

Non-Opioid Based Treatments for Persons Enduring Musculoskeletal Chronic Pain

The following is not an exhaustive list of treatments but rather serves as a perspective range of options for the reader

Physical Therapy

Neurological, Orthopedic, Transcutaneous Electrical Nerve Stimulation (TENS), Hands-on therapy to increase range of motion, strength and functioning; Physical therapy guided exercise.

Physical and Occupational Therapy may also include Aqua therapy, Tone / Strengthening and Desensitization

Chiropractic Care and Massage

Hands-on to increase range of motion, strength and functioning;

Extracorporeal Shockwave Therapy, Therapeutic Ultrasound and Low Laser Therapy for soft tissue pain.

Acupuncture

Can be used as muscle relaxant however more commonly known to relieve pain and reduce muscle irritability by inhibiting pain transmission and increasing natural (endogenous) opioids.

Myofascial Activation and Dry Needling

Considered to be similar to acupuncture however the mechanism focus is on myofascial trigger points which are hyper-irritable spots on skeletal muscle that are associated with hypersensitive hard discrete, palpable nodules in a taut band.

Myofascial Pain Syndrome(MPS) is considered as one of the most common chronic musculoskeletal pain syndromes. In pain clinics, the prevalence of MPS may reach as high as 85%. Journal of Pain Research 2023;16 1025-1038.

Emerging research is examining Acupuncture and Dry Needling role in changing gene expression of muscle tissue to accelerate muscular regeneration.

Biofeedback

Widely used to relieve muscle tension and reduce overreactive nervous system that impact pain signals. Autonomic nervous system (heart rate, temperature skin response), central nervous system (neuro stimulation) and biomechanic (functional movement of limbs/joints) measures all contribute to biofeedback.

Neurofeedback

Measured via electroencephalography (EEG) or functional Magnetic Resonance Imaging (fMRI), neurofeedback is a type of biofeedback that provides patients with real-time information about their brain activity. Therapeutic interventions and stressors including pain have real-time activation.

Cognitive Behavioural Therapy

Helps to decrease depression, anxiety and rumination secondary to chronic pain. Provides coping / management of adverse impact on functional role with friends, family and employers.

Helps with the identification and mitigation of stressors that magnify pain

Education and functional application of engagement activities such as exercise, muscle relaxation, mindfulness, exertion and restorative sleep, full range preparation of feel good activities.

Education and therapeutic support for substance abuse secondary to chronic pain

Trauma Informed holistic treatment methods can be included where needed

CBT psychosocial therapy tends to be individual, family and group based

Hypnosis

Altered states of consciousness can assist with focus and narrowing attention to reduce discomfort. Three common types are Imagery, Distraction and Relaxation/Guided Imagery

Comfort Therapy

Comfort Therapy focus is to provide opportunities for expression, creativity and the experience of a full range of emotion. Includes but not limited to hot and cold water applications, lotions, massage, meditation, music, art and/or drama therapy

Non-Opioid Pharmacological Treatments

Muscle Relaxants

Benzodiazepines such as cyclobenzaprine, tizanidine, diazepam. Short/term or as needed basis; used as muscle relaxant and anti-anxiety medication.

Psychotropic Medications

SNRIs Serotonin-Norepinephrine Reuptake Inhibitors demonstrates an analgesic effect of centrally sensitized pain

Anti-convulsant medication primarily used for neuropathic pain however has been periodically used for musculoskeletal pain. Medication interferes with overactive transmission of pain signals.

Anti-anxiety and anti-depressants most commonly engaged to assist with the regulation of pain and mitigation of dynamic life stressors that exacerbate pain.

Topical Agents Diclofenac, capsaicin

Medical Cannabis (inhaled, oral or topical)

Phytocannabinoids (plant derived) THC and CBD

Synthetic Cannabinoids Dronabinol (THC) and Nabilone (similar to THC)

Nonsteroidal Anti-Inflammatory ibuprofen, naproxen, celecoxib