometimes people don’t give you everything not because they don’t want to, but because they just don’t observe
4. Subjective Symptom’s	<ul style="list-style-type: none"> • These are symptom’s felt by the patient & could be similar as the presenting symptom’s <ul style="list-style-type: none"> ○ What the patient tells you? ○ What they feel? ○ What they think? ○ How they react? Or don’t react?

FIVE DIFFERENT TYPES OF SYMPTOMS	
SYMPTOM	DEFINITION
5. Concomitant Symptom's	<ul style="list-style-type: none"> • Two or more symptom's that occur at the same time <ul style="list-style-type: none"> ○ IE: vomiting & diarrhea

Six Essential Steps in Case Taking

SIX SIGNIFICANT STEPS IN CASE TAKING	
1. Location	<ul style="list-style-type: none"> • The exact spot of the problem
2. Sensation	<ul style="list-style-type: none"> • Explain how it feels? <ul style="list-style-type: none"> ○ Burning ○ Throbbing ○ Tingling etc.
3. Modalities	<ul style="list-style-type: none"> • What makes it better or worse? Etc.
4. Intensity	<ul style="list-style-type: none"> • Rate using a scale system between 1 to 10
5. Time	<ul style="list-style-type: none"> • When does it occur? In the <ul style="list-style-type: none"> ○ Morning ○ Evening ○ Night etc.
6. Concomitants	<ul style="list-style-type: none"> • Two things occurring at the same time

Hahnemann discusses guidelines for case taking and how the homeopath should proceed in order, to gather all the information required to determine the correct remedy for a patient. In §84 Hahnemann states:

The patient complains of the process of his ailments. The patient's relations tell what he has complained of, his behavior and what they have perceived about him. The physician sees, hears and notices through the remaining senses what is altered or unusual about the patient. He writes

everything down with the very same expressions used by the patient and his relations. The physician keeps silent, allowing them to say all they have to say without interruption, unless they stray off to side issues. Only let the physician admonish them to speak slowly right at the outset so that, in writing down what is necessary, he can follow the speaker. (p. 131)

Hahnemann further comments on two relevant aphorisms, §85 and §86 on the steps involved in proper case taking.

§85

The physician begins a fresh line with every new symptom or circumstance mentioned by the patient or relation so the symptoms are all ranged separately, one below the other. The physician can add to any one that is initially stated all-too-indefinitely, but afterwards more clearly. (p. 131)

§86

When the narrator has finished what he wanted to say of his own accord, the physician enters a closer determination of each particular symptom in the following way: He reads through the single symptoms reported to him and asks for further particulars about this or that one. For example:

1. At what time did this befallment take place?

2. Did the befallment occur before the medicine was used, while taking the medicine, or only some days after setting it aside?
3. What kind of pain, what sensation (describe exactly) took place at this spot?
4. What exact spot was it?
5. Did the pain ensue in fits and starts at different times, or was it persistent, incessant?
6. How long did the pain last?
7. At what time of day or night, and in what positions, was the pain the worst? At what time, and in what position, did it stop entirely?
8. Described in clear, plain words, how was the befallment or circumstance exactly constituted? (p. 131-132)

In §87 Hahnemann discusses the reasons for using open ended questions.

In this way, the physician makes a closer determination of each single statement, without ever asking a question that would put words into the patient's mouth or that would be answerable with a simple yes or no. Otherwise, the patient would be misled into affirming something untrue or half-true or denying something that really exists, out of convenience or to please the interviewer, whereby a false image of the disease and an unsuitable mode of treatment must arise. (132)

A well taken case gives the homeopath a complete picture of the patient's symptoms, the totality of symptoms. Hahnemann in §104 explains the following:

Once the totality of the symptoms that principally determine and distinguish the disease case – in other words, the image of any kind of disease – has been exactly recorded, the most difficult work is done. During the treatment (especially of a chronic disease), the medical-art practitioner then has the total disease image always before him. He can behold it in all of its parts and lift out the characteristic signs. He can then select (from the lists of symptoms of all the medicines which have become known according to their pure actions) a well-aimed similar, artificial disease potency, in the form of a homeopathically chosen medicinal means, to oppose the total disease image. During treatment [at a follow-up examination of the patient], when the medical-art practitioner inquires as to the result of the medicine and the altered condition of the patient, all he needs to do with his new disease finding is refer to the original list of symptoms and omit those that have improved, note what is still present, and add whatever has, perchance, come up in the way of new ailments.

Once the totality of symptoms have been chosen the next step is the selection of the remedy. Most homeopaths use a computer software version of a repertory. A repertory is a valuable index, it is a directory of the symptoms of the Materia Medica arranged in a particular

form providing grading's of each remedy. Even though the repertory may point to a specific medicine it is not the final decision. The sole purpose of the repertory is intended as a guide. To further read the Materia Medica and compare other medicines alike before obtaining the simillimum. A simillimum is the most suitable homeopathic remedy for a certain case of disease.

In §118 in the Organon of the Medical Art, Hahnemann explains that,

Every medicine exhibits particular actions in the human body which do not come about in exactly the same way from any other medicinal substance of a different kind. (p. 150)

Hahnemann in §120 discusses that to distinguish a medicine power, one needs to be able to differentiate among other similar medicines. In turn, this lessens the chance any errors are made when prescribing for the use of a disease.

Therefore the medicines upon which the life and death, the disease and health of human beings depend must be exactly, painstakingly distinguished from one another. For this reason, through careful, pure experiments, they must be tested as to their powers and true actions in the healthy body so that we may become exactly acquainted with them and avoid every mistake in their use with diseases, since only an apt selection of medicine can quickly and permanently restore the greatest of earthly blessings, the well-being of body and soul. (p. 151-152)

PATIENT CASES

The following cases are taken from the book 'Thinking Hands' by Gunaratne and Yuen (2015). I have chosen three particular cases as they address concerns of acute and severe chronic ailments. Moreover, I will provide a summary of the steps involved to take a proper consult and thus, assess a case to arrive at an appropriate remedy. Realistically, these cases require additional information such as a medical history and more in-depth case taking questions like sensation, location, modalities etc. in order to have a clear picture of the patient's totality of symptoms.

Case #1 Helena Dell & her Jaw

1) Introduction & Central Issue of Helena’s Case (p. 29)

Helena was a student at the University of Guelph-Humber degree in the movie and television industry. In 2011, Helena was in her frosh year when she began to experience pain in her jaw.

Helena wore braces for three years and after removing them she began to experience pain almost daily from morning to night. Helena’s jaw would lock periodically and this continued for an additional two years. By 2013, she had difficulty opening her mouth. This caused her to have difficulties eating and talking. At this point, she was only able to open her mouth half way to chew her foods such as pizza and found it difficult to masticate tough foods like meat.

Throughout the three years of wearing braces she did not like to smile because she felt self-conscious. Although, once the braces were removed she felt more confident and began to smile.

Helena decided to seek treatment for her jaw problem from three different practitioners, a massage therapist, a dentist and an osteopath. Her first treatment was with a massage therapist where she did not obtain any signs of relief. Helena felt that the massage therapist was aggressive and she said “it hurt and was painful”. In addition, Helena also took advice from her dentist where he suggested that she might need to wear braces again and a night guard to fix her jaw. (There was no reference of

her wearing braces a second time only mention of a night guard). Following this, she was referred to an osteopath by her dentist.

Diagnosis by the Osteopath:

During Helena’s assessment by the osteopath he noted that her temporomandibular joints (TMJ) was stiff and she had limitations in opening her mouth, about 10mm. Also, mentioned was that Helena’s jaw deviated to the left upon opening her mouth. Fortunately, after only 5 treatments her problem was corrected, she felt better and has not returned.

Etiology: Jaw began to click and she experienced pain in her jaw with limitations to opening her mouth after the removal of her braces.

2) Characteristic Symptoms of Helena’s Case

CHARACTERISTIC SYMPTOMS OF HELENA’S CASE	
SYMPTOMS	REASON FOR SELECTION
1. Clicking & limitation of opening her mouth	• Etiology
2. Constant pain of TMJ (day & night)	• Modality
3. Self-confidence	• Mental Sx
4. Stiff jaw	• Characteristic Sx
5. Jaw deviated to left	• Characteristic Sx

3) Repertory Chart of Helena’s Case

The screenshot shows a software interface for a homeopathic repertory. On the left, a list of symptoms is displayed under 'Clipboard 1':

- 1. FACE - PAIN - Jaws - Joints - opening the mouth agg. (13) 1
- a 2. FACE - PAIN - Jaws - Joints (62) 1
- a 3. FACE - PAIN - Jaws - sore (7) 1
- 4. MIND - CONFIDENCE - want of self-confidence (205) 1
- 5. GENERALS - STIFFNESS - Joints (34) 1

On the right, a grid shows the match for these symptoms across 16 remedies. The remedies listed are: caust., bry., coloc., op., rhus-t., dulc., sep., alum., am-m., ang., bell., calc., dros., hep., staph., anac. The grid cells contain numbers representing the degree of match, with some cells highlighted in yellow or orange to indicate higher values.

	caust.	bry.	coloc.	op.	rhus-t.	dulc.	sep.	alum.	am-m.	ang.	bell.	calc.	dros.	hep.	staph.	anac.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	1
4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2
9	5	5	5	5	4	4	3	3	3	3	3	3	3	3	3	4
1. FACE - PAIN - Jaws - Joints - opening the mouth agg. (13) 1	3				1		1	1				1	1			
a 2. FACE - PAIN - Jaws - Joints (62) 1	2	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1
a 3. FACE - PAIN - Jaws - sore (7) 1	2															
4. MIND - CONFIDENCE - want of self-confidence (205) 1	1	2	1	1	2	2	1	1	1	1	1	1	1	1	1	3
5. GENERALS - STIFFNESS - Joints (34) 1	3	1	3	3	1		2			1	1	1			1	

At the bottom of the interface, it shows '5 symptom(s) / 252 remedies', 'Sum of symptoms (sorted degrees)', 'No limitation', and 'All remedies'.

4) Selection of Remedy for Helena’s Case

The selection which appeared best in Helena’s case is the remedy Causticum. This remedy has similar symptoms that Helena is experiencing like:

- Stiffness of joints
- Pain in jaw with difficulty opening her mouth
- Cracks of joints

Given the amount of information available I would suggest the following:

REMEDY & DOSE: Causticum 200C, dry dose
ADMINISTRATION: 2 pellets one time daily for 2 days, only if necessary
Follow up Appointment: In one week, sooner if necessary to re-assess

5) Advice on Life Style Changes

This is an example of §7 discussed by Hahnemann were the etiology of Helena's illness occurred from her wearing braces. In order, to help the patient restore health, I would recommend combination therapy between a homeopath and osteopath. Homeopathy can help with the management of pain including the physical and mental component. As well as, initiate healing of the body to restore balance, function and harmony without any invasive measures. However, the patient also needs intervention from an osteopath where they can align and correct the structural defects of TMJ caused by the braces. If left untreated this situation could have escalated towards a chronic problem. Thankfully, it only took 5 treatments and the patients' problem was corrected.

Additional Advice for Helena:

- For the patient to cut food into smaller pieces and/or chew softer foods
- Eat more fruits, vegetables and lean meats. Avoid processed foods such as sugars, fats as this will help decrease inflammation in her body
- Exercises to strengthen the mandible
- To engage in physical exercise such as walking, swimming to avoid stiffness of muscles
- Apply ice or warm applications for the discomfort
- To learn coping mechanisms in how to handle day to day pain

Case #2 Marissa Lang & her Lower Back

1) Introduction & Central Issue of Marissa's Case (p. 55)

Marissa lived in Quebec at the time of her back injury. Her back pain began in high school when Marissa's "back went out a few times". Her injury began to worsen when she was in her twenties. One day while attending university she fell on her lower back. Eventually, Marissa began to experience PTSD (post-traumatic stress disorder) as a result of her back pain. Some other conditions that she endured was difficulties standing for long periods of time and once had to prop herself up against a clothing rack when she was at a mall. Unfortunately, while still living in Quebec any type of medical physician she saw for treatment only advised her to take "pain killers" for her problem.

Prior to moving to Toronto in 2002, her family doctor, who was open to alternative medicine suggested for her to seek treatment from an osteopath. Upon arriving to Toronto she located an osteopath and began treatment.

Diagnosis by the Osteopath:

During the assessment the osteopath noted that Marissa had difficulty walking into his office and standing. Some other medical conditions that were noted were weight gain and hypertension from lack of exercise ever since her injury. Her visits consisted of weekly treatments, which gradually diminished to monthly visits. Marissa had improvements and learned a great deal from her osteopath's treatment.

Etiology: Fell down on her lower back when she was in her 20's

Concomitant: PTSD and back injury

2) Characteristic Symptoms of Marissa's Case

CHARACTERISTIC SYMPTOMS OF MARISSA'S CASE	
SYMPTOMS	REASON FOR SELECTION
1. Pain in lower back	• Etiology
2. Despair of health	• Concomitant: PTSD & injury
3. Difficulty standing for long	• Modality
4. Difficulty walking	• Characteristic Sx

3) Repertory Chart for Marissa's Case

The screenshot shows a repertory chart for Marissa's case. The interface includes a search bar, a list of symptoms on the left, and a grid of remedies with their corresponding degrees for each symptom. The symptoms are: 1. BACK - PAIN - Lumbosacral region (42) 1, 2. MIND - DESPAIR (252) 1, 3. BACK - PAIN - standing - agg. (64) 1, and 4. BACK - PAIN - walking - agg. (80) 1. The remedies listed are: aesc., sulph., agar., cocc., phos., ruta, carb-an., calc., puls., art-t., bry., coff., coloc., con., dulc., kali-c., lyc., nat-m., sep., and spon.

	aesc.	sulph.	agar.	cocc.	phos.	ruta	carb-an.	calc.	puls.	art-t.	bry.	coff.	coloc.	con.	dulc.	kali-c.	lyc.	nat-m.	sep.	spon.
1. BACK - PAIN - Lumbosacral region (42) 1	3	1	1	1	2	1	1		3	1			1		1					
2. MIND - DESPAIR (252) 1	1	3	1	2	1	1	1	3	2	2	1	3	3	2	3	1	3	3	2	3
3. BACK - PAIN - standing - agg. (64) 1	2	3	2	1	2	2	1	2	1		2	1		2	1	1	1	1	2	1
4. BACK - PAIN - walking - agg. (80) 1	3	2	2	2	1	2	1	1		2	2	1	1	1		3	1	1	1	1

4 symptom(s) / 301 remedies Sum of symptoms (sorted degrees) No limitation All remedies

4) Selection of Remedy for Marissa's Case

The selection which appeared best in Marissa's case is the remedy *Aesculus hippocastanum*. It had similar symptoms to Marissa's case such as:

- Agg by standing and walking
- Aching in lumbar and sacral regions with stiffness in the back
- Sacro-iliac problems since an injury or a fall

Given the amount of information available I would suggest the following:

REMEDY & DOSE:	<i>Aesculus hippocastanum</i> 1M, dry dose
ADMINISTRATION:	2 pellets one time only
Follow up Appointment:	In five days, sooner if necessary to re-assess

5) Advice on Life Style Changes

Marissa's injury also affected her physical and mental state. This is an example in §71 what a physician needs to cure. Due to the nature of her injuries, I would recommend combination therapy from a homeopath, osteopath and physiotherapist. The homeopath can help restore vitality in her body, help her physical and mental concerns while improving her health. An osteopath will help with the structural changes caused by her fall that lingered for many years. Lastly, a physiotherapist can prescribe appropriate exercise techniques that will strengthen her back muscles.

Additional Advice for Marissa:

- Improve her diet by adding more fruits, vegetables and lean protein to her menu
- Avoid eating processed foods, fats, sugar, carbohydrates as these choices may be contributing to inflammation in her body, the hypertension and weight gain
- Engage in an exercise program IE: walking, swimming, stretching etc.
- Educate herself in mind body awareness skills such as: positive thinking, setting daily affirmations, enquiring about relaxation methods like reiki, NLP (neurolinguistics programing)

Case #3 Palma Carboni & her Neck

1) Introduction & Central Issue of Palma's Case (p. 57)

Palma was a dental assist. One day while at work sitting in an acrobatic position something shifted diagonally in her neck. She had been working long hours and was stressed out. Also, Palma had never been in any prior accidents, injuries or falls and she used to exercise regularly.

Her Symptoms Consisted of:

Palma was in pain and at first when the incident happened she had limitations in turning her head. After 6 days, Palma was completely seized up, unable to turn her head. She had tingling and numbness in her hands and her shoulders felt like they were cemented to her ears. As the days went by the symptoms worsened and she had limited mobility in her body.

Types of Therapists Seen:

Palma saw a massage therapist who told her something was wrong and was unable to move anything. The massage therapist referred her to a naturopath who did acupuncture. The naturopath told Palma later that it took a while to place the acupuncture needles because Palma was seized up. The naturopath then referred her to chiropractor the following week. Palma also saw a physiotherapist.

After 2 years of treatment from all of the above therapists Palma was referred to an osteopath by her massage therapist.

Medical Doctors seen:

Palma went to the walk-in-clinic and had a CT done. When the doctor received her test results he, told her ‘if you get worse or you can’t breathe, you’d better go to a hospital emergency right away’. At this point Palma could not feel anything when she touched her neck. The doctor began telling her things like ‘if this happens or that happens, if you lose control of your bladder, etc.’ Her diagnosis was called cervical spondylolisthesis. Palma was getting scared not knowing what was going on and asked the doctor ‘Tell me what I need to do to get better’! The doctor wanted Palma to see a neurosurgeon. The neurosurgeon mentioned surgery and Palma said ‘No, to surgery unless it’s a life or death situation!’ The doctor wasn’t happy with the response and he changed his tone and said “You’re not in desperate need. You just have to exercise and you’ll be fine”.

