



WORK-RELATED MUSCULOSKELETAL DISORDERS (WRMSD) AND IT'S HOMOEOPATHIC MANAGEMENT

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ABSTRACT: Work-related Musculoskeletal Disorders include variety of impairments to musculoskeletal structures where the severity of conditions ranging from temporary aches to permanent, disabling injuries. They can either be caused directly or made worse by the workload. In India, agricultural workers, artisan workers, professionals in IT and healthcare sectors experience major risks. In addition to ergonomic improvements, homoeopathy provides a specific therapeutic approach. Remedies like Arnica montana for overexertion, Rhus toxicodendron for fibrous tissue stiffness, and Ruta graveolens for tendon strain target specific symptoms and pathological changes. This integrated approach aims to balance workplace demands with an individual's physical capabilities to reduce risk of injury and support long-term musculoskeletal health.

KEYWORDS: WORK-RELATED MUSCULOSKELETAL DISORDERS, WRMSD, MECHANICAL WORKLOAD, ERGONOMICS, HOMOEOPATHY

INTRODUCTION:

Work-Related Musculoskeletal Disorders (WRMSD) are leading cause of workplace absenteeism that



represent a major financial burden on public health systems affecting the locomotor system (especially muscles, tendons, skeleton, cartilage, ligaments, and nerves) ranging from mild, transitory aches and occasional pain to chronic, irreversible, and disabling injuries. These disorders are either directly caused or made worse by occupational tasks and the specific physical work performance. In addition, external activities like sports or housework can contribute to these conditions, WRMSDs are primarily characterized by the professional environment's impact on the body.

BASIC RISK FACTORS:

- Exertion of high intensity forces e.g. lifting, carrying, pushing, pulling heavy objects
- Handling heavy loads over long period of time e.g. manual materials handling
- Frequently repeated manipulation of objects e.g. assembly work long time typing, check-out work
- Working in unfavourable posture e.g. heavily bent or twisted trunk, or hand and arms above shoulders
- Static muscular load e.g. working overhead, working in a confined space
- Muscular inactivity e.g. long-term sitting with low muscular demands
- Monotonous repetitive manipulation e.g. repeated activation of the same muscles without relaxation
- Application of vibration e.g. use of vibrating hand-tools, sitting on vibrating vehicles
- Physical environmental factors e.g. use of hand-held tools at low temperature
- Psychosocial factors e.g. low social support

When the workload is higher than the load-bearing capacity typical consequences occur such as, injuries of muscles and tendons (e.g. strains, ruptures), ligaments (e.g. strains, ruptures), and bones (e.g. fractures, unnoticed microfractures, degenerative changes). Other injuries may happen at the insertion points of muscles, tendons and of tendon sheaths, as well as functional restrictions and early degeneration of bones and cartilages (e.g. menisci, vertebrae, intervertebral discs, articulations) may also happen.^[1]

Among different occupational groups in India marked variation in the rates of occurrence, with each sector experiencing distinct ergonomic challenges has been shown. Where agriculture workers have



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highest prevalence at 0.87, artisan workers have significant rates of lower back pain (0.75) and neck pain (0.59), textile industry workers have prevalence of shoulder pain (0.56), high prevalence rates in health care, mining industries and IT industries. [2]

COMMON WRMSD ACCORDING TO INTERNATIONAL LABOUR OFFICE: [3]

- Radial styloid tenosynovitis
- Chronic tenosynovitis of hand and wrist
- Olecranon bursitis
- Prepatellar bursitis
- Epicondylitis
- Meniscus lesions
- Carpal tunnel syndrome

There is marked variation in the prevalent pathologies in different employment sectors and related occupational categories: [4]

- Health sector: (1) Doctors- Osteopenia (2) Dentists- Hand OA
- Farming sector: (1) Farm workers with animals- Knee and Hip OA (2) Growers- Osteoporosis (3) Fruit tree growers- Hand OA
- Industrial sector: (1) Coal miner- Knee OA. Lateral epicondylitis, De-Quervain disease, ulnar neuropathy (2) Construction workers- Osteoporosis, Atrophic shoulder muscle, lumbar disc degeneration (3) Vibration exposed workers- OA of the elbow, wrist and acromioclavicular joint, MSD of the upper limb and neck, rheumatic diseases (4) Occupational kneeling- Degeneration of the knee joints and alteration and tearing of the medial meniscuses (5) Factory workers- Osteoporosis
- Computer sector: MSD of the upper limb, neck and shoulders

