

Effects of Integral Yoga on Lumbar Region Muscular Spasm

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Abstract

Muscle Spasm is a forceful involuntary contraction of a muscle. Muscle Spasm occurs suddenly and is often painful. Muscle spasms in human body may be a sign that your body is trying to tell you something either to slow down or it's a wrong activity or posture. Other possible reasons could be hypocalcaemia, alkalosis, certain phobias and anxiety and lactic acid, Uric acid, low magnesium or low potassium.

Spasms can affect many different types of muscles in the body, leading to many different symptoms (DrBenjamin Wedro, MD, FACEP, FAAEM2017). Spasms of skeletal muscles are most common and are often due to overuse and muscle fatigue, dehydration, and electrolyte abnormalities.

The research is prompted by noticeable muscular pain in regular yoga practitioners. The pain of a spasm becomes more noticeable to those constantly exercising and therefore the pain of the spasm is correlated to exercise. Present research will focus on the Lumbar Region spasm. Spasms can be the result of injuries to the muscles, tendons, and ligaments, or they can be related to more serious medical condition related to hormonal imbalance, Heavy weight lifting could be a common cause of back spasms, including excessive forward bending, missing the counterpractice with lateral bending and spinal twists. Any activity that puts excessive strain on the muscles and ligaments in the lower back can cause an injury. Sports like Football and Golf can also lead to back spasms because they demand that the back turn suddenly and repeatedly. (Annie Hauser 2015, updated 2017). Your back muscles may be more vulnerable if the abdominal muscles are weak, which help support the back. Weak or stiff muscles in the back itself can be injured more easily than muscles that are stronger and more limber. Back spasms may occur, if you have arthritis or a ruptured disk in your spine. Arthritis in the lower back can put pressure on the spinal cord, which may cause pain in the back and the legs. A ruptured or bulging disk in the vertebrae may also press a nerve and result in back pain. (Deborah Weatherspoon, PhD, RN, CRNA 2018)

Resolving Muscle Spasm

One can smile more often. And work its way through spasm, by resolving it the permanent way by Self, throughSelf, forSelf.

Yoga therapy is just not a physical practice of Asanas, Pranayamas, Mudras and Bandhas but also emphasis on following certain Yamas and Niyamas with special attention to Ashtanga yoga putting emphasis on Aparigraha in Yama #5 Non-possessiveness- holding of any kind of negativity, baggage, sorrow, anger, guilt including a simple discouraging thought to inflame the current situation. (JuliaBelluz 2015). When one is uncomfortable

in their own body may invite Spasm unconsciously it becomes a vicious circle. (Sidney J Blatt, Donald M Quinlan, Paul A Pilkonis, M Tracie Shea).

Ishwarpranidhana Patanjali (I-23PYS) when we are grateful in the present we attract only the best, it's always rewarded with more positivity it attracts only good with a relaxed mind, in a relaxed body and vice versa become a guide, philosopher to self. Person, who blends his/ her inner feelings with creativity, doubts about path of yoga including Yama, Niyama bring suffering, mental agony. Samshay about importance of Yama makes us break one Yama or other and obviously, we are put in trouble. And in trouble or turbulence one experiences body pain, mental pain, tremors and increased respiration. If just this (aparigraha and ishwarpranidhana) thought enters can relieve the cause, problem, the symptom.

Meditation replaces Medication-(Dan Siegel, nicabm 2018) the journey within is the hardest of all because that is where we encounter the darkest area. The darkness is that makes us sometimes fall apart and at that moment. All we need to do is to become a little more human by accepting our flaws and limitations in prayer we feel the param -atma the supreme energy with us, with unconditional love, faith and trust can work well .

Muscle memory (Asam Dachis 2011 memory) - Identification of nature of the problem, it's related to medical science, human anatomy or physiology to treat the recurring issue, it so happens that the occurrence of injury to the same group of muscle may be the cause of muscle memory.

Age-related changes in muscle contractility – Despite the significance of skeletal muscle atrophy and weakness as inevitable concomitants of old age; the underlying molecular mechanisms responsible for these impairments are only partially understood. There could be many reasons for the same, as the person grows old, its biochemical process is deteriorating -degeneration is a very common cause, the metabolism slows down, which hinders its functioning and attracts diseases. The protein levels the Actin or Myosin levels keeps fluctuating can add up too many reasons including medical family history (Thompson LV and Brown, 2001)

To understand the root cause, one has to go to their roots; it's found in Ayurveda – Sushruta Samhita wrote the Dhanvantari, the three dosha's or regulating forces of nature. Ayurveda wisdom holds that equilibrium or balance of these three dosha's is extremely important. (Healthcare in India)

Self-treatment- Temporary solutions

A) Stretching and gently massaging the area may help stop muscle spasms. Icing the area or applying heat from a warm towel, heating pad or hot water in the shower may also help to soothe the spasm.

B) Ice will help reduce inflammation and heat may help improve blood flow. Medications like non steroidal anti-inflammatory drugs (NSAIDs) and muscle relaxants may help relieve symptoms while the muscles heal.

C) Research supports that muscle relaxants provide significant pain relief in short-term muscle spasms. (True remedies 2018)

Yoga is considered to be low impact activity that can provide the benefits related to general, health, stamina and reduction in stress. Yoga practices and its principles have deep impact and positive effect on overall personality of the practitioner. It is well established fact that it not only gives a proper conditioning to the body-mind complex to attain perfect health at physical, mental and emotional levels but also creates a path for permanent happiness, opens the gateway to access realms of super-human capabilities'

Intervention

Yoga module designed and to be implemented for 21 days

Highlighting the points of the modules on controlled groups and seeing lifestyle changes in the patients suffering from muscular spasm.

- ★ Objective to show by group study presentation, the potential for the two different types of prayer Mahamatruytujai Mantra including Gayatri Mantra, five different Pranayamas, which include the Nadi-Shodan, Brahmari, Sheetali, Shitkari, Ujjayi for 15-20 minute.
- ★ Including a daily writing and dropping of one negative thought pondering on the Aparigraha for couple of minutes.
- ★ Meditation on the muscle tissue to relax the practitioner to avoid spasm including practicing visualization to create harmony and peace in body and mind.
- ★ Summary of background in spasm (hereditary etc) has the capacity to come and flare -up to an extent that it can effects daily activities and chores.
- ★ Methods will be a complete designed 21-day program a brief report after observation and study of current issue and situation of practitioner within designed parameters.
- ★ So it could be monitored minute lyand approached at personal level being objective but sensitive to situation, a proper diet and clear instructed step by step procedure would be drawn to be noted.
- ★ Evidence in the entire process of treatment prescribed through mantra Jap, meditation, mindful asana practices references from Maharishi Patanjali text and Ayurveda text...
- ★ Results to show up, will take a study of minimum 21 days' close monitor to 6 months and further questionnaires to evaluate the final readings accordingly.
- ★ Experimental evidences may show that pain may cause muscle spasm causes pain and discomfort so to study the depth of pain different scales may be used.
- ★ Further evidence for the existence of a pain-spasm