Medications Taken & Modalities Used:

Medications did not help the pain (Tylenol two, Tylenol three, pain killers etc.). The narcotics made her drowsy and she also could not sleep. Palma used an ice pack and a hot water bottle for months to help with the pain.

Palma began treatment with an osteopath 2 years later after seeing the above therapists. After 4 years of treatment from her osteopath Palma saw gradual

improvements and felt better than when she first walked in the front door of the osteopath's office. Palma was grateful she sought treatment from her osteopath as this was a serious chronic condition. Palma just wanted to get better. A while after treatment from her osteopath, Palma could do half the things she used to. Prior to this incident Palma used to go to the gym and now just does simple exercises like goes to the pool. Her strength has increased and she is happy.

Diagnosis from the Osteopath:

Upon assessing Palma, she looked like a tin soldier, poorly nourished, her digestive tract was dysfunctional and her metabolic dysfunctions were toxic. She also suffered from hemorrhoids and was unable to sit. Palma was fortunate not to have had paralysis of any muscles.

The osteopath recommended her to change her diet as this would help decrease the inflammation in her body and eventually lessen her pain.

Etiology: Her vertebrae shifted diagonally causing pain in her neck. She seized up and could not turn her head.

Concomitant: Numbness and tingling in her hands

2) Characteristic Symptoms for Palma's Case

CHARACTERISTIC SYMPTOMS FOR PALMA'S CASE	
SYMPTOMS	REASON FOR SELECTION
1. Numbness & tingling in her hands	• Concomitant
2. Was stiff, looked like a tin soldier	• Characteristic Sx
3. Her neck was seized up & could not turn her head. She could not feel her neck when she touch it	• Etiology
4. In pain for months/years	• Characteristic Sx
5. Used an ice pack & a hot water bottle	• Modality
6. Stressed at work, worked long hours	• Mental Sx

3) Repertory Chart for Palma's Case

The screenshot shows a repertory chart for '3. Palma' with 7 symptoms and 18 remedies. The symptoms are listed on the left, and the remedies are listed at the top of the grid. The grid cells contain numerical values representing the degree of association between a symptom and a remedy. The values are color-coded: green for 1, yellow for 2, orange for 3, and red for 4. The remedy 'nux-v.' has a red '4' in the cell for symptom 7.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	cupr.	cocc.	nux-v.	rhus-t.	lyc.	phos.	sil.	calc.	ruta	sep.	bell.	verat.	lach.	acon.	kali-c.	hell.	aesc.	arn
1. EXTREMITIES - NUMBNESS - Hands (214)	2	3	2	2	3	3	2	2	2	1	1	1	2	2	3	1	1	
2. EXTREMITIES - TINGLING - Hands (103)	1	3	2	1	2	2	2	2	1	1	1	2	2	3	2	1	1	1
3. GENERALS - STIFFNESS (103)	3	1	1	3	1		1	1	2	2	1	1	1	1		3	1	2
4. BACK - PARALYSIS (40)	2	2	1	3	2	2	1		1	2		1			1		3	1
5. NECK - PAIN (117)	1	1	1	1	1	1	1	1	1	1	2	1	3	1	1	1	1	2
6. GENERALS - ANESTHESIA [= insensibility] (94)	1	1	1	1	1	2		1			1	1		2		2		
7. MIND - AILMENTS FROM - mental exertion (69)	3	1	4	1	1	1	2	1	1	1	1		2		2			1

7 symptom(s) / 357 remedies Sum of symptoms (sorted degrees) No limitation All remedies

4) Selection of Remedy for Palma's Case

This case is a perfect explain of a remedy not well represented or mentioned in the repertory chart. Hahnemann mentions this in §118 and §120 and noting the reasons why a homeopath should research and study the materia medica and not depend solely on the repertory.

This case is a serious chronic condition, which could have end in catastrophe for Palma. The selected remedy, which appeared best in Palma's case is *Hypericum perforatum*. My top priority for this case was to treat the numbness and tingling sensation as this is a severe sign that the nerves are affected and she could lose permanent feeling causing paralysis.

The remedy *Hypericum* is indicated for:

- Injuries to nerves, brain and spinal cord
- Stiff neck
- Spasms
- Ill effects of shock

Given the amount of information presented in this case I would suggest the following:

REMEDY & DOSE:	<i>Hypericum perforatum</i> 200C, liquid dose
ADMINISTRATION:	1 Tbsp once daily for one week
Follow up Appointment:	In 5 days or sooner to re-assess

5) Advice on Life Style Changes

This is a case where homeopathy can assist in different ways of treatment such as the nerves, stiffness, shock of the incident and bring the body to homeostasis.

Osteopathy will help the structural defects of her spine. Given that Palma's case needs special attention, she must continue to visit a medical doctor for close observation.

Additional Advice for Palma:

- I would recommend Palma to eat more of a nightshade diet. These foods do not cause inflammation and can decrease pain
 - Eat more vegetables, fruits and lean protein
 - Avoid sugars, fats, processed foods and carbohydrates
- Seek Treatments from
 - A physiotherapist for specific exercises related to her neck condition
 - Osteopath for management of vertebrae
- Exercises in a warm pool to loosen muscles and increase strength
- Learn coping techniques in how to handle pain
 - Learn to manage daily routines differently
- Palma must be under observation by her medical doctor and inform the doctor of any symptoms worsening or improving

HOMEOPATHIC REMEDIES FOR DIFFERENT PAIN SYMPTOMS

Remedies Related to TMJ Symptoms

REMEDIES RELATED TO TMJ SYMPTOMS	
DIFFERENT TYPES OF PAINS	REMEDIES
1. Face pain jaws joint opening the mouth agg (13)	alum. Am-c. am-m. CAUST. Cor-r. dros. Dulc. Hep. Nicc. Sabad. Verat. Zinc.
2. Mouth open difficult to (23)	<i>Caust. LACH. Merc-c. Phos.</i>
3. Face pain jaws joints (62)	<i>Arum-t. Bapt. Bry. Caust. Cham. Rhus-t. Stry.</i>
4. Face pain jaws (104)	<i>Aids. Alumn. CAUST. Nux-v. Rhus-v. Sping.</i>
5. Face pain jaws joints chewing agg (16)	acon. Alum. Am-c. am-m. bar-c. bell. Calc. coc-c. cor-r. dulc. Kali-s. puls. Sil. Spig. V-a-b. zinc.
6. Face pain jaws upper (88)	<i>Amph. Calc-ar. Calc-caust. Calc-p. Calc-s. Cham. Euph-a. Kali-bi. Kali-cy. Kali-i. Kreos. Lyc. Spig. Spong. Verb.</i>
7. Face pain jaws lower (176)	<i>Agn. Am-m. Anac. Anthraci. Ars. AUR. Bell. Bov. Bry. Carb-an. Carb-v. Caust. Cocc. Colch. Coloc. Dulc. Gels. Kalm. Lach. M-ambo. M-arct. Meny. Merc. Mez. Nat-m. Nux-v. Phos. Plat. Rat. Rhus-t. Sars. Sel. Sil. Spig. Thuj. Verb.</i>

REMEDIES RELATED TO TMJ SYMPTOMS	
TYPES OF SENSATIONS	REMEDIES
8. Face stiffness jaws (91)	<i>Arum-t. CAUST. Cupr. Cupr-act. Gels Hyper. Ign. Kali-i. Lach. Merc. Merc-c. Merc-i-f. Mez. Morph. Nat-c. NUX-V. Phyt. RHUS-T. Sil. STRY. Ther. Verat.</i>
9. Face stiffness jaws lower (89)	<i>CAUST. Cupr. Cupr-act. Gels. Hyper. Ign. Kali-i. Lach. Merc. Merc-c. Merc-i-f. Mez. Morph. Nat-c. NUX-V. Phyt. RHUS-T. Sil. STRY. Ther. Verat.</i>
10. Face pain jaws drawing pain (31)	<i>Alumn. Aur. CARB-V. Con. Nux-v. Rhus-v.</i>
11. Face pain jaws lower drawing pain (65)	<i>Sil.</i>
12. Face pain jaws burning (5)	<i>anac. Bov. Caust. Daph. Fl-ac.</i>
13. Face pain jaws pressing pain (5)	<i>dulc. Ruta symph. Tritic-vg. Vanil.</i>
14. Face pain jaws stitching pain (15)	<i>acon. Agath-a. aids. Ambr. Arge-pl. berb. Carb-an. Cimx. Ham. Heroin. Kalm. Op. thuj. Verat. Zinc.</i>

Remedies Related to Lumbosacral Symptoms

REMEDIES RELATED TO BACK PAIN SYMPTOMS	
LOCATIONS	REMEDIES
1. Back pain in lumbosacral region (42)	AESC. <i>Cimic.</i> ONOS. <i>Phos.</i> PULS.
2. Back pain in coccyx (144)	APIS. <i>Bry. Calc. Calc-caust. Calc-p. Cann-s. Canth. Carb-an. Carb-v. Carbn-s.</i> CAUST. <i>Cist. Con. Euph. Ferr-p. Fl-ac. Gamb. Hyper. Kali-bi. Kali-c. Kali-p.</i> KREOS. <i>Lach. Mag-c. Mag-p. Med. Merc. Nit-ac. Par. Petr. Phos. Rhus-t. Ruta. Sep. Sil. Thuj.</i> ZINC.
3. Back pain in sacral region (236)	AESC. AGAR. <i>All-c. Alum. ANT-T. Apis. Arg-met. Ars. Bapt. Bar-c. Bell. BERB. Bry. CALC. Calc-p. Caps. Carb-an. Carb-v. Caust. Chin. Cimic. Cimx. Coloc. Dios. Dulc.</i> GELS. <i>Graph. Helon. Hep. Hyper. Ign. Kali-bi. Kali-c. Kali-p. Kreos. Lac-c. Lach. Laur. Lept. Lil-t. Lob. LYC. Lyss. Med. Merc. MUR-AC. Nat-m. Nat-s. NIT-AC. NUX-M. Nux-v. ONOS. Phos. Phyt. Podo. Psor. PULS. Rhus-r. Rhus-t. Ruta Sabad. Sec. SEP. Sil. Sulph. TELL. Thuj. VARIO.</i>
4. Back pain spine sore (110)	AGAR. <i>Ang. Arn. Atro. BELL. Bell-p. Benz-ac. Calc. Carb-ac. Chel. Chin. CHININ-S. Cimic. Cocc. Crot-c. Cupr. Dios. Glon. GRAPH. Gua. Hep. Ign. Kali-ar. Kali-c. KALI-P. Lac-c. LACH. Lec. LYSS. Med. Naja Nat-ar. Nat-c. NAT-M. NAT-P. Nat-s. NUX-V. Ol-j. Ph-ac. PHOS. Phyt. Plat. Puls. Ran-b. Rat. Rhus-t. RUTA. Sang. Sars. Sep. SIL. Tarent. Tell. THER. Thuj. Vib. ZINC.</i>
5. Back pain labor like (15)	<i>acon. Aloe Carb-v. Cocc. Coff. eup-pur. ferr. KALI-C. Kreos. Lyc. Nux-v. PULS. SABIN. sec. Sep.</i>
6. Back pain lameness (36)	<i>abrot. Aesc. agar. Alum. asar. BERB. Cocc. cupr-ar. Dios. Dulc. ferr. fl-ac. helon. hep. Hyper. kali-br. kali-c. kali-n. kali-p. lyss. nat-c. NAT-M. Nux-v. phos. phys. plb. puls-n. rhus-t. RUTA. sel. sil. spig. sulph. verat. zinc. zing.</i>

REMEDIES RELATED TO BACK PAIN SYMPTOMS	
LOCATIONS	REMEDIES
7. Curvature of spine (61)	<i>Aesc. ASAF. Bar-m. CALC. CALC-F. Calc-p. CALC-S. Carb-v. Con. Lyc. Merc. MERC-C. PH-AC. Phos. Puls. SIL. SULPH.</i>
8. Back caries of spine (5)	<i>Calc. ph-ac. Puls. Sil. syph.</i>
AGG SYMPTOMS	REMEDIES
9. Back pain standing agg (64)	<i>Aesc. Agar. Bry. Calc. Con. Kali-s. Ph-ac. Phos. Ruta. Sep. SULPH. VALER.</i>
10. Back pain walking agg (80)	<i>AESC. Agar. Ant-t. Asaf. Bry. Caust. Chel. Cocc. Colch. KALI-C. Mag-m. Psor. RAN-B. Ruta. Sars. Sulph. Thuj.</i>
11. Back pain walking in open air agg (9)	<i>arn. galeoc-c-h. kali-c. merc. nit-ac. Sil. ter. tritic-vg. Zinc.</i>
12. Back pain sitting agg (78)	<i>Caust. Chin. Kali-bi. Meny. Petr. Puls. Rhus-t. Ruta. Sel. Valer. Zinc.</i>
13. Back pain stooping agg (52)	<i>Aesc. Borx. Caust. Lyc. Meny. Puls. Verat.</i>
14. Back pain bending backwards agg (20)	<i>arg-met. bar-c. Calc. Calc-p. Chel. Cimic. con. dios. dulc. eug. hydrog. kali-c. lam. lim. mang. plat. puls. sabin. sel. stann.</i>
15. Back pain bending forward agg (15)	<i>abrom-a. cadm-met. camph. dulc. ham. nat-sil. pert-vc. petr-ra. Pic-ac. pieri-b. ruta. sep. spong. tritic-vg. vanil.</i>
16. Back pain turning agg (23)	<i>Agar. alum-sil. am-m. bov. Bry. calc. dios. dulc. hep. kali-bi. kali-s. merc. Nux-v. puls. Sanic. sars. sep. sil. spong. thuj. tritic-vg. vanil. verat.</i>
17. Back pain lying agg (50)	<i>Arn. Berb. Chin. Cur. Ferr. Ign. Kreos. Nux-v. Puls. Rhus-t.</i>

REMEDIES RELATED TO BACK PAIN SYMPTOMS	
AGG OF SYMPTOMS	REMEDIES
18. Back pain lying on back agg (36)	am-m. ap-g. apis ars. bell. berb. bry. carb-an. <i>Chin.</i> cina COLOC. cur. dulc. euph. euphr. guat. hyos. ign. kali-n. kali-p. lyc. mag-m. mag-s. nat-m. nit-ac. prun. psor. puls. ruta. sep. spong. stann. staph. tell. tritic-vg. zinc.
19. Back pain lying on side agg (10)	cina. des-ac. dulc. ign. <i>Nat-s.</i> polys. puls. ruta. staph. vanil.
20. Back pain cold air agg (15)	acon. agar. bacis-7. bar-c. <i>Bry. Dulc.</i> merc. nit-ac. <i>Nux-v. Rhod. Rhus-t.</i> sabad. sep. sulph. tritic-vg.
AMEL OF SYMPTOMS	REMEDIES
21. Back pain sitting amel (15)	aeth. bell. borx. caust. dulc. mag-c. meny. mur-ac. plb. sars. spong. staph. stroph-s. tritic-vg. vanil.
22. Back pain standing amel (10)	aloe. <i>Arg-n. Bell.</i> calc. caust. mur-ac. staph. sulph. thuj. tritic-vg.
23. Back pain bending backwards amel (22)	abrom-a. acon. aeth. am-m. bell. cocc. cycl. cypra-eg. dulc. eupi. fl-ac. hura lac-c. lach. mang. petr. <i>Plb.</i> puls. rhus-t. sabad. sabin. sil.
24. Back pain bending forward amel (16)	chel. des-ac. eug. hydrog. kali-c. lob. meny. nat-ar. ph-ac. <i>Plb.</i> puls. sang. sec. sep. sulph. thuj.
25. Back pain lying amel (28)	agar. alum-sil. am-m. aq-mar. arg-met. ars. asar. both-ax. bry. cob. dream-p. dulc. kali-c. kali-m. kola <i>Nat-m. Nux-v.</i> petr-ra. <i>Phos.</i> plac-s. <i>Psor. Ruta.</i> sars. sep. sil. tritic-vg. urol-h. vanil.
26. Back pain lying on back amel (24)	aesc. ambr. bufo cain. casc. chin. cob. colch. dulc. equis-h. gnaph. ign. <i>Kali-c.</i> lach. NAT-M. nux-v. <i>Phos.</i> puls. <i>Rhus-t.</i> RUTA. sanic. sep. sil. zinc.

REMEDIES RELATED TO BACK PAIN SYMPTOMS	
AMEL OF SYMPTOMS	REMEDIES
27. Back pain lying on something hard amel (12)	am-m. bell. eupi. <i>Kali-c.</i> lyc. mag-m. NAT-M. puls. <i>Rhus-t.</i> sanic. <i>Sep.</i> stann.
28. Back pain lying on a pillow amel (3)	<i>Carb-v.</i> dulc. <i>sep.</i>
29. Back pain lying on side amel (6)	kali-n. nat-c. nat-s. nux-v. <i>Puls.</i> zinc.
30. Back pain walking amel (450)	ARG-MET. <i>Arg-n.</i> Bell. DULC. <i>Kali-c.</i> <i>Nux-v.</i> <i>Ph-ac.</i> <i>Puls.</i> RHUS-T. <i>Ruta.</i> <i>Sep.</i> Sulph. Zinc.
31. Back pain walking slowly amel (2)	FERR. <i>Puls.</i>
32. Back pain warm applications amel (14)	bacls-7. calc-f. caust. cinnb. dream-p. galeoc-c-h. kola lat-h. <i>Nux-v.</i> phos. pin-con. RHUS-T. <i>ruta spong.</i>
SENSATIONS	REMEDIES
33. Back pain burning (98)	<i>Agar.</i> ARS. <i>Bar-c.</i> Bism. <i>Carb-an.</i> Glon. <i>Kali-cKali-p.</i> Kalm. Kreos. Lach. Lyc. Med. Merc. <i>Nux-v.</i> <i>Ph-ac.</i> PHOS. <i>Pic-ac.</i> <i>Sep.</i> Sil. SULPH. Thuj. Zinc.
34. Back numbness (62)	<i>Agar.</i> Ars. Calc-p. Chel. Cocc. Graph. Nat-m. Phos.
35. Back formication (105)	ACON. <i>Agar.</i> All-c. Arn. Ars. Cham. Cocc. Lach. Lyc Nat-c. <i>Nux-v.</i> Osm. <i>Ph-ac.</i> PHOS. <i>Sal-ac.</i> SEC. <i>Viol-t.</i>
36. Back paralysis (40)	AESC. Chin. Cocc. Cupr. Dulc. Gels. Hep. Ip. Irid-met. Led. Lyc. Phos. RHUS-T. <i>Sep.</i> Stry.
37. Back pain tearing (60)	<i>Aesc.</i> Arn. Ars. Calc-p. <i>Canth.</i> Caps. Cham. Chel. Chin. Cina Lyc. Mang. NIT-AC. <i>Nux-v.</i> <i>Ph-ac.</i> PHOS. Sil. Stann.