ERGONOMICS: It refers to the concept of "fitting the job to the worker," a term derived from the Greek words "ergon," meaning work, and "nomos," meaning law. Ergonomics seeks to improve human productivity and well-being by achieving a harmonious relationship between man and his occupation. For particular age and gender a balance between working condition and capacity of worker must be



considered. Highly capable employee should not be misemployed and a recruitment preference should be prioritized only on specifically trained groups. ^{[1][5]}

HOMOEOPATHIC MANAGEMENT: ^{[6][7]}

- 1) **ARNICA MONTANA:** Ailments from injuries, falls, blows, contusions. After traumatic injuries, overuse of any organ, strains. Act as a muscle tonic and excellent remedy for trauma. Aching pain in limbs and body as if they are beaten; joints as if sprained. Feeling of Soreness, lameness, bruising, sprained and dislocated after overexertion. Writer's cramp with want of strength in the hands while grasping anything.
- 2) **BELLIS PERENNIS:** Very much effective remedy for injuries to deeper tissues, especially following major surgery. Results of nerve injuries with intense soreness. As noted by Burnett, it is beneficial for older laborers, especially gardeners. Pain along the front of thighs. Feeling of contraction as from elastic band around wrist joint. Sprains and bruises.
- 3) **BRYONIA ALBA:** Every muscle is aching. Nape of neck is painfully stiff. Small of back is stiffed with stitching sensation. Knees also have sensation of stiffness and pain. Joints are red, swollen, hot, with sensation of stitches and tearing aggravated on slightest movement. Every part of body is painful when pressed. When Arnica fails, this remedy is often indicated in joint injuries.
- 4) **CALCAREA CARBONICA:** After overlifting the patient can hardly rise with pain as if sprained. Dorsal vertebrae curvature. Stiffness and rigidity in nape of neck. Extremities weak. Joints are swollen, especially knee joint. Old sprains. Tendency to sprain the muscles easily. Neck pains are aggravated after lifting. Weakness of back leads to difficulty in sitting upright in chair. Vertebrae are painful when pressed with loose feeling. Numbness of hands when grasping. Want of mobility of fingers.
- 5) **CAUSTICUM:** Act on chronic rheumatic, arthritic and paralytic conditions with indications of tearing, drawing pains in the muscular and fibrous tissues, with joint deformities; muscular strength lost progressively, contractures of tendons. Left-sided sciatica accompanied by numbness. Muscles of forearm and hand are unsteady. Loss of sensation in hands with numbness. Cracking and tension with stiffness in hollow of knee. Can hardly move the head with stiffness of neck. Writer's cramp. Fulness of hands while grasping anything.