REMEDIES RELATED TO BACK PAIN SYMPTOMS	
SENSATIONS	REMEDIES
38. Back pain drawing pain (107)	<i>Agar. Alum. Ang. Ars. Bamb-a. Bry. Canth. Caps. Carb-an. Carb-v. CARD-M. Cham. Chel. Chin. CIMIC. Colch. Graph. Guaj. Hep. Hyper. Kali-c. Lach. Lil-t. Lyc. Merc. Nat-m. NUX-V. Petr. Phos. Puls. Sabin. Stront-c. Sulph. Thuj.</i>
39. Back pain stitching pain (171)	<i>AGAR. Alum. Bamb-a. Bell. BERB. Bov. BRY. Calc. CAUST. Cham. Chin. Cimic. Colch. Con. Dulc. Guaj. Hep. Ign. Kali-bi. KALI-C. Kali-p. KALI-S Kreos. Lach. LYC. Mag-p. Merc. Mez. Mur-ac. Nat-c. NIT-AC. Nux-v. Par. Phyt. Plat. Puls. Rhus-t. Sanic. Sars. Sep. Sil. Spig. Stann. Sulph. THUJ.</i>
40. Back pain boring pain (20)	<i>acon. agar. Agath-a. ang. asaf. bar-c. Bism. brom. carb-ac. cocc. dulc. Ham. kola laur. Lyc. mag-p. nat-c. psor. ruta thuj.</i>
41. Back pain dull pain (81)	<i>Agar. Ant-t. Arn. Berb. Calc. Calc-f. Cimic. Cob. Cocc. Helon. Kali-c. Kalm. LycNat-m. Nux-v. Ol-j. Ox-ac. Phyt. Puls. Pulx. Rhus-t. Sabal. Sep. Staph. Still. Sulph. Ter. Vib.</i>
42. Back pain lancinating (25)	<i>Berb. Coloc. Nat-s. Nit-ac. Scol. Stry.</i>
43. Back pain cutting pain (48)	<i>Alum. Arg-n. Bell. Calc-p. Coloc. Con. Eup-pur. Gels. Kali-bi. Lith-c. NAT-M. Nat-s.</i>
44. Back pain gnawing pain (5)	<i>agar. Alum. hell. lil-t. stry.</i>
45. Back pain aching (210)	<i>Aesc. Aloe. Arg-n. Ars. Asaf. Bapt. BELL. Berb. Bism. BRY. Buteo-j. Calc. Cann-i. Carb-an. Carbn-s. Carl. Casc. Cob. Con. Cupr-ar. EUP-PER. EUP-PUR. Gels. GRAPH. IP. Kali-bi. Kali-c. Kali-s. Kalm. Lil-t. Lyss. Morph. MUR-AC. Nat-c. NAT-M. Nat-p. NUX-V. Phos. Pic-ac. Psor. PULS. RAN-B. Rhus-t. Ruta. Sec. SEP. Sil. Spect. Sulph. TELL. Ter.</i>
46. Back pain labor like (15)	<i>acon. Aloe Carb-v. Cocc. Coff. eup-pur. ferr. KALI-C. Kreos. Lyc. Nux-v. PULS. SABIN. sec. Sep.</i>
47. Back pain lameness (36)	<i>Aesc. Alum. BERB. Cocc. Dios. Dulc. Hyper. NAT-M. Nux-v. RUTA.</i>
48. Back spasms dorsal region (33)	<i>Ang. Bell. Cocc. Euph. Lyc. Sep. Sil.</i>

REMEDIES RELATED TO BACK PAIN SYMPTOMS	
SENSATIONS	REMEDIES
49. Back spasms (60)	<i>Ang. Ars. Bell. alc-p. Cham. Cocc. Crot-c. Euph. Ign. Lach. Lyc. Mygal. Nat-m. Nat-s. Nux-v. Phys. Puls. Rhus-t. Sep. Sil. Stry.</i>
50. Back constriction or band (63)	<i>Aml-ns. Bell. Bry. Cham. Cocc. Dulc. Glon. Lach. Nux-m.</i>
51. Extremities numbness legs (166)	<i>Acon. Alum. Am-c. Ant-c. Apis. Aran. Arg-met. Arg-n. Ars. Calc. Calc-p. Carb-an. Carbn-s. Caust. Cocc. Coloc. CON. Crot-h. Crot-t. Eup-pur. GRAPH. Ham. Hyper. Kali-c. Lil-t. LYC. Merc. Merc-c. Nat-m. NUX-V. Onos. Op. Ox-ac. Phos. Phys. Phyt. PLAT. Psor. Puls. RHUS-T. Sep. SIL. Tarent.</i>
52. Extremities tingling legs (83)	<i>Alum. Calc. Calc-p. Carb-an. Carbn-h. Caust. Cocc. Crot-h. Gnaph Kali-c. Phos. Rhus-t. Sec. Sulph. Trios.</i>

Remedies Related to Cervical Region Symptoms

REMEDIES RELATED TO NECK PAIN SYMPTOMS	
SENSATIONS	REMEDIES
1. Extremities numbness hands (214)	<i>Acon. Apis Ars. Calc. Camph. CARB-AN. Carb-v. Carbn-s. Caust. Cimx. Coca. COCC. Colch. Con. CROT-C. Crot-h. Cupr. Dulc. Ferr. Fl-ac. Gels. GRAPH. Hyos. Hyper. Kali-ar. KALI-C. KALI-N. Kali-s. Lac-c. Lach. Lat-m. LYC. Mez. Nat-m. Nit-ac. Nux-v. Onos. Op. PHOS. Plb. Psor. Puls. Rhus-t. Ruta. Sec. Sil. Spig. Thuj. Zinc.</i>
2. Extremities tingling hands (103)	<i>ACON. Alum. Apis. Calc. Carb-an. Carbn-s. Chin. COCC. Kali-c. Kali-n. Lach. Lyc. Mag-c. Mez. Nit-ac. Nux-v. Ph-ac. Phos. Rhod. Sel. Sil. Verat.</i>
3. Neck pain boring pain (3)	<i>bar-c. cina. tarax.</i>

REMEDIES RELATED TO NECK PAIN SYMPTOMS	
SENSATIONS	REMEDIES
4. Back pain cervical region aching pain (58)	<i>Aesc. Bry. Calc. Calc-caust. Cimic. GELS. Guaj. Lach. Merl. PHYT. Syph. Verat-v. Zinc.</i>
5. Back pain cervical region burning (38)	<i>Apis. Ars. Bar-c. Calc. Caust. Med. MERC. Nat-s. PH-AC. Phos. Rhus-t.</i>
6. Back pain cervical region compressed as if (4)	<i>crot-h. nat-pyru. pip-m. tritic-vg.</i>
7. Back pain cervical region constricting pain (5)	<i>dulc. Ferr. Glon. myos-a. symph.</i>
8. Back pain cervical region cramping (29)	<i>Asar. Calc-p. CIC. Spong.</i>
9. Back pain cervical region cutting pain (13)	<i>berb. canth. dig. eup-per. glon. graph. grat. Kali-bi. naja. nat-sil. samb. stry. thuj.</i>
10. Back pain cervical region drawing pain (98)	<i>Aesc. Agar. Alum. Am-c. Ang. Bell. Bry. Calc-p. Carb-v. CHEL. Chin. CIMIC. Coloc. Ferr. Kali-n. Lil-t. Lyc. Merc. Nat-c. Nat-m. Nat-s. Nux-m. Nux-v. Petr. Puls. Rhod. Staph. Sulph. THUJ.</i>
11. Back pain cervical region jerking pain (5)	<i>aeth. aur. caps. Chin. tarax.</i>

REMEDIES RELATED TO NECK PAIN SYMPTOMS	
SENSATIONS	REMEDIES
12. Back pain cervical region nape of neck drawing pain (46)	<i>Ant-c. Carb-v. Lyc. Merc. Nux-v. Puls. Rhod.</i>
13. Back pain cervical region stitching pain (78)	<i>Bov. Carb-an. Chin. Nat-m. Nat-p. Rhus-v. Sars. Stann. Stry. Sulph.</i>
14. Back pain cervical region pressing pain (65)	<i>Anac. Ars. Bar-c. BELL. Carb-v. Chel. Cocc. Coloc. Elaps. Glon. Lach. Laur Nat-m. Nat-s. PAR. PHOS. Puls. Staph.</i>
15. Back pain cervical region sore (70)	<i>Aesc. Agar. Ars. Bad. Bell. Carb-ac. Ferr. Gels. Kalm. Lach. Nat-m. NAT-S. Nit-ac. PH-AC. Phos. SIL. Thuj. Zinc.</i>
16. Back pain cervical region nape of neck aching (16)	<i>adon. aesc. ang. bapt. caust. cocc. Con. gels. guaj. Par. ph-ac. pic-ac. rad-br. stront-c. verat-v. zinc.</i>
17. Back spasms cervical region (12)	<i>ant-c. arn. asar. cann-i. Cic. Cimic. ign. nat-m. nux-v. spong. stram. Stry.</i>
18. Neck constriction or band (14)	<i>Apis. arn. asar. bell. brom. chel. dulc. ferr. glon. iod. LACH. olnd. op. sep.</i>
19. Neck contraction (11)	<i>am-c. asar. cic. coloc. con. gels. iod. laur. olnd. sep. verat.</i>
20. Neck cracking noise (14)	<i>Calc. chel. cocc. M-ambo. M-arct. nat-c. nit-ac. nux-v. petr. psor. puls. spong. stann. sulph.</i>

REMEDIES RELATED TO NECK PAIN SYMPTOMS	
SENSATIONS	REMEDIES
21. Back paralysis (40)	<i>AESC. Chin. Cocc. con. Cupr. Dulc. Gels. Hep. Ip. Irid-met. Led. Lyc. Phos. RHUS-T. Sep. Stry.</i>
GENERAL SYMPTOMS	REMEDIES
22. Neck pain (117)	<i>Arn. Asaf. Asar. Bell. Carb-v. LACH. Merc. Rhod.</i>
23. Back paralysis (40)	<i>AESC. Chin. Cocc. con. Cupr. Dulc. Gels. Hep. Ip. Irid-met. Led. Lyc. Phos. RHUS-T. Sep. Stry.</i>
24. General anesthesia - insensibility (Ice & heat used for pain control like an anesthesia) (94)	<i>Acon. Anac. Ars. Camph. Caps. Caust. Cic. Croc. Eucal. Hell. HYDR-AC. Hyper. Kali-i. MUR-AC. Nux-m. Olnd. Op. Phos. Plat. PLB. Sec. Stann. Verat-v.</i>
AGG SYMPTOMS	REMEDIES
25. Back pain cervical region bending head backwards agg (16)	<i>Bad. bell. chel. cic. cinnb. cupr. cycl. dig. dulc. hep. kali-c. kali-p. lachn. laur. lyc. valer.</i>
26. Back pain cervical region bending head forward agg (11)	<i>camph. cimic. dulc. graph. kali-p. olib-sac. rad-br. rhus-t. stann. tritic-vg. vanil.</i>
27. Back pain cervical region motion agg (31)	<i>Aesc. Bell. Coloc. Rhus-t.</i>

REMEDIES RELATED TO NECK PAIN SYMPTOMS	
AGG SYMPTOMS	REMEDIES
28. Back pain cervical region motion head of agg (58)	<i>Aesc. Agar. Alum. Bamb-a. Bell. Bry. Chel. Cocc. Coloc. Dros. Hyper. Kalm. Ran-b. Rhus-t. Sulph. Tarent.</i>
29. Back pain cervical region turning head agg (40)	<i>Bamb-a. Bry. Calc. Ran-b.</i>
30. Back pain cervical region stooping agg (16)	<i>agar. ant-c. berb. borx. canth. gran. graph. kali-bi. lac-ac. manc. nux-v. par. Rhus-t. spig. spong. sulph.</i>
31. Back pain cervical region sitting agg (9)	<i>ant-c. aur-m. kali-s. lyc. lyss. nat-c. nux-v. ruta. tritic-vg.</i>
32. Neck cold air agg (5)	<i>ars. bar-c. calc-p. chinin-s. gels.</i>
33. Back pain cervical region air draft of agg (6)	<i>calc-f. CALC-P. cemic. dulc. podo. RHUS-T.</i>

REMEDIES RELATED TO NECK PAIN SYMPTOMS	
AMEL SYMPTOMS	REMEDIES
34. Back pain cervical region bending head forward amel (4)	gels. laur. ruta. sanic.
35. Back pain cervical region motion amel (11)	alum. aur-m-n. morg-p. olib-sac. rhod. ruta spig. <i>Sulph.</i> tritic-vg. v-a-b. vanil.
36. Back pain cervical region pressure amel (7)	lac-leo. petr-ra. <i>Prot.</i> psor. tritic-vg. xan. zinc.
CONDITIONS/LOCATIONS	REMEDIES
37. Back cervical stenosis (1)	phos.
38. Back cervical region complaints of vertebrae (19)	acon. anac. arn. calc. carb-v. <i>Con.</i> dig. guaj. kali-n. lach. mang. nat-c. nit-ac. nux-v. puls. sabin. sep. stann. sulph.
39. Back cervical region complaints of nape of neck (121)	<i>Am-c.</i> BAR-C. BELL. CALC. <i>Carb-v.</i> <i>Caust.</i> <i>Cimic.</i> <i>Gels.</i> <i>Kali-c.</i> <i>Kalm.</i> <i>Lach.</i> <i>Lyc.</i> <i>Nat-c.</i> NAT-M. <i>Nit-ac.</i> NUX-V. <i>Petr.</i> <i>Phos.</i> <i>Phyt.</i> <i>Puls.</i> RHUS-T. SEP. SIL. SULPH.
40. Back curvature of spine (61)	<i>Aesc.</i> ASAF. <i>Bar-m.</i> CALC. CALC-F. <i>Calc-p.</i> CALC-S. <i>Carb-v.</i> <i>Con.</i> <i>Lyc.</i> <i>Merc.</i> MERC-C. PH-AC. <i>Phos.</i> <i>Puls.</i> SIL. SULPH.

Remedies Related to Inflammation of Joints

REMEDIES RELATED TO INFLAMMATION OF JOINTS	
RUBRIC'S	REMEDIES
1. GENERALS - INFLAMMATION - Joints; of: (183)	<i>ACON. Agn. Ang. Ant-t. APIS Arn Aur. BELL. Benz-ac. Brom. BRY. Calc. Caust. Colch. Dulc. Ferr-p. Form-ac. Gaul. Guaj. Iod. Kali-bi. Kali-c. Kali-i. Kalm. Kreos. Lac-ac. LED. Lith-be. Lyc. Mang. MED. Merc. Merc-c. Nat-m. Nat-s. Phyt. Pip-m. Psor. PulsRham-cal. Rhod. Rhus-t. Ruta. Sars. Sep. SIL. Stel. Sulph.</i>
2. GENERALS - INFLAMMATION - Joints; of - deformans; arthritis: (80)	<i>Am-p. Arn. Ars. Benz-ac. Brom. Calc. Caust. Cimic. Colch. Dulc. Guaj. Iod. Kali-i. Led. MED. Merc-c. Pip-m. Puls. Ruta. Sabin. Sil. Sulph. Thuj.</i>
3. GENERALS - INFLAMMATION - Joints; of - osteoarthritis: (5)	<i>bacls-7. cassia-s. dys. prot. rhus-t.</i>
4. GENERALS - INFLAMMATION - Joints; of - rheumatic: (18)	<i>acon. apis arn. asc-c. Bry. caust. chin. Chinin-s. cop. gaul. guaj. influ. lil-t. Merc. Puls. rad-br. Rham-cal. thyr.</i>
5. GENERALS - INFLAMMATION - Joints; of - rheumatic - acute: (3)	<i>asc-c. Chinin-s. guaj.</i>
6. GENERALS - INFLAMMATION - chronic: (2)	<i>kali-p. sil.</i>
7. GENERALS - INFLAMMATION - Muscles; of - fibromyalgia, fibromyositis: (1)	<i>Calen.</i>
8. EXTREMITIES - ARTHRITIC nodosities: (117)	<i>Aesc. Ant-c. APIS Aur. BENZ-AC. Brom. Bry. Bufo Cal-ren. CALC. CALC-F. Calc-p. Calc-s. CAUL. Caust. Cic. Clem. Colch. Dig. Elaps Form. GRAPH. Guaj. Hecla Kali-i. Kali-sil. LED. LITH-C. LYC. Meny. Merc. Nat-s. Puls. Rhod. Rhus-t. Sil. Staph. Sulph. Urt-u. Zinc.</i>

Remedies Related to Agg & Amel of Symptoms for Sciatica & Gout

REMEDIES RELATED TO AMEL OF SYMPTOMS FOR SCIATICA & GOUT	
RUBRIC'S	REMEDIES
1. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - cold - amel.: (2)	ars. puls.
2. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - cold - applications - agg.: (7)	<i>Ars. Bry. Mag-p. Nux-v. Phos. RHUS-T. ruta.</i>
3. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - walking - amel.: (27)	agar. am-m. ars. caps. <i>Coc-c. Dios. FERR. Ign. indg. Kali-bi. Kali-i. kali-p. kali-s. lac-h. LYC. mag-c. ox-ac. ph-ac. Puls. RHUS-T. ruta. sep. sulph. syph. tell. tritic-vg. Valer.</i>
4. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - pressure - amel.: (15)	ars. bell. <i>Bry. coff. coloc. MAG-P. meny. Mez. nux-v. phyt. plb. Rhus-t. ruta. spig. tritic-vg.</i>
5. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - lying - amel.: (7)	AM-M. bar-c. <i>Bry. Cob. Dios. lach. Ruta.</i>
6. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - motion - amel.: (40)	<i>Arg-met. Ars. Dios. Dulc. Euph. FERR. Ign. Kali-bi. Kali-i. Kali-p. Lyc. Puls. RHUS-T. Ruta.</i>
7. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - sitting - amel.: (6)	bell. gnaph. guaj. kali-i. lac-h. nept-m.
8. EXTREMITIES - PAIN - Joints - cold - applications - amel.: (9)	bell. guaj. kali-i. kali-s. lac-c. led. puls. sabin. sulph.
9. EXTREMITIES - PAIN - Joints - warmth - amel.: (17)	aesc. arg-met. ARS. <i>Bry. calc-f. Caust. kali-p. Lyc. Nux-v. phos. puls. rhod. Rhus-t. ruta. sal-ac. Sulph. tub.</i>

REMEDIES RELATED TO AGG OF SYMPTOMS FOR SCIATICA & GOUT	
RUBRIC'S	REMEDIES
10. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - walking - agg.: (19)	bamb-a. bar-c. berb. <i>Chinin-s.</i> coff. <i>Coloc.</i> gnaph. ign. iris lach. <i>Led.</i> nat-ar. nat-s. nept-m. psor. spong. staph. <i>Sulph.</i> zinc.
11. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - standing - agg.: (14)	<i>Aesc.</i> agar. bar-c. bell. ferr. germ-met. gnaph. kali-bi. kali-i. lach. nept-m. nux-v. <i>Sulph.</i> <i>Valer.</i>
12. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - lying - agg.: (13)	am-m. coloc. ferr. gnaph. kali-bi. <i>Kali-i.</i> meny. <i>Nat-m.</i> ruta. sep. syph. tell. valer.
13. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - lying - side; on - painful side - agg.: (12)	bamb-a. coloc. dros. <i>Kali-c.</i> KALI-I. lac-h. LYC. nux-v. <i>Phos.</i> RHUS-T. sep. <i>Tell.</i>
14. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - motion - agg.: (40)	BRY. <i>Cocc.</i> <i>Coff.</i> <i>Coloc.</i> <i>Dios.</i> <i>Guaj.</i> <i>Iris Kali-c.</i> <i>Phos.</i> <i>Phyt.</i> <i>Ran-b.</i> <i>Spig.</i> <i>Staph.</i> <i>Verb.</i>
15. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - sitting - agg.: (32)	AM-M. <i>Arg-met.</i> <i>Bry.</i> <i>Cob.</i> LYC. <i>Meny.</i> <i>Rhus-t.</i> <i>Valer.</i>
16. EXTREMITIES - PAIN - Joints - cold - exposure to - after: (12)	arg-met. <i>Calc.</i> CALC-P. cemic. con. DULC. kali-c. <i>Kalm.</i> <i>Ph-ac.</i> RHUS-T. rumx. sil.
17. EXTREMITIES - PAIN - Joints - warmth - agg.: (14)	bora-o. caust. cedr. <i>Guaj.</i> iod. kali-i. kali-s. <i>Lac-c.</i> LED. mand. merc. PULS. sabin. sulph.

Remedies Related to Sensations of Sciatica & Gout

REMEDIES RELATED TO SENSATIONS OF SCIATICA & GOUT	
RUBRIC'S	REMEDIES
1. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - accompanied by - numbness: (23)	acon. agar. ars. carc. caust. cham. COLOC. glon. <i>Gnaph.</i> graph. <i>Kalm.</i> lac-c. led. lith-c. merc. mez. nux-v. PHYT. <i>Plat.</i> plb. RHUS-T. sep. spig.
2. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - drawing pain: (10)	<i>Cham.</i> chin. coloc. ph-ac. phos. <i>Puls.</i> spig. <i>Stann.</i> sulph. verb.
3. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - shooting pain: (5)	acon. <i>Coloc.</i> hyper. iris mag-c.
4. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - burning: (18)	acon. all-c. anthraci. apis <i>Ars.</i> bufo caps. coloc. gels. <i>Gnaph.</i> lach. lyc. <i>Phos.</i> ran-b. rhus-t. ruta. sal-ac. spig.
5. EXTREMITIES - PAIN - Knees - gouty - drawing pain: (3)	<i>Ant-c.</i> crot-h. sep.
6. EXTREMITIES - HEAT - Feet - burning: (43)	<i>Agar.</i> <i>Graph.</i> Lyc. MED. <i>Nat-s.</i> PH-AC. <i>Phos.</i> PULS. <i>Sang.</i> SEC. <i>Sep.</i> SULPH. <i>Zinc.</i>
7. EXTREMITIES - ITCHING - Feet: (166)	<i>Agar.</i> <i>Ambr.</i> <i>Ars.</i> <i>Bell.</i> <i>Berb.</i> <i>Bov.</i> <i>Calc.</i> <i>Calc-s.</i> <i>Caust.</i> <i>Chel.</i> <i>Cocc.</i> <i>Hydr.</i> <i>Hydrc.</i> <i>Ign.</i> <i>Kali-p.</i> <i>Lach.</i> LED. <i>Lith-c.</i> <i>Mez.</i> <i>Ph-ac.</i> <i>Phos.</i> <i>Propr.</i> <i>Rhus-t.</i> <i>Sel.</i> SEP. <i>Sil.</i> SULPH. <i>Tarax.</i> <i>Tell.</i> <i>Trios.</i> <i>Zinc.</i>

REMEDIES RELATED TO SENSATIONS OF SCIATICA & GOUT	
RUBRIC'S	REMEDIES
8. EXTREMITIES - PAIN - Joints - tearing pain: (83)	<i>Acon. Act-sp. Agn. Ambr. ARG-MET. Ars. Ars-i. Aur. BELL. Bov. Bry. Calc. Camph. Carl. CAUST. Chin. Colch. Coloc. Con. Dros. Graph. GUAJ. Hell. Hep. Hyos. Iod. Kali-bi. KALI-C. Kali-n. Led. LYC. MERC. Nat-s. Nit-ac. Nux-v. Ph-ac. Phos. Plat. PULS. RHUS-T. Sabin. Sars. Sep. Sil. Staph. Stram. STRONT-C. SULPH. Tub. ZINC.</i>
9. EXTREMITIES - PAIN - Joints - stitching pain: (97)	<i>Agn. Apis Arn. Asaf. Bar-c. Bell. Bov. BRY. CALC. Camph. Carbn-s. Caust. Cimic. Cocc. Colch. Con. Dros. Graph. Guaj. HELL. Hep. Hyos. Ign. KALI-C. Kali-i. Kali-n. Kali-s. Kalm. Kreos. Led. Mag-m. MANG. Meny. MERC. Merc-c. Nat-m. Phos. Plan. Puls. Rhod. RHUS-T. SABIN. Sars. Sep. SIL. SPIG. Spong. Stann. Staph. Stront-c. Sul-ac. SULPH. TARAX. THUJ. ZINC.</i>
10. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - chronic: (14)	<i>am-m. Ars. calc. gels. kali-i. lyc. nat-m. phos. plb. ran-b. Rhus-t. sulph. visc. zinc.</i>

Remedies Related to Locations of Sciatica & Gout

REMEDIES RELATED TO LOCATIONS OF SCIATICA & GOUT	
RUBRIC'S	REMEDIES
1. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve: (225)	<i>AESC. Am-m. Arg-n. Arn. Ars. Bamb-a. Bell. BRY. BUFO Cact. Calc. Calc-p. Carbn-s. Caust. Cham. Cimic. Coff. COLOC. Dios. Elaps. Elat. Ferr. Ferr-ar. Gels. Gnaph. Graph. Guaj. Ign. Indg. IRIS. Kali-ar. Kali-bi. KALI-I. Kali-p. Lac-c. Lach. Led. Lyc. MAG-P. Meny. Nat-m. Nat-s. Nux-m. NUX-V. Nyct. Ol-j. Petr. Phos. Phyt. Plb. Podo. Puls. Ran-b. RHUS-T. Ruta. Sal-mo. Sep. Stann. Staph. Still. Sulph. TELL. Valer. Verat. Verb. Zinc.</i>

REMEDIES RELATED TO LOCATIONS OF SCIATICA & GOUT	
RUBRIC'S	REMEDIES
2. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - extending to - Downward: (7)	carb-n-s. <i>Coloc.</i> dios. lac-h. lach. <i>Ruta.</i> spong.
3. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - extending to - Extremities: (5)	coloc. gnaph. graph. kalm. pall.
4. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - extending to - Knee: (7)	bamb-a. coloc. elat. ind. <i>Kali-bi.</i> Lach. plan.
5. EXTREMITIES - PAIN - Lower limbs - Sciatic nerve - extending to - Upward: (7)	bell. dulc. hep. kalm. mag-c. phos. ran-b.
6. EXTREMITIES - PAIN - Joints - gouty: (208)	<i>Abrot.</i> Acon. AGN. Alum. <i>Apis.</i> ARG-MET. ARN. <i>Ars.</i> <i>Ars-i.</i> <i>Asaf.</i> <i>Bapt.</i> <i>Bar-c.</i> BELL. <i>Benz-ac.</i> BRY. <i>Bufo.</i> CALC. CALC-P. CALC-S. <i>Carbn-s.</i> CAUST. <i>Chel.</i> <i>Chim.</i> <i>Chin.</i> <i>Chinin-ar.</i> <i>Cinnb.</i> <i>Cocc.</i> COLCH. <i>Colchin.</i> <i>Coloc.</i> <i>Cupr.</i> <i>Dulc.</i> <i>Ferr.</i> <i>Form.</i> <i>Graph.</i> <i>Guaj.</i> <i>Hep.</i> <i>Hyos.</i> <i>Ign.</i> <i>Iod.</i> <i>Kali-ar.</i> KALI-C. <i>Kali-i.</i> <i>Kalm.</i> <i>Laur.</i> LED. LYC. MAG-C. <i>Mang.</i> MERC. <i>Mez.</i> <i>Nat-ar.</i> <i>Nat-c.</i> <i>Nat-m.</i> <i>Nat-s.</i> NUX-V. <i>Ox-ac.</i> <i>Ph-ac.</i> <i>Phos.</i> <i>Phyt.</i> <i>Plb.</i> PSOR. <i>Puls.</i> <i>Ran-b.</i> <i>Rhod.</i> RHUS-T. SABIN. <i>Sal-ac.</i> <i>Sang.</i> <i>Sars.</i> SEP. <i>Sil.</i> SPONG. <i>Stann.</i> STAPH. <i>Stront-c.</i> SULPH. <i>Thuj.</i> <i>Urt-u.</i> <i>Visc.</i>
7. EXTREMITIES - PAIN - Feet - gouty: (6)	graph. <i>Led.</i> lyc. nat-p. <i>Nat-s.</i> urt-u.
8. EXTREMITIES - PAIN - Ankles - gouty: (8)	abrot. ambr. arn. <i>Bry.</i> LED. petr. stel. verat.
9. EXTREMITIES - PAIN - Fingers - Joints - gouty: (9)	berb. <i>Calc.</i> calc-p. <i>Hep.</i> LYC. ruta. sabin. stel. <i>Sulph.</i>
10. EXTREMITIES - PAIN - Joints - gouty - accompanied by - rheumatism: (4)	abrot. lith-c. nat-m. ran-b.

Remedies Related to Strains

REMEDIES RELATED TO STRAINS	
RUBRIC'S	REMEDIES
1. BACK - STRAINING; easily: (28)	CALC. GRAPH. LYC. <i>Mur-ac. Nux-v. Olnd.</i> RHUS-T. <i>Sep. Sil.</i>
2. GENERALS - INJURIES - overexertion, strain, from: (27)	<i>Agn. Arn. Ars.</i> BELL-P. CALC. <i>Con. Ham. Mill.</i> <i>Rhus-t. Ruta.</i>
3. GENERALS - LIFTING, straining of muscles and tendons: (67)	<i>Acon. Agn. Ambr.</i> ARN. <i>Bell-p. Bov. Bry.</i> CALC. <i>Calc-s.</i> CARB-AN. <i>Carb-v. Caust. Cocc.</i> CON. <i>Ferr. Form.</i> GRAPH. <i>Hyper. Ign. Kali-c.</i> <i>Kalm. Lyc. Mag-c. Mill. Nat-c. Ph-ac. Puls.</i> RHUS-T. <i>Sec. SIL.</i>
4. GENERALS - LIFTING, straining of muscles and tendons - from: (79)	<i>Acon. Agn. Ambr.</i> ARN. <i>Bell-p. Borx. Bov.</i> <i>Bry.</i> CALC. <i>Calc-s.</i> CARB-AN. <i>Carb-v. Carbn-s.</i> <i>Caust. Cocc.</i> CON. <i>Dulc. Ferr. Form.</i> GRAPH. <i>Hyper. Ign. Kali-c. Kalm. Lyc. Mag-c. Mill.</i> <i>Nat-c. Ph-ac.</i> RHUS-T. <i>RUTA. Sec. SIL.</i>
5. GENERALS - LIFTING, straining of muscles and tendons - tendency to strain oneself in lifting: (14)	<i>arn. bry. Calc. carb-v. con. graph. lyc. Nat-c.</i> <i>nat-m. nit-ac. psor. Rhus-t. SIL. Symph.</i>

NUTRITION

Nutrition provides our bodies with energy, health and well-being. Our bodies need essential nutrients for function. They are supplied through various foods we eat such as fruits, vegetables, dairy products, poultry and grains as well as through supplements for sufficient quantities. If proper nutrients are not supplied, overtime an individual can become deficient and may lead to depletion of valuable vitamins and minerals causing illnesses. In order to prevent depletion in the body, there are at least forty essential nutrients that are part of our diet, this is vital for our dietary health. Foods are categorized into groups; protein, carbohydrates, fat, fibers, vitamins and minerals and water.

Essential Nutrients Needed

According to Wildman (2009), he states that the first Recommended Dietary Allowances (RDAs) was developed in the United States (US) in the 1940s and other countries have similar recommendations. Recently, US and Canada have developed a more up to date guideline of nutritional facts now called Dietary Reference Intakes (DRIs). The current DRIs include the RDAs, which address concerns about preventions of deficiencies, promoting normal growth, development, and health in individuals (p. 63).

Vitamins are organic substances found in food. It helps to regulate metabolism and maintain normal growth and function. Vitamins are either water-soluble or fat-soluble. Water-soluble vitamins are B and C and excess amounts are excreted through urine. Fat-soluble

vitamins are A, D, E and K, which will be stored in the body as fat. Minerals are important because they are the building blocks that make up muscle, tissue and bone. There are two types of minerals, macro and trace minerals. The body requires macro minerals in large quantities including calcium, phosphorus, magnesium, sodium, potassium, sulfur, and chloride. Trace minerals the body requires in smaller amounts and consist of iron, zinc, iodine, copper, manganese, fluoride, chromium, selenium, molybdenum, and boron.

Below is a chart showing Nutrients, Vitamins and Minerals:

Table 3.1 Essential Nutrients for Humans

ENERGY NUTRIENTS	VITAMINS	MINERALS	OTHER
Protein/essential Amino acids Carbohydrates Fats	Vitamins A, C, D, E, K, & B₆, B₁₂, thiamin, folate, biotin, riboflavin, niacin, pantothenic acid choline	Calcium, zinc, copper, sodium, potassium, iron, phosphorus, magnesium, chromium, chloride, molybdenum, fluoride, selenium manganese, iodide, chromium	Water

(Wildman, 2009)

Regulation and supply of fluids in the body is also important. According to the Canada's Food Guide (2016), there are five important reasons why fluids are needed. Fluids help to:

1. Move nutrients and waste through your body
2. Keep your blood pressure normal
3. Protect and cushion your joints and organs
4. Control your body temperature and
5. Lower your risk of dehydration and heat stroke (Canada’s Food Guide, 2016)

As well as, Canada’s Food Guide (2016), recommends specific daily servings to ensure healthy lifestyle choices and to maintain optimal health and well-being.

Below is a chart indicating suggested daily food guide servings per day.

Suggested Food Guide Servings required per day:

	Children			Teens		Adults			
Age	2-3	4-8	9-13	14-18		19-50		51+	
Sex	Girls and boys			Females	Males	Females	Males	Females	Males
Vegetables & Fruit	4	5	6	7	8	7-8	8-10	7	7
Grain Products	3	4	6	6	7	6-7	8	6	7
Milk & Alternatives	2	2	3-4	3-4	3-4	2	2	3	3
Meat & Alternatives	1	1	1-2	2	3	2	3	2	3

(Canada’s Food Guide, 2016)

Moreover, the daily nutritional requirements as indicated above are recommendations from Health Canada. It is essential that individuals eat a healthy diet to avoid complaints and illness as one ages. If someone is experiencing health concerns an area that must be managed is proper nourishment. Some examples of when dietary modifications might be advised are in the following situations:

When Dietary Modification are Advised

EXAMPLES OF WHEN DIETARY MODIFICATIONS ARE ADVISED
WHEN AN INDIVIDUAL EXPERIENCES PROBLEMS WITH:
• Allergies
• Anemia
• Arthritis
• Colds
• Depression
• Fatigue
• Gastrointestinal disorders
• High/Low blood pressure
• Insomnia
• Headaches
• Obesity
• Pregnancy
• Premenstrual syndrome
• Respiratory conditions

EXAMPLES OF WHEN DIETARY MODIFICATIONS ARE ADVISED
WHEN AN INDIVIDUAL EXPERIENCES PROBLEMS WITH:
• Stress
• Gluten free diets
• Dairy free diets
• Elimination of food additives
• Decrease inflammation

How Nutrition can benefit in Pain Management?