- 6) **CONIUM MACULATUM:** Dorsal pain between shoulders. Ailments from bruises, shocks to spine, contusions, blows, overstraining, over work. Coccyodynia. Dull aching sensation in lumbar and sacral region. Feeling of heaviness, weariness, paralysis; trembling; unsteady bands; numbness of fingers and toes. muscle weakness, especially of lower limbs. Pain is ameliorated after Putting feet on chair. Drawing pain in the lumbar vertebrae aggravated by standing.
- 7) **GELSEMIUM SEMPERVIRENS:** Languor with bruised feeling of muscles. Fatigue after every little exertion. Neck pains, especially upper sterno-cleido muscles. Bruised sensation of neck with inability to hold the head. Mostly deep-seated muscles of back, hips, and lower extremities are painful. Forearm muscles' cramp. Professional neuroses. Writer's cramp. Excessive trembling and weakness are observed in all limbs. Muscles' incoordination, which do not obey the will. Hard aching sensation in humerus (R). Weakness of knees aggravated by descending; tottering gait; cannot direct his leg. Feeling of partial luxation of patella when walking.
- 8) **HYPERICUM PERFORATUM:** The great remedy for injuries to nerves, especially of fingers, toes etc. Crushed fingers, especially tips. Pain in nape of neck. Pressure over sacrum. Spinal concussion. Injury to coccyx after a from fall, with pain in spine and limbs. Jerking and twitching of muscles. Darting pain in shoulders. Pressure along ulnar side of arm. Cramp in calf muscles. Inflammation of nerve with tingling, burning pain and numbness. Joints feel bruised. Inability to walk or stoop with violent pain resulting from a fall on coccyx.
- 9) **LEDUM PALUSTRE:** Affection of fibrous tissue of joints esp. small; ankles; tendons; Stiffness of back with cramps aggravated by rising from sitting. Lumbago. Hip joint cramps. Soreness of heels. Soles are painful with difficulty in stepping on them. Hands are trembling when moving them or grasping anything. Ankles sprain easily. Feet held to earth as by a magnet, when attempting to move. Pain in shoulder on raising arm.
- 10) **MAGNESIUM PHOSPHORICUM:** Hands are shaking involuntary. Sciatica with tenderness of feet. Weakness of arms and hands. Finger-tips are stiff and numb. General muscular weakness. Spasmodic effects such as chorea, writer's, piano, violin player's cramps etc. Sensation of absence of one vertebra. Pains in lower limbs; alternating between sides. Cramps



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resulting from prolonged exertion such as prolonged use of tools. Crampy contraction of fingers.

- 11) **NATRIUM MURIATICUM:** Back pain with need for firm support. Weakness of arms, legs especially knees. Sensation of numbness and tingling in fingers and lower. Ankles are weak with tendency to turn easily. Hamstrings are painfully contracted. Joints are cracking on motion. Muscles and tendons are Contracted. <Exertion, writing. Chronic sprains. Can stoop easily but getting straight is painful. Hands tremble when writing. House maid's knee.
- 12) **PLUMBUM METALLICUM:** Localized nerve pains and inflammation. Lightning-like pains which are ameliorated by pressure temporarily. Single muscle's paralysis. Difficulty in raising or lifting anything with the hand. Difficulty in extension. Paralysis in piano players from overexertion of the extensor muscles. Paroxysmal pains in muscles of thighs. Wrist-drop. Calf muscle cramp. Patellar reflex is lost. Arms are shaking while attempting to use them.
- 13) **RANUNCULUS BULBOSUS:** Affection nerves; muscles; fingers, toes and left side. Stitching; stabbing; shooting pains that extort tears with shuddering and difficulty to rest in any position. Muscular pain along inner edge of left scapula extending through lower half of left chest from sitting bent for needlework, typewriting, piano-playing. Scapula adherent. Rigid contraction of neck muscle, can speak only by moving shoulders up and down. Crawling and tingling sensation in fingers. Sudden jerk and stitching pain in right forearm while writing. Heel pains as if it is pinched by boots.
- 14) **RHUS TOXICODENDRON:** Affection of fibrous tissue such as joints, tendons, sheaths-aponeurosis, etc, resulting pains and stiffness. Ailments from strains, overlifting. Pain and stiffness in small of back is painful and stiff ameliorated by, motion or lying on something hard and aggravated while sitting. Tearing pain in tendons, ligaments, and fasciae. Soreness of condyles of bones. Pain along ulnar nerve. Sensation of numbness and formication resulting from overwork. Paralysis and trembling resulting from exertion. Knee-joint is tender. Forearm and fingers seem powerless with crawling sensation in the tips of fingers. Pain feels as though the flesh is being torn loose from the bones. Neck stiffness with painful tension when moving. Backache as if contracted or broken ameliorated by hard pressure or lying on something hard,



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walking about or bending backwards. Lumbago. Coccyx pain radiates to thighs. Pricking sensations in tips of fingers and palms when grasping.