“Let food be thy medicine and medicine be thy food” (Hippocrates, n.d.). In other words, food is medicine and this is vital to our health. It is important what one eats and digests into their bodies. Otherwise, after a while unhealthy choices will contribute to health problems, aches and pains progressing to more serious disorders.

By eating healthy it benefits individuals in many different ways. As stated by Stein (2015), research and anecdotal evidence suggest that the best diets to consume are fruits, vegetables, whole grains, fish and unprocessed foods. This can improve one’s mood, decrease inflammation that causes pain, rheumatoid arthritis and other associated medical conditions and increase well-being (p. 95). When examining how certain foods have an impact on pain we need to consider both the physical and mental view point of the person. We need to explain to individuals that in order to help in their healing recovery every aspect must be investigated including diet. Education also plays a vital role in one’s treatment. As a result, diet is a key

component in perhaps a leading reason why musculoskeletal pain arises over time.

Inflammation is a major cause of chronic pain conditions. “A pro-inflammatory diet may increase pain, decrease energy, stress the immune system and increase the risk of illnesses” (Stein, 2015, p. 96). Conversely, an anti-inflammatory diet has the opposite effect it decreases pain, increases energy, strengthens the immune system and decreases risk of illnesses.

Pro-inflammatory & Anti-inflammatory Foods

PRO-INFLAMMATORY FOODS
<ul style="list-style-type: none">• Trans fats known as hydrogenated oils
<ul style="list-style-type: none">• Sugar
<ul style="list-style-type: none">• Corn syrup
<ul style="list-style-type: none">• Processed carbohydrates found in;<ul style="list-style-type: none">○ Cookies○ Crackers○ Cakes
<ul style="list-style-type: none">• Processed meats such as;<ul style="list-style-type: none">○ Cold cuts

ANTI-INFLAMMATORY FOODS
<ul style="list-style-type: none"> • Fatty fish are good fats such as; <ul style="list-style-type: none"> ○ Salmon ○ Tuna ○ Sardines ○ Anchovies ○ Mackerel ○ Trout
<ul style="list-style-type: none"> • Fresh Fruits
<ul style="list-style-type: none"> • Fresh Vegetables
<ul style="list-style-type: none"> • Eggs containing omega-3 fatty
<ul style="list-style-type: none"> • Nuts such as <ul style="list-style-type: none"> ○ Walnuts ○ Almonds

Diets that Decrease Inflammation

EASY, ANTI-INFLAMMATORY FOOD SWAPS		
INSTEAD OF THIS	TRY THIS	COMMENTS
¼ cup of croutons	½ cup cubed beets roasted in ½ teaspoon of olive oil	The croutons have about 46 calories for this tiny amount, no fiber, & are loaded with refined carbohydrates. The beets drizzled with oil have 60 calories total (for twice the food) & contain healthy fats, 2 grams of fiber, vitamins, & antioxidants.
Hamburger (3 ounces)	Salmon (3 ounces)	The same size serving of salmon has 175 vs. 245 calories found in a hamburger, a comparable amount of protein, mostly unsaturated fat, & is rich in omega-3 fatty acids

EASY, ANTI-INFLAMMATORY FOOD SWAPS		
INSTEAD OF THIS	TRY THIS	COMMENTS
Wheat crackers	Apple slices	For each serving of about 16 thin crackers, you would consume 140 calories of refined starch & hidden sugars. One medium apple has about 95 calories, water, fiber & about 14 percent of the recommended daily amount of vitamin C.
12-ounce can of soda	Sparkling water with 1 ounce of pomegranate juice	The soda contains about 136 calories of sugar & unhealthy chemicals. Sparkling water has no sugar or chemicals, hydrates your body, & the pomegranate juice has 17 calories, no harmful chemicals, & contains antioxidant polyphenol.
Milk chocolate	Dark chocolate	Milk chocolate is nutrient-poor & simply a source of fat, sugar, & calories. Dark chocolate is also fat & calorie-dense but is a good source of antioxidants & has been found to lower blood pressure. Aim for at least 70% dark chocolate.

(Stein, 2015, p. 97)

Some dietary changes that will help decrease pain and inflammation are avoiding foods that belong to the nightshade family. Nightshade belongs to the Solanaceae family, which is a plant. According to an article from McFarland (2013), in the 'Link between Nightshades, Chronic Pain and Inflammation' McFarland states, individuals who experience arthritis and arthritis related illness such as rheumatism and other MSDs found that consuming foods from the nightshade family does indeed affect one's health. Dr. Childers, founder of the Arthritis Nightshades Research Foundation, stated: *"Diet appears to be a factor in the etiology of arthritis based on surveys of over 1400 volunteers during a 20-year period. Plants in the drug*

family, Solanaceae (nightshades) are an important causative factor in arthritis in sensitive people" (McFarland, 2013, p. 1).

Nightshade Family Foods

NIGHTSHADE FAMILY FOODS
• Potatoes
• Tomatoes
• Eggplants
• Peppers
• Tobacco

(Stein, 2015, p. 98).

Moreover, Stein (2015), suggests other types of foods to avoid in order to decrease inflammation. These are provided below:

Foods to Avoid to Decrease Inflammation

FOODS TO AVOID TO DECREASE INFLAMMATION
• Wheat
• Gluten
• Raw vegetables
• Dairy
• Spicy foods

(p. 98).

Hence, the more basic and natural your food choices are the better your health.

Supplements that may Decrease Inflammation

Vitamin D

Vitamin D is used to treat rickets caused from deficiency in vitamin D, weak bones such as osteoporosis, bone pain, preventing low calcium and bone loss. It helps to regulate the minerals calcium and phosphorus found in the body as well as maintaining proper bone structure. A natural source of vitamin D is from sun exposure. Eventually, if one lacks sunlight it will deplete vitamin D levels thus causing deficiencies. According to Stein (2015), studies show that low levels of vitamin D are related to increased risks of rheumatoid arthritis, muscle and bone weakness, cardiovascular, depression etc. There are two forms of vitamin D supplementations, Vitamin D₂ and D₃. Vitamin D₂ is ergocalciferol and vitamin D₃ is cholecalciferol and from natural sunlight. Vitamin D₃ is given to strengthen muscles and reduce inflammation, fibromyalgia pain etc. In turn, to determine whether an individual is deficient in vitamin D a medical doctor can have your blood levels tested.

Recommendations for Deficiency in Vitamin D

RECOMMENDATIONS FOR DEFICIENCY IN VITAMIN D	
TREATMENT	DOSING (DEPENDS ON BLOOD LEVELS)
• Daily intake	400 IU
• Osteoporosis & Fractures	400-1000 IU per day for older adults
• Fibromyalgia	1200 IU to 2400 IU daily
• Elderly patients	800 to 1000 IU

(Stein, 2015, p. 133).

Magnesium

Magnesium is an essential mineral for bone structure. It is found in foods such as legumes, whole grains, vegetables (broccoli, squash, and green leafy vegetables), seeds, and nuts. Other sources include dairy products, meats, chocolate, and coffee. Also, it's found in water with a high mineral content of magnesium. Low levels of magnesium have been linked with inflammation, muscle spasms, leg cramps, insomnia, osteoporosis, fibromyalgia, migraine headaches etc. In turn, inflammation has been associated with heart disease and diabetes. In addition, magnesium is used for constipation and menstrual issues. It has been suggested by Stein (2015), that excessive intake of magnesium can lead to serious side effects. Magnesium should be avoided if one has kidney disease and it may interfere with other vitamin/mineral supplements, which should be taken at different times. It is important to always consult a professional physician before beginning magnesium supplements.

Guidelines for Deficiency in Magnesium

GUIDELINES FOR DEFICIENCY IN MAGNESIUM	
DAILY RECOMMENDATIONS	DOSING
• Children ages 1-3	65 mg/day
• Children ages 4-8	110 mg/day
• Adults & children ages 9 and up	350 mg/day

(WebMD, 2016).

Omega-3 Fatty Acids

Omega-3s are found in foods such as fatty fish tuna, mackerel, sea bass, sardines, walnuts and flaxseeds. It helps to reduce inflammation, which are essential in pain management and health. Furthermore, it reduces the risk of developing rheumatoid arthritis, anxiety and depression. Omega-3s supplements contain EPA, known as eicosapentanoic acid, DHA known as docasahexaenoic acid or both. It is important to always, consult a professional physician before taking fish oils as it may interact with certain medications or medical conditions such as, people taking blood thinners as it decreases blood clotting, for individuals scheduled to have surgery or undergoing chemotherapy.

Recommendations for Daily Omega-3 Fatty Acids

RECOMMENDATIONS FOR DAILY OMEGA-3 FATTY ACIDS	
TOATAL AMOUNT SUGGESTED	DOSING PER DAY
By food or supplements	500 mg per day

(Stein, 2015, p. 138).

Spices

There two kinds of spices that have been known to help reduce pain. They are Ginger and Turmeric.

1. Ginger

Ginger is a plant with leafy stems and yellowish green flowers. Ginger is obtained from the root of the plant. It is used to add flavor to foods such as stir fries, cooked foods and tea and is also available in supplementation form. It also helps to reduce pain related to osteoarthritis, rheumatoid arthritis, migraine headaches, nausea etc. Ginger may interact with certain types of disorders or medication therefore, consult a professional physician beforehand if taking any blood thinner or have any clotting problems.

Recommendation for Ginger

RECOMMENDATION FOR GINGER	
TREATMENT USE	DOSE
For pain use: Rheumatoid arthritis & Osteoarthritis	1 gram twice daily & can increase up to 4 grams twice daily
For nausea use	1 gram twice daily & can increase up to 4 grams twice daily

(Stein, 2015, p. 140).

2. Turmeric

Turmeric is a plant obtained from ginger and it is an orange colored spice used in curry powder. It helps with disorders such as arthritis, joint pain, stiffness, fibromyalgia and many other conditions. In addition, turmeric helps to reduce inflammation, pain and improve function.

Recommendation for Turmeric

RECOMMENATION FOR TURMERIC	
TREATMENT	DOSE
For Therapeutic use	Range between 500 & 2000 mg daily. Daily intake greater than 500 mg should be divided.

(Stein, 2015, p. 140).

EXERCISES

According to an article from Crandall, Howlett and Keysor (2013), they suggest that people with chronic musculoskeletal pain should engage in 150 hours per week of low to moderate exercise. This includes walking, swimming and biking, followed by muscle resistance training at least 2 days per week (p. 17).

A professional physical therapist also known as a physiotherapist is one that demonstrates specific therapeutic exercises for one's condition. The goal is to help diminish pain and improve function.

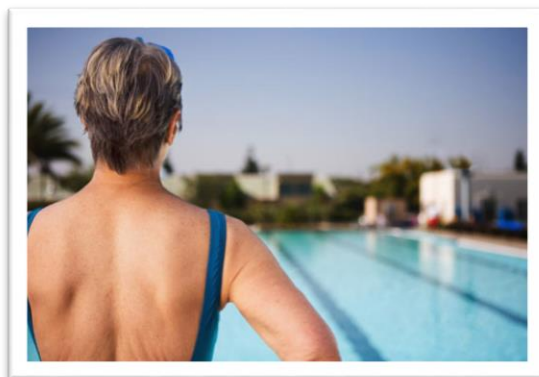
Below are examples of basic stretches for back, neck, hands and finger exercises. As always, consult a registered physiotherapist and/or medical doctor before beginning any exercise or strengthening program to ensure that these particular exercises are suitable for your condition.

Tips for General Stretches

1. Wear comfortable clothes.
2. Stretching should be pain free. Never force the body into difficult positions.
3. Slowly move into the stretch and avoid bouncing, which may actually tear muscles.
4. Stretch on a clean, flat surface that is large enough to move freely.

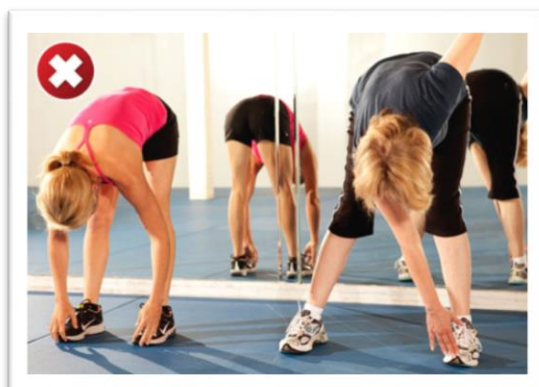
15 Good & Bad Exercises for Low Back Pain

1. Lower Back Pain: How Exercises Helps



You may feel like resting, but moving is good for your back. Exercises for lower back pain can strengthen back, stomach, and leg muscles. They help support your spine, relieving back pain. Always ask your healthcare professional before doing any exercise for back pain. Depending on the cause and intensity of your pain, some exercises may not be recommended and can be harmful.

2. Avoid: Toe Touches



Exercise is good for low back pain -- but not all exercises are beneficial. Any mild discomfort felt at the start of these exercises should disappear as muscles become stronger. But if pain is more than mild and lasts more than 15 minutes during exercise, patients should stop exercising and contact a doctor. Some exercises may aggravate pain. Standing toe touches, for example, put greater stress on the discs and ligaments in your spine. They can also overstretch lower back muscles and hamstrings.

3. Try: Partial Crunches



Some exercises can aggravate back pain and should be avoided when you have acute low back pain. Partial crunches can help strengthen your back and stomach muscles. Lie with knees bent and feet flat on the floor. Cross arms over your chest or put hands behind your neck. Tighten stomach muscles and raise your shoulders off the floor. Breathe out as you raise your shoulders. Do not lead with your elbows or use arms to pull your neck off the floor. Hold for a second and then slowly lower back down. Repeat 8 to

12 times. Proper form prevents excessive stress on your low back. Your feet, tailbone, and lower back should remain in contact with the mat at all times.

4. Avoid: Sit-ups



Although you might think sit-ups can strengthen your core or abdominal muscles, most people tend to use muscles in the hips when doing sit-ups. Sit-ups may also put a lot of pressure on the discs in your spine.

5. Try: Hamstring Stretches



Lie on your back and bend one knee. Loop a towel under the ball of your foot. Straighten your knee and slowly pull back on the towel. You should

feel a gentle stretch down the back of your leg. Hold for at least 15 to 30 seconds. Do 2 to 4 times for each leg.

6. Avoid: Leg Lifts



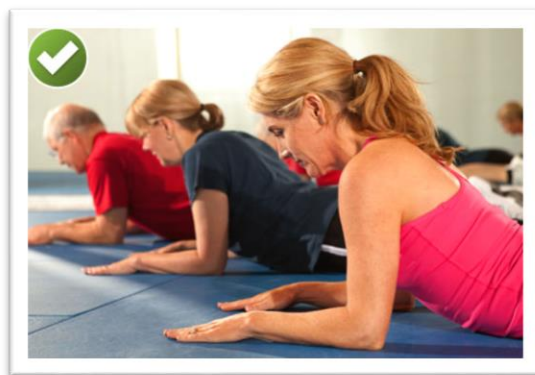
Leg lifts are sometimes suggested as an exercise to "strengthen your core" or abdominal muscles. Exercising to restore strength to your lower back can be very helpful in relieving pain yet lifting both legs together while lying on your back is very demanding on your core. If weak, this exercise can make back pain worse. Instead, try lying on your back with one leg straight and the other leg bent at the knee. Next, keep your lower back flat on floor and slowly lift the straight leg up about 6 inches and hold briefly and then lower the leg slowly. Repeat 10 times and then switch legs.

7. Try: Wall Sits



Stand 10 to 12 inches from the wall and then lean back until your back is flat against the wall. Slowly slide down until your knees are slightly bent, pressing your lower back into the wall. Hold for a count of 10 then carefully slide back up the wall. Repeat 8 to 12 times.

8. Try: Press-up Back Extensions



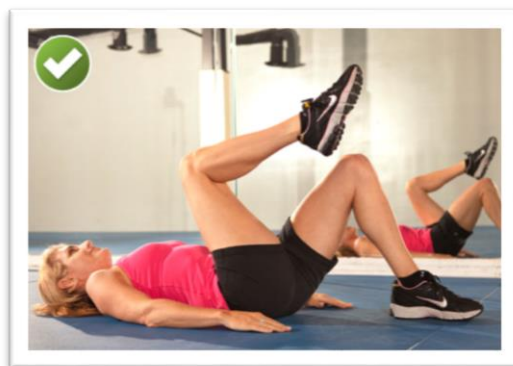
Lie on your stomach with your hands under your shoulders. Push with your hands so your shoulders begin to lift off the floor. If it's comfortable for you, put your elbows on the floor directly under your shoulders and hold this position for several seconds.