15) **RUTA GRAVEOLENS:** Affection of periosteum and cartilages. Complaints related to straining flexor tendons especially. Tendency for deposit to form in the periosteum, tendons, joints, especially wrist. Overstrain of eye muscles. Painful sensation as if bruised in all parts of body. Useful in sprains after Arnica. Sprains followed by lameness. Back pain ameliorated by pressure and lying on back. Lumbago aggravated in morning before rising. Bruised feeling in spine and limbs. Legs feel weak while attempting to rise from a chair, require multiple attempts. Fingers are contracted Wrists and hands are painful and stiff. Soreness of tendons. Aching pain in tendo-Achilles. Pain in thighs when stretching the limbs. Sensation like pins and needles are pricking in tips of fingers and palms when grasping. Weakness of lower limb while going up or down-stairs.

16) **SILICEA TERRA:** Ailments from injuries; sprains. Affections of nerve after spinal injury especially when pressure on spine results pain in distant parts. Weakness and sensitivity of spine to drafts on back. Caries of vertebrae. Coccyx is painful. Back pain resulting from riding in carriages for a long time. Painful curvature of spine, known as kyphosis. Weakness of ankles and feet. Tension and contraction of calf muscles. Fingers are numb and atrophied. Bones are inflamed. Hands tremble when trying to do something. Lameness of forearm. Feeling of paralysis of legs and trembling while walking. Cramps in knees. Bursa over patella is enlarged.

17) **ZINCUM METALLICUM:** Unbearable sensation of back while being touched. Tension and stinging between shoulders. Irritation of spine. Sensation of dull aching at the last dorsal or first lumbar vertebrae aggravated by sitting. Burning sensation of spine. Weariness of nape of neck resulting from writing or any exertion. Tearing sensation in blades of shoulder. Muscular lameness, weakness, trembling and twitching. Sensitivity of soles of feet. Steps are taken with entire sole of foot on floor. Spine aches especially small of the back aggravated by turning in bed, sitting or in the act of sitting down and stooping. Pain in deltoid aggravated by raising arm.

CONCLUSION: Homoeopathy provides remedies which address unique occupational pathologies: Rhus toxicodendron and Ruta graveolens are indicated for strained tendons and fibrous



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tissue stiffness; Arnica montana and Bellis perennis manage trauma and overexertion in laborers; and Gelsemium or Magnesium phosphoricum target professional neuroses like writer's cramp. By integrating ergonomic improvements with individualized homoeopathic management, the burden of WRMSDs can be significantly reduced, ensuring better human efficiency and long-term well-being.

REFERENCES:

1. Jäger PD, Griefahn B, Liebers F, Steinberg DI, für Arbeitsschutz B. Preventing musculoskeletal disorders in the workplace. World Heal Organ Rep Geneva. 2003(5):1-38.
2. Mishra S, Avinash G, Kundu MG, Verma J, Sheth A, Dutta A. Work-related musculoskeletal disorders among various occupational workers in India: a systematic review and meta-analysis. Journal of Occupational Health. 2024 Jan;67(1):uia077.
3. International Labour Office. List of occupational diseases (revised 2010): Identification and recognition of occupational diseases: Criteria for incorporating diseases in the ILO list of occupational diseases. Geneva: International Labour Office; 2010. (Occupational Safety and Health Series, No. 74)
4. Greggi, C.; Visconti, V.V.; Albanese, M.; Gasperini, B.; Chiavoghilefu, A.; Prezioso, C.; Persechino, B.; Iavicoli, S.; Gasbarra, E.; Iundusi, R.; et al. Work-Related Musculoskeletal Disorders: A Systematic Review and Meta-Analysis. J. Clin. Med. 2024, 13, 3964. <https://doi.org/10.3390/jcm13133964>
5. Park K. Occupational health. In: Park's textbook of preventive and social medicine. 25th ed. Jabalpur: Banarsidas Bhanot Publishers; 2019. p. 864.
6. Phatak SR. Materia Medica of Homoeopathic Medicines. 2nd ed. rev. & enl. 21st impression. New Delhi: B. Jain Publishers (P) Ltd.; 2017.
7. Boericke W. Pocket manual of homoeopathic materia medica & repertory. Low price ed. 15th impression. New Delhi: B. Jain Publishers; 2018.