9. Try: Bird Dog



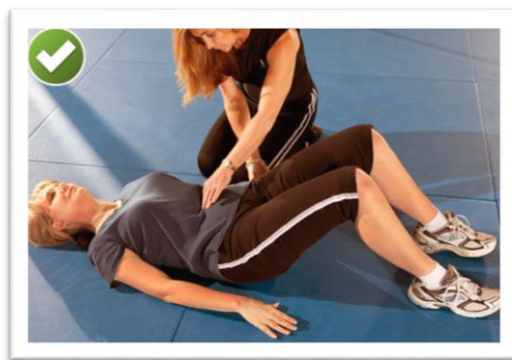
Start on your hands and knees, and tighten your stomach muscles. Lift and extend one leg behind you and keep hips level. Hold for 5 seconds, and then switch to the other leg. Repeat 8 to 12 times for each leg, and try to lengthen the time you hold each lift. Try to lift and extend your opposite arm for each repetition. This exercise is a great way to learn how to stabilize the low back during movement of the arms and legs. While doing this exercise, do not allow the lower back muscles to sag. Only raise the limbs to heights where the low back position can be maintained.

10. Try: Knee to Chest



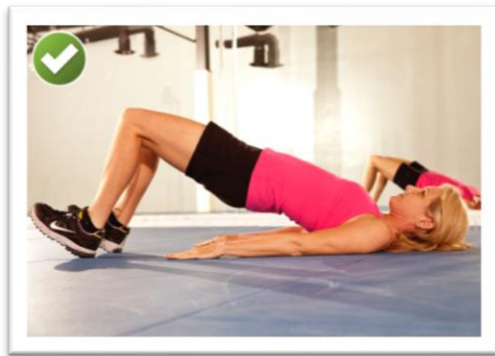
Lie on your back with knees bent and feet flat on the floor. Bring one knee to your chest, keeping the other foot flat on the floor. Keep your lower back pressed to the floor, and hold for 15 to 30 seconds. Next, lower your knee and repeat with the other leg. Do this 2 to 4 times for each leg.

11. Try: Pelvic Tilts



Lie on your back with knees bent, feet flat on floor. Tighten your stomach by contracting it as though you were preparing for a punch. You'll feel your back pressing into the floor, and your hips and pelvis rocking back. Hold for 10 seconds while breathing in and out smoothly. Repeat 8 to 12 times.

12. Try: Bridging



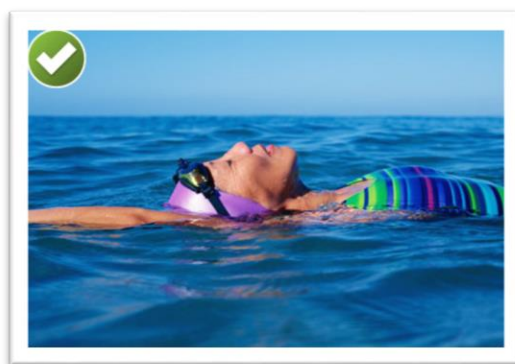
Lie on your back with knees bent and just your heels on the floor. Push your heels into the floor, squeeze your buttocks, and lift your hips off the floor until shoulders, hips, and knees are in a straight line. Hold about 6 seconds, and then slowly lower hips to the floor and rest for 10 seconds. Repeat 8 to 12 times. Avoid arching your lower back as your hips move upward. Avoid overarching by tightening your abdominal muscles prior and throughout the lift.

13. Lifting Weights May Help



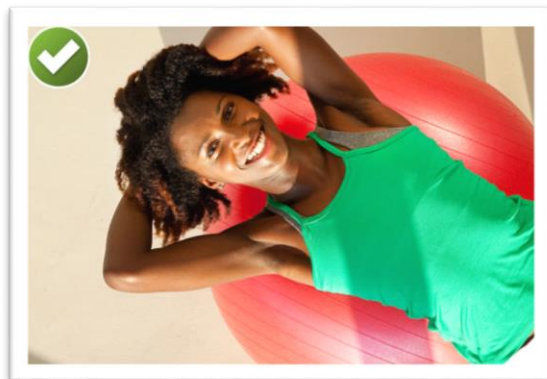
Done properly, lifting weights doesn't usually hurt your back. In fact, it may help relieve chronic back pain. But when you have acute (sudden) back pain, putting extra stress on back muscles and ligaments could raise risk of further injury. Ask your doctor whether you should lift weights, and which exercises to avoid.

14. Try: Aerobic Exercise



Aerobic exercise strengthens your lungs, heart, and blood vessels and can help you lose weight. Walking, swimming, and biking may all help reduce back pain. Start with short sessions and build up over time. If your back is hurting, try swimming where the water supports your body. Avoid any strokes that twist your body.

15. Try: Some Pilates Moves



Pilates combines stretching, strengthening, and core abdominal exercises. Under the instruction of an experienced teacher, it may help some people with back pain. Be sure to tell your teacher about your back pain, because you may need to skip some moves.

(WebMD, 2014.)

4 Stretches to Ease Neck Aches & Fatigue

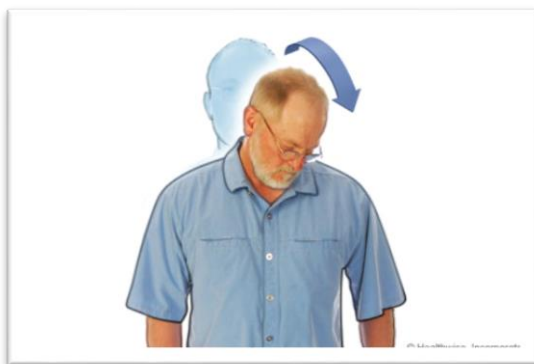
1. Neck Stretch



This stretch works best if you keep your shoulder down as you lean away from it. To help you remember to do this, start by relaxing your shoulders and lightly holding on to your thighs or your chair.

- Tilt your head toward your shoulder and hold for 15 to 30 seconds.
- If you would like a little added stretch, use your hand to gently and steadily pull your head toward your shoulder. For example, keeping your right shoulder down, lean your head to the left. Let the weight of your head stretch your muscles, or use your left hand to pull gently down on your head.
- Repeat 2 to 4 times toward each shoulder.

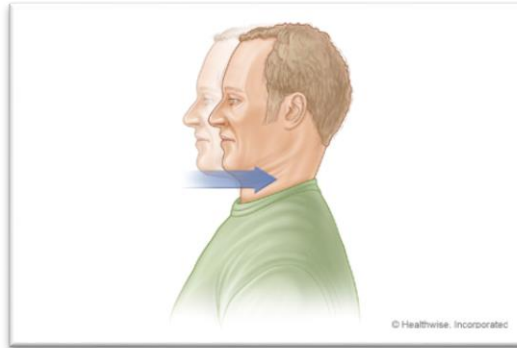
2. Diagonal Neck Stretch



- Turn your head slightly toward the direction you will be stretching, and tilt your head diagonally toward your chest and hold for 15 to 30 seconds.
- If you would like a little added stretch, use your hand to gently and steadily pull your head forward on the diagonal.

- Repeat 2 to 4 times toward each side.

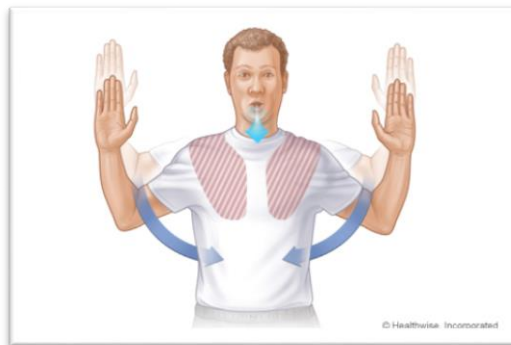
3. Dorsal Glide



Dorsal glide stretches the back of the neck. If you feel pain, do not glide so far back. You may find this exercise easier to do while lying on your back with an ice pack or a small towel roll under your neck.

- Sit or stand tall and look straight ahead
- Slowly tuck your chin as you glide your head backward over your body
- Hold for a count of 6, then relax for up to 10 seconds
- Repeat 8 to 12 times

4. Dorsal Glide



Sitting or standing tall, slowly tuck your chin as you glide your head backward over your body (dorsal glide).

- Rise both arms so that your hands are next to your ears.
- Take a deep breath, and as you breathe out, lower your elbows down and behind your back. You will feel your shoulder blades slide down and together, and at the same time you will feel a stretch across your chest and the front of your shoulders.
- Hold for about 6 seconds, then relax for up to 10 seconds.
- Repeat 8 to 12 times.

(WebMD Medical Reference from Healthwise, 2014).

12 Osteoarthritis Exercises for Hands & Fingers

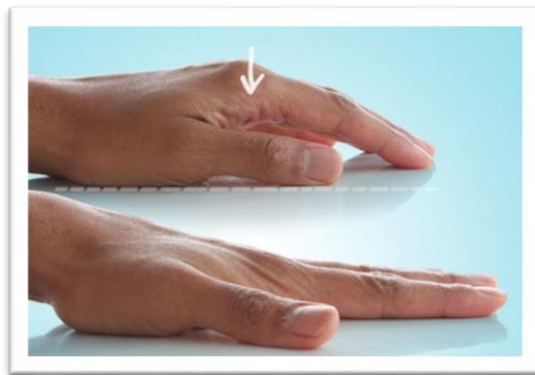
1. Make a Fist



Hand and finger exercises can help strengthen your hands and fingers, increase your range of motion, and give you pain relief. Stretch only until you feel tightness. You shouldn't feel pain. Start with this simple stretch:

- Make a gentle fist, wrapping your thumb across your fingers.
- Hold for 30 to 60 seconds. Release and spread your fingers wide.
- Repeat with both hands at least four times.

2. Finger Stretch



Try this stretch to help with pain relief and to improve the range of motion in your hands:

- Place your hand palm-down on a table or other flat surface.
- Gently straighten your fingers as flat as you can against the surface without forcing your joints.
- Hold for 30 to 60 seconds and then release.
- Repeat at least four times with each hand.

3. Claw Stretch



This stretch helps improve the range of motion in your fingers.

- Hold your hand out in front of you, palm facing you.
- Bend your fingertips down to touch the base of each finger joint. Your hand should look a little like a claw.
- Hold for 30 to 60 seconds and release.
- Repeat at least 4 times on each hand.

4. Grip Strengthener



This exercise can make it easier to open door knobs and hold things without dropping them.

- Hold a soft ball in your palm and squeeze it as hard as you can.
- Hold for a few seconds and release.
- Repeat 10 to 15 times on each hand.
- Do this exercise two to three times a week, but rest your hands for 48 hours in between sessions. Don't do this exercise if your thumb joint is damaged.

5. Pinch Strengthenener



This exercise helps strengthen the muscles of your fingers and thumb. It can help you turn keys, open food packages, and use the gas pump more easily.

- Pinch a soft foam ball or some putty between the tips of your fingers and your thumb.
- Hold for 30 to 60 seconds.
- Repeat 10 to 15 times on both hands.
- Do this exercise two to three times a week, but rest your hands for 48 hours in between sessions. Don't do this exercise if your thumb joint is damaged.

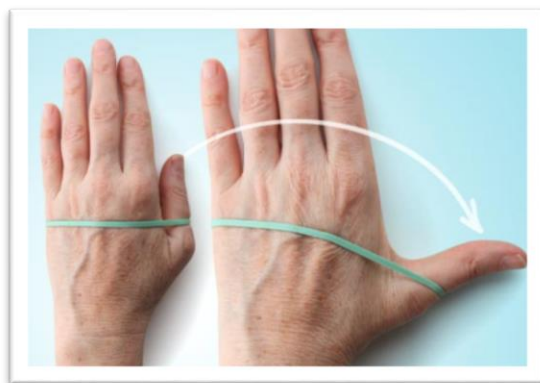
6. Finger Lift



Use this exercise to help increase the range of motion and flexibility in your fingers.

- Place your hand flat, palm down, on a table or other surface.
- Gently lift one finger at a time off of the table and then lower it.
- You can also lift all your fingers and thumb at once, and then lower.
- Repeat eight to 12 times on each hand.

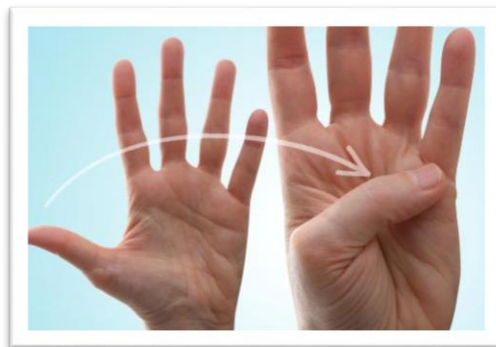
7. Thumb Extension



Strengthening the muscles of your thumbs can help you grab and lift heavy things like cans and bottles.

- Put your hand flat on a table. Wrap a rubber band around your hand at the base of your finger joints.
- Gently move your thumb away from your fingers as far as you can.
- Hold for 30 to 60 seconds and release.
- Repeat 10 to 15 times with both hands.
- You can do this exercise two to three times a week, but rest your hands for 48 hours in between sessions.

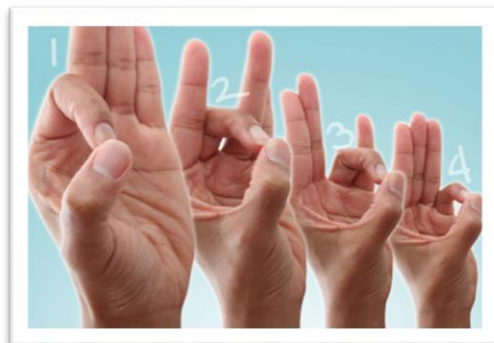
8. Thumb Flex



This exercise helps increase the range of motion in your thumbs.

- Start with your hand out in front of you, palm up.
- Extend your thumb away from your other fingers as far as you can. Then bend your thumb across your palm so it touches the base of your small finger.
- Hold for 30 to 60 seconds.
- Repeat at least 4 times with both thumbs.

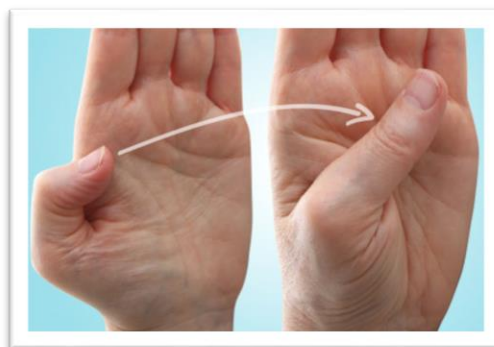
9. Thumb Touch



This exercise helps increase the range of motion in your thumbs, which helps with activities like picking up your toothbrush, fork and spoon, and pens when you write.

- Hold your hand out in front of you, with your wrist straight.
- Gently touch your thumb to each of your four fingertips, one at a time, making the shape of an "O."
- Hold each stretch for 30 to 60 seconds.
- Repeat at least four times on each hand.

10. Thumb Stretches



Try these two stretches for your thumb joints:

- Hold your hand out, palm facing you. Gently bend the tip of your thumb down toward the base of your index finger. Hold for 30 to 60 seconds. Release and repeat four times.
- Hold your hand out, palm facing you. Gently stretch your thumb across your palm using just your lower thumb joint.
- Hold for 30 to 60 seconds. Release and repeat four times.

11. An Exercise Tip



If your hands and fingers feel painful and stiff, try warming them up before you exercise. This can make it easier to move and stretch.

- Use a heating pad or soak them in warm water for about 5 to 10 minutes. For a deeper warmth, rub some oil on your hands, put on a pair of rubber gloves, and then soak them in warm water for a few minutes.

12. Play with Clay



Playing with putty or clay is a great way to increase the range of motion in your fingers and strengthen your hands at the same time. It won't even feel like exercise. Just follow the kids' lead -- squish the clay into a ball, roll it into long "snakes" with your palms, or use your fingertips to pinch spikes on a dinosaur. (WebMD, 2014).

SLEEP

We need to sleep, without it we cannot function and being deprived from it has consequences to our health. Good sleep is necessary for optimal health as it can affect our moods, hormone levels, weight etc. Sleep problems may occur for different reasons such as snoring, sleep apnea, insomnia, pain issues, lifestyle etc. For the purpose of this paper the main focus will be associated with MSDs disorders and pain.

In a research journal from Lavigne, Nashed, Manzini and Carra (2011), they noted that “10% to 30% of the general population complains of chronic pain, and almost two thirds of these individuals also report poor sleep quality (perceived as nonrestorative sleep). Nonrestorative sleep is a self-reported condition present in about 10% of the general population” (p. 536). The amount of sleep varies amongst people, but on average;

- Adults 6 to 9 hours per night
- Teenagers 8.5 to 9.5 hours per night
- Infants 14 to 15 hours per night

Sleep has two types of eye movements, non-rapid eye movement (NREM) and rapid eye movement (REM). In REM sleep the eyes move quickly in different directions, but not in NREM sleep. The first stage of sleep is NREM and can last 5 to 10 minutes before reaching REM sleep. There are three sleep phases of non-REM:

1. In stage one: The eyes are closed and at this point it is easy to wake up. It can last 5 to 10 minutes.
2. In stage two: It's light sleep. The heart rate slows down and the body temperature drops as an individual gets ready for deep sleep.
3. In stage three: This is deeper sleep. It would be more difficult to awaken from this stage than stage one.

In stage three of NREM this is where the body repairs and regrows tissues, builds bone and muscle and strengthens the immune system. In REM sleep this generally happens 90 minutes once fallen asleep and the first REM lasts 10 minutes. Typically in REM sleep it gets longer in duration until it finally reaches an hour. In this phase, your heart rate and breathing increase followed by intense dreaming. Some concerns for individuals who have MSDs and reasons why they may not be improving could be from sleep deprivation. The body is not capable of repair, regrowth, able to build bone and muscle and strengthen the immune system. This leaves the individual susceptible to further issues.

Causes of Sleep Problems

CAUSES OF SLEEP PROBLEMS
• Pain
• Physical function
• Depression
• Anxiety
• Medications

Medications & Treatments for Sleep

MEDICATIONS & TREATMENTS FOR SLEEP
MEDICATIONS
<ul style="list-style-type: none"> • Medications to improve pain & sleep: <ul style="list-style-type: none"> ○ Pregabalin ○ Sodium oxybate,
<ul style="list-style-type: none"> • Medications for anti-depressant & pain: <ul style="list-style-type: none"> ○ Duloxetine ○ Tricyclic ○ Trazodone
<ul style="list-style-type: none"> • Medications for sleep: <ul style="list-style-type: none"> ○ Zolpidem (Ambien) ○ Eeszopiclone (Lunesta) ○ Ramelteon (Rozerem)
<ul style="list-style-type: none"> • Medications that reduce sleep are: <ul style="list-style-type: none"> ○ Opioid & morphine
TREATMENTS
<ul style="list-style-type: none"> • Cognitive behaviour therapy

Homeopathic Remedies for Sleep Concerns

Below are rubrics and remedies associated with sleep concerns.

Related Remedies for Sleep Concerns

RELATED REMEDIES FOR SLEEP CONCERNS	
RUBRIC'S	REMEDIES
1. SLEEP - SLEEPLESSNESS - pain; from: (142)	<i>Alum. Ant-t. Arg-n. AUR. Calc. Caul. Cham. Chel. CHIN. Chlol. Croc. Dol. Ferr-p. Graph. Ign. Iris. Kali-bi. Kalm. Lac-c. Lach. Merc. Merl. Mez. Nat-m. Phys. Rhod. Rhus-t. Spig. Staph. Stict. Sulph. Thuj.</i>
2. SLEEP - ANXIOUS: (33)	<i>Acon. ARS. Bell. Cocc. Hep. Kali-c. Kali-i. Merc-c. Nat-c.</i>
3. SLEEP - DISTURBED - anxiety, from: (69)	<i>Acon. Ars. Bell. Bry. Carb-v. Castm. Caust. Chin. Cocc. Ferr. Graph. Hep. Hyos. Ign. Kali-c. Mag-c. Merc. Nat-m. Nit-ac. Phos. Sep. Sil. Sulph.</i>
4. MIND - ANXIETY - sleep - during: (49)	<i>ARS. Bell. Cocc. Graph. Kali-c. Kali-i. Lyc. Merc-c. Nat-c. Nat-m. Nit-ac. Phos. Spong.</i>
5. SLEEP - SLEEPLESSNESS - mental exertion; after: (25)	<i>ARS. Aur-m. Chlol. Coff. HYOS. Kali-c. Kali-p. Lach. Lyc. NUX-V. Ph-ac. Pic-ac. Sil.</i>
6. SLEEP - SLEEPLESSNESS - grief; from: (7)	<i>Gels. Ign. Kali-br. NAT-M. Sulph.</i>
7. SLEEP - WAKING - night: (244)	<i>All-c. Aloe. Am-c. Am-m. Arg-n. Ars. Bapt. Bell. Benz-ac. Berb. Borx. Calc. Caust. Chin. COC-C. Cocc. Coff. Dios. Euphr. Form. Graph. Hed. Ign. Kali-bi. Kali-c. LachLyc. M-arct. Mag-c. Merc. Mez. Moni. Mur-ac. Nat-m. NIT-AC. NUX-V. Ph-ac. Phyt. Pic-ac. PTEL. Puls. Ran-s. Raph. Rat. Rumx. Samb. Sep. Sil. SULPH. Urol-h. Verb.</i>
8. SLEEP - SLEEPLESSNESS - irritability; from: (16)	<i>Acon. Arg-n. Bapt. Chinin-s. Chlol. Coff. Gels. HYOS. Kali-p. Lach. Nat-m. Stict.</i>

RELATED REMEDIES FOR SLEEP CONCERNS	
RUBRIC'S	REMEDIES
9. SLEEP - SLEEPLESSNESS - restlessness, from: (128)	ACON. Alum. Ant-c. APIS. ARS. Bry. Calc. Carb-v. Chin. Cic. Cina Coff. Con. Cupr. Cypr. Ign. Ip. Kreos. Lach. Led. Lyc. Meph. Merc. MERC-C. Nat-m. Nit-ac. Op. Petr. Phos. Psor. Puls. Rhod. Rhus-t. Sep. Sil. Spig. Stram. Teucr. Thuj. Valer.
10. SLEEP - SLEEPLESSNESS - fear; from: (51)	ACON. Bry. Cann-s. Chin. Cocc. Con. Ign. Lach. Laur. Plat. Puls. Rhus-t. Sabin. Samb. Verat.
11. SLEEP - SLEEPLESSNESS - complaints – causing sleeplessness: (111)	ARS. Bell. BRY. Calad. CALC. Carb-v. CHAM. CHIN. COFF. Con. Graph. Hep. Hyos. Ign. Kali-c. Kreos. Lyc. Mag-c. Mag-m. MERC. Nat-m. PHOS. PULS. Ran-s. Rhod. RHUS-T. Sabin. Sars. Sel. SEP. Sil. Sulph.
12. SLEEP - SLEEPLESSNESS - anger; after: (8)	Acon. Cham. COLOC. Nux-v.
13. SLEEP - SLEEPLESSNESS - exertion agg.; after: (24)	ARS. Calc. Chlol. Cocc. Colch. Dig. Gels. Nux-v. Phos. Sil.
14. GENERALS - SLEEP - loss of sleep; from: (62)	Caust. Cimic. Coc-c. COCC. Coff. Colch. Cupr. Gels. Lac-d. Nit-ac. NUX-V. PHOS. Sel. Sulph.

Symptoms & Remedies for Sleep Concerns

SYMPTOMS & REMEDIES FOR SLEEP CONCERNS	
SYPMTOMS	REMEDIES
<ul style="list-style-type: none"> • Pain from: <ul style="list-style-type: none"> ○ body, bones, head, joints, hips, knee, legs, feet, limbs, lumbar region, muscles, rheumatic pain 	Alumina, Antimonium tartaricum, Argentum nitricum, Aurum, Calcareo carbonica, Caulophyllum, China officinalis, Chloralum hydratum, Crocus sativus, Ferrum phosphoricum, Graphites, Ignatia amara, Iris versicolor, Kalium bichromicum, Kalmia latifolia, Lac caninum, Lachesis muta, Mercurius solubilis, Mezereum, Natrum muriaticum, Rhus toxicodendron, Staphisagria & Sulphur
<ul style="list-style-type: none"> • Anxiety, anxiousness 	Arsenicum album
<ul style="list-style-type: none"> • Mental exertion 	Arsenicum album, Hyoscyamus niger & Nux vomica

SYMPTOMS & REMEDIES FOR SLEEP CONCERNS	
SYMPTOMS	REMEDIES
• Grief	Natrum muriaticum
• Waking at night	Coccus cacti, Nitricum acidum, Nux vomica, Ptelea trifoliata, & Sulphur
• Irritability	Aconitum napellus, Argentum nitricum, Baptisia tinctoria, Coffea cruda, Gelsemium sempervirens, Hyoscyamus niger, Kalium phosphoricum, Lachesis muta & Natrum muriaticum,
• Restlessness	Aconitum napellus, , Apis, Arsenicum album, Mercurius corrosivus
• Fear of dying	Aconitum napellus

ALTERNATIVE HEALTH CARE PRACTITIONERS & THEIR ROLES IN MSDs

Medicine is about treating and curing an individual's conditions. It is not about the medical physician or healthcare practitioner. The sole purpose is to help the person with their condition and to restore health, bring balance, harmony and homeostasis. Furthermore, there are numerous times when more than one type of treatment is required in order to facilitate healing. By incorporating different types of therapies it is possible for one to achieve optimal health. What optimal health means to one will ultimately be different to someone else. Unfortunately, depending on the severity of an individual's disorder they may not return to their original health prior to their incident. A person can still live a satisfactory life and prevent problems from worsening by using non-invasive treatments. Recovery is possible in both acute and chronic situations. Below are additional therapies that may be beneficial for treatments with MSDs.

Physiotherapy Treatment

Physiotherapy is a regulated health profession. They treat injuries, diseases, disorder in movement and function through rehabilitation techniques using varies exercises and equipment. The purpose is to help individuals improve, restore independent function and physical abilities. A physiotherapist can treat MSDs to reduce and eliminate pain, address muscle weakness, loss of stability and limited functional abilities. According to the Canadian Physiotherapist Association (2012), one in ten Canadians consult a physiotherapist with MSDs conditions. They also state that the,

Impact on patient experience in physiotherapy treatment improves a patient's physical wellbeing and quality of life.

- Physiotherapy interventions include education about treatment and self-management strategies which improves patient satisfaction.³
- Patients benefit from physiotherapists' use of multiple skills or approaches in the treatment of MSK conditions.⁴
- Patients are confident in physiotherapist abilities to assess MSK conditions (Musculoskeletal Conditions, 2012).

Massage Therapy

Massage therapy is a regulated profession. It treats soft tissues, joints, pain related to injuries and diseases. Massage treats conditions such as arthritis, muscle strain, tendonitis, and other acute and chronic pain conditions. According to an article from St. John’s Reb Clinic (n.d.), massage therapy can alleviate, “muscle tightness and restrictions, pain, swelling, muscle spasm, anxiety and stress. It can also improve mobility, increase circulation, promote tissue health, increase relaxation and improve immune system function” (Massage therapy, n.d.).

Osteopathy Treatment

Osteopathy is a regulated profession in the US, but is not regulated in Canada. It is a natural holistic treatment and based on the idea that the body is self-healing. According to Gunaratne (2015), osteopaths use “finely tuned manual skills to “palpate” the body’s internal and external systems to not only determine the root causes, but importantly, to provide manual treatment and lifestyle advice in order to remove the imbalances and facilitate healing” (p. 12). An osteopath provides change in the body’s structure and function to help in the healing process of individuals.

Naturopath Treatment

Naturopath is a regulated profession. It is an alternative medicine that utilizes many modalities to help individual's combat disease. They use many tools for treatments such as acupuncture, Chinese medicine, herbalism, diet and lifestyle changes. In addition, a naturopath also incorporates kinesiology, integrated bio-dynamics and counselling techniques to assist individuals.

Chiropractic Treatment

Chiropractic is a regulated natural and holistic healthcare profession. A chiropractor uses hands on approach to treat individuals. As well as, they use many different kinds of techniques such as spinal manipulation, relaxation techniques, rehabilitative exercises, and counseling about nutrition and dietary supplements. In turn, these treatments can increase mobility and range of motion that can prevent issues from progressing. According to an article written by Dr. Eidelson (2016), he states that:

Chiropractors believe one of the main causes of back or neck pain is subluxation. Subluxation occurs when your vertebrae become misaligned. Treating subluxations can help to alleviate pain associated with a myriad of conditions, including: headaches, sciatica, trauma such as whiplash, scoliosis, leg pain sports injuries bursitis and tendonitis. It also treats fibromyalgia and spinal arthritis (spondylosis). Sometimes chiropractic care (eg, an adjustment) can cause mild soreness or aching but that usually resolves itself within 12 to 48 hours. (Eidelson, 2016)

Always check with your medical physician whether chiropractic treatment is appropriate for your condition.

ABBREVIATIONS

Aggravated (agg)

Amelioration (amel)

Aphorism (§)

Chronic Pain Syndrome (CPS)

Degenerative Joint Disease (DJD)

Dietary Reference Intakes (DRIs)

Disc Herniation (DH)

Disease Modifying Anti-Rheumatic Drugs (DMARDs)

International Association for the study of Pain (IASP)

Musculoskeletal Disorders (MSDs)

Neurolinguistics Programming (NLP)

Nonsteroidal Anti-Inflammatory Drugs (NSAIDs)

Non-rapid Eye Movement (NREM)

Osteoarthritis (OA)

Rapid Eye Movement (REM)

Recommended Dietary Allowances (RDAs)

Repetitive Strain Injury (RSI)

Rheumatoid Arthritis (RA)

Selective Serotonin Reuptake Inhibitors (SSRIs)

Temporomandibular Joints (TMJ)

United States (US)

CONCLUSION

In conclusion, acute symptoms can be treated and in many situations are reversible. Conversely, in chronic severe conditions this is where the situation becomes more difficult with alleviating pain due to structural defects. Depending on the severity of the illness, full recovery may not be possible; however, treatment options are available. As a homeopath our responsibility is to restore an individual's health as much as possible. In other words, it is to bring an individual to balance, harmony and homeostasis. By treating a patient with non-intrusive methods, the homeopath can work with the patient to determine the most effective and gentle course of action without causing much disruption to the body and mind. Additional tools may be used by the homeopath to assist with treatment such as diet, exercise and medical tests. Through the help of various alternative therapies and/or medical treatments, one can live a satisfactory life. Preventive measures can be taken to reduce further risks of degeneration and inflammatory conditions.

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APPENDIX

Appendix A:

Table 1 Classification and Measurement System of Functional Health (CLAMES)

Core attributes

Pain or discomfort (PD)

1. Generally free of pain and discomfort
2. Mild pain or discomfort
3. Moderate pain or discomfort
4. Severe pain or discomfort

Physical functioning (PF)

1. Generally no limitations in physical functioning
2. Mild limitations in physical functioning
3. Moderate limitations in physical functioning
4. Severe limitations in physical functioning

Emotional state (ES)

1. Happy and interested in life
2. Somewhat happy
3. Somewhat unhappy

4. Very unhappy
5. So unhappy that life is not worthwhile

Fatigue (FA)

1. Generally no feelings of tiredness, no lack of energy
2. Sometimes feel tired, and have little energy
3. Most of the time feel tired, and have little energy
4. Always feel tired, and have no energy

Memory and thinking (MT)

1. Able to remember most things, think clearly and solve day-to-day problems
2. Able to remember most things but have some difficulty when trying to think and solve day-to-day problems
3. Somewhat forgetful, but able to think clearly and solve day-to-day problems
4. Somewhat forgetful, and have some difficulty when trying to think or solve day-to-day problems
5. Very forgetful, and have great difficulty when trying to think or solve day-to-day problems

Social relationships (SR)

1. No limitations in the capacity to sustain social relationships
2. Mild limitations in the capacity to sustain social relationships

3. Moderate limitations in the capacity to sustain social relationships
4. Severe limitations in the capacity to sustain social relationships
5. No capacity or unable to relate to other people socially

(Murphy, Spence, & McIntosh, 2006, p. v)

Supplementary attributes Anxiety (AN)

1. Generally not anxious
2. Mild levels of anxiety experienced occasionally
3. Moderate levels of anxiety experienced regularly
4. Severe levels of anxiety experienced most of the time

Speech (SP)

1. Able to be understood completely when speaking with strangers or friends
2. Able to be understood partially when speaking with strangers but able to be understood completely when speaking with people who know you well
3. Able to be understood partially when speaking with strangers and people who know you well
4. Unable to be understood when speaking to other people

Hearing (HE)

1. Able to hear what is said in a group conversation, without a hearing aid, with at least three other people
2. Able to hear what is said in a conversation with one other person in a quiet room, with or without a hearing aid, but require a hearing aid to hear what is said in a group conversation with at least three other people
3. Able to hear what is said in a conversation with one other person in a quiet room, with or without a hearing aid, but unable to hear what is said in a group conversation with at least three other people
4. Unable to hear what others say, even with a hearing aid

Vision (VI)

1. Able to see well enough, with or without glasses or contact lenses, to read ordinary newsprint and recognize a friend on the other side of the street
2. Unable to see well enough, even with glasses or contact lenses, to recognize a friend on the other side of the street but can see well enough to read ordinary newsprint
3. Unable to see well enough, even with glasses or contact lenses, to read ordinary newsprint but can see well enough to recognize a friend on the other side of the street
4. Unable to see well enough, even with glasses or contact lenses, to read ordinary newsprint or to recognize a friend on the other side of the street

Use of hands & fingers (HF)

1. No limitations in the use of hands and fingers
2. Limitations in the use of hands and fingers, but do not require special tools or the help of another person
3. Limitations in the use of hands and fingers, independent with special tools and do not require the help of another person
4. Limitations in the use of hands and fingers, require the help of another person for some tasks
5. Limitations in the use of hands and fingers, require the help of another person for most tasks

(Murphy, Spence, & McIntosh, 2006, p. vi)

Appendix B:

The Lumbar Region

Fig. 7.1 Surface anatomy of the lumbosacral spine - posterior view

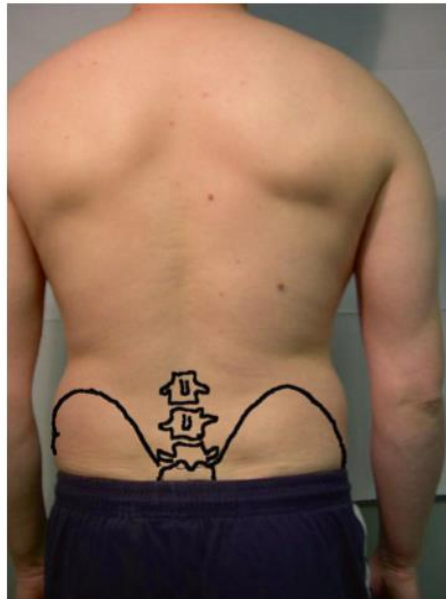


Fig. 7.2 Skeletal anatomy of the lumbosacral spine

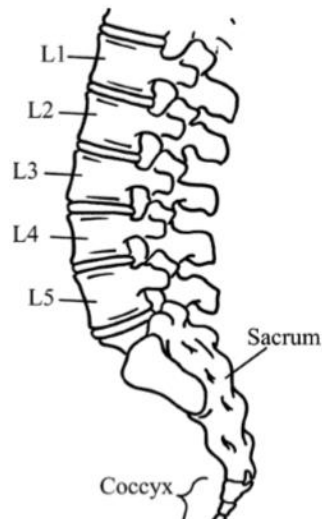
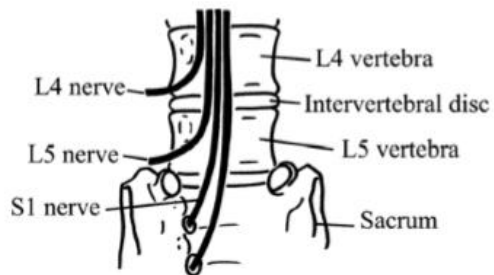


Fig. 7.3 Skeletal and neuroanatomy Of the lumbosacral spine L4-L5 level



(Daniel, 2015, p. 66-67).

Appendix C: Allopathic Medications

Table 3

NON-OPIOID MEDICATIONS			
DRUG CLASS		GENERIC	BRAND NAME(S)
Anticonvulsants		Gabapentin	Neurontin
		Topiramate	Topamax
		Carbamazepine	Tegretol
		Valproic Acid	Depakote
		Pregablin	Lyrica
Anti-depressants	Tricyclics	Amitryptilline	Elavil
	SSRI-SNRI	Desipramine	Norpramin
		Norpramine	Pamelor
		Venflaxine	Effexor
		Duloxetine	Cymbalta
NSAIDs	COX2s	Celecoxib	Celebrex
	Traditional NSAIDs	Ibuprofen	Advil, Motrin
		Naproxen	Naprosyn, Aleve
		Indomethacin	Indocin
		Nabunetone	Relafen
Muscle Relaxants		Methocarbamol	Robaxin
		Liorisal	Baclofen
		Metaxalone	Skelaxin
		Cyclobenzaprine	Flexeril
		Tizanadine	Xanax

NON-OPIOID MEDICATIONS		
DRUG CLASS	GENERIC	BRAND NAME(S)
Topicals	Capascins	Zostrix
	Lidocaine	Lidoderm patches
	Diclofenac gel	Voltaren
	Diclofenac patches	Flector

(Pohl, 2011, p. 44)

Table 4

MOOD-ALTERING & POTENTIALLY ADDITIVE DRUGS		
(This list is not all-inclusive)		
TYPE	BRAND NAME	GENERIC NAME
Amphetamines	Adderall	Amphetamine aspartate/Sulfate
	Dexedrine	Dextroamphetamine
Barbiturates	Fioricet/Codeine	Butalbital/Codeine/Acet/Caffeine
	Fiorinal	Butalbital/Aspirin/Caffeine
	Phenobarbital	Phenobarbital
Benzodiazepines	Ativan	Lorazepam
	Dalmane	Flurazepam
	Halcion	Triazolam
	Klonopin	Clonazepam
	Librium	Chlordiazepoxide
	Restoril	Temazepam
	Serax	Oxazepam
	Tranxene	Clorazepate Dipotassium
	Valium	Diazepam
	Xanax	Alprazolam

MOOD-ALTERING & POTENTIALLY ADDITIVE DRUGS		
(This list is not all-inclusive)		
TYPE	BRAND NAME	GENERIC NAME
Hypnotics (for sleep)	Ambien	Zolpidem titrate
	Lunesta	Eszopiclone
	Sonata	Zaleplon
Muscle Relaxants	Soma	Carisoprodol
	Equagesic	Meprobamate/Aspirin
Opioids	Hycodan	Hydrocodone/Methylbromide
	Tussionex	Hydrocodone bit/Chlorpheneramine
	Actiq	Oral transmucosal fentanyl citrate
	Avinza	Morphine sulfate
	Demerol	Meperidine
	Dilaudid	Hydromorphone
	Duragesic	Fentanyl
	Kadian	Morphine sulfate
	Methadone	Methadone
	MS Contin	Morphine sulfate
	Oxycontin	Oxycodone
	Oxyfast	Oxycodone
	Percocet	Oxycodone/Acetaminophen
	Percodan	Oxycodone/Aspirin
	Tylox	Oxycodone/Acetaminophen
	Lorcet	Hydrocodone/Acetaminophen
	Lortab	Hydrocodone/Acetaminophen
	Norco	Hydrocodone/Acetaminophen
	Subutex	Buprenorphine hydrochloride
	Suboxone	Buprenorphine hydrochloride + naloxone

MOOD-ALTERING & POTENTIALLY ADDITIVE DRUGS		
(This list is not all-inclusive)		
TYPE	BRAND NAME	GENERIC NAME
Opioids	Tylenol/Codeine	Acetaminophen/Codeine
	Vicodin	Hydrocodone/Acetaminophen
	Vicoprofen	Hydrocodone/Ibuprofen
	Darvocet-N	Propoxyphene/Acetaminophen
	Darvon	Propoxyphene
	Stadol NS	Butorphanol tartrate
	Talwin NX	Pentazocine naloxone
Stimulants	Concerta	Methylphenidate
	Ritalin	Methylphenidate

(Pohl, 2011, p. 46)

Appendix D: The Cervical Spine

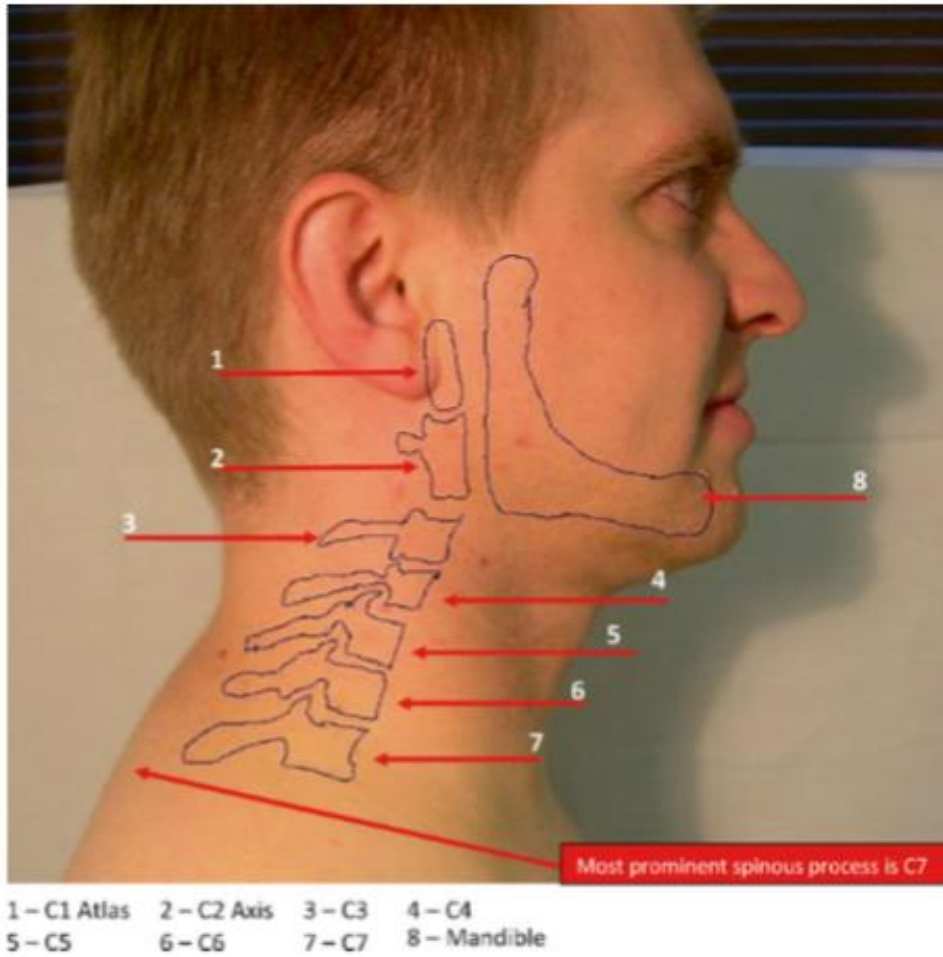
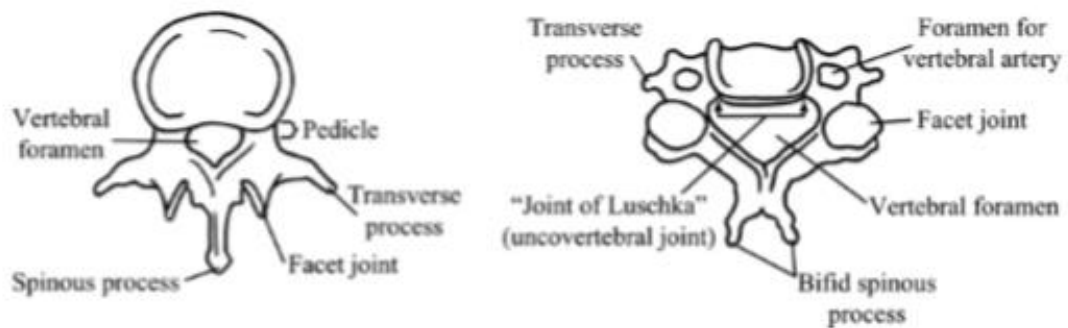


Fig. 2.1 Surface anatomy of cervical spine



(Daniel, 2015, p. 6)

Cervical Radiculopathy Test

1. Cervical rotation of less than 60° to the ipsilateral side.
2. A *positive Spurling's test*. This test is performed with the patient in a seated position. The patient laterally flexes the neck to the ipsilateral side, and the examiner

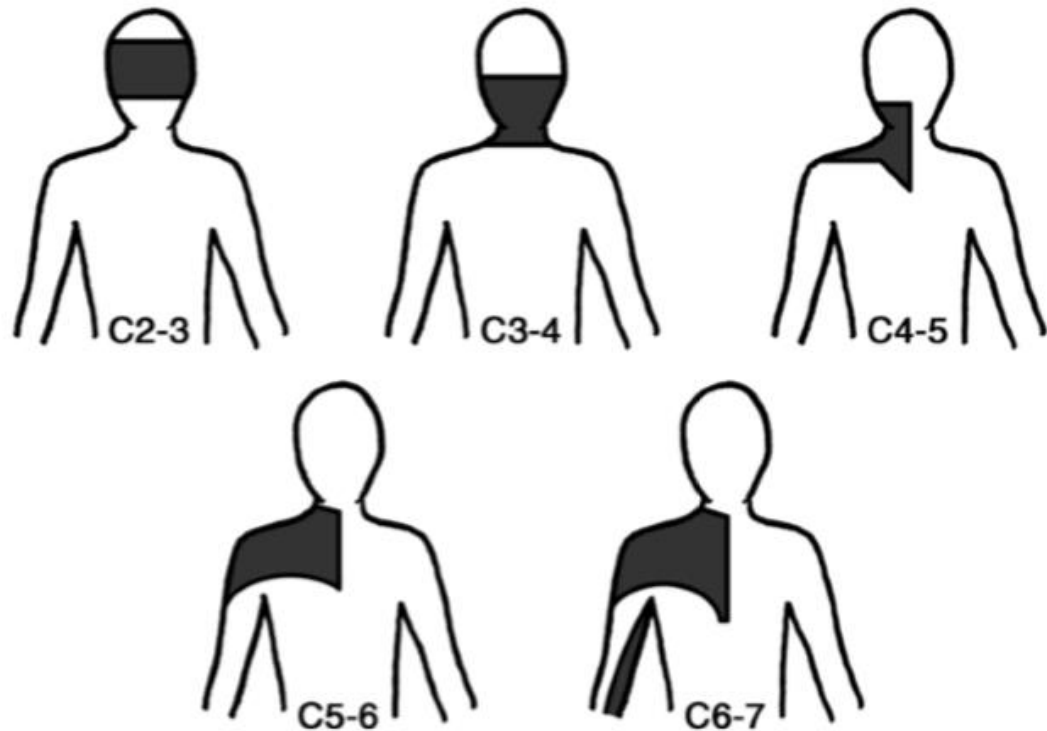


Fig. 2.3 Pain patterns at each cervical level (Adapted from Grubb SA, Kelly CK, & Bgoduk N. Cervical discography: clinical implications from 12 years of experience. Spine. 2000; 25:1382-9)

Motor, Sensory, Reflex Evaluation of Cervical Spine Nerve Roots

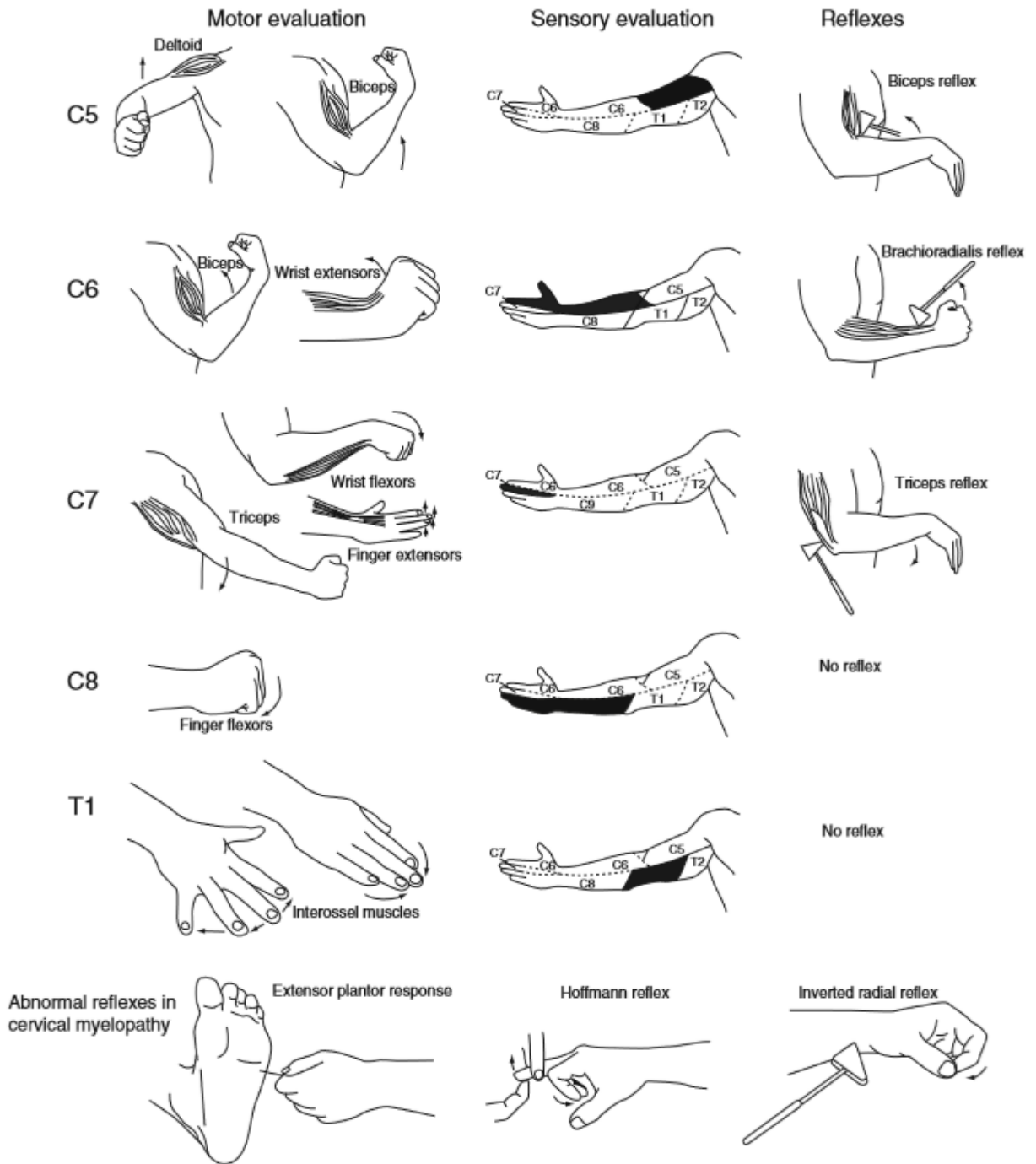


Fig. 2.4 Motor, sensory, reflex evaluation of cervical spine nerve roots places pressure the top of the patients head. If the pressure on the patient's head reproduces the patient's symptoms into the arm, then the test is positive (see Fig. 2.5).

3. A *positive distraction test*. This test is performed with the patient in a supine position. The examiner cradles the patient's neck on the occiput and exerts traction. If this relieves some to the patient's symptoms, it is positive.
4. A *positive upper limb test*. This test is performed with the patient in a seated position. The patient abducts the arm to 90°, and with the elbow completely extended, the examiner dorsiflexes the wrist. This maneuver can reproduce patient's symptoms if the cause is cervical nerve related.

(Daniel, 2015, p. 10-11)



(Tender Points, 2016).

Appendix F: Short-form McGill Pain Questionnaire

RONALD MELZAK

Patient's Name: _____

Date: _____

	NONE	MILD	MODERATE	SEVERE
THROBBING	0 _____	1 _____	2 _____	3 _____
SHOOTING	0 _____	1 _____	2 _____	3 _____
STABBING	0 _____	1 _____	2 _____	3 _____
SHARP	0 _____	1 _____	2 _____	3 _____
GRAMPING	0 _____	1 _____	2 _____	3 _____
GNAWING	0 _____	1 _____	2 _____	3 _____
HOT-BURNING	0 _____	1 _____	2 _____	3 _____
ACHING	0 _____	1 _____	2 _____	3 _____
HEAVY	0 _____	1 _____	2 _____	3 _____
TENDER	0 _____	1 _____	2 _____	3 _____
SPLITTING	0 _____	1 _____	2 _____	3 _____
TIRING-EXHAUSTING	0 _____	1 _____	2 _____	3 _____
SICKENING	0 _____	1 _____	2 _____	3 _____
FEARFUL	0 _____	1 _____	2 _____	3 _____
PUNISHING-CRUEL	0 _____	1 _____	2 _____	3 _____

NO PAIN |-----| WORST POSSIBLE PAIN

P P I

- 0 NO PAIN _____
- 1 MILD _____
- 2 DISCOMFORTING _____
- 3 DISTRESSING _____
- 4 HORRIBLE _____
- 5 EXCRUCIATING _____

(Phol, 2011, p. 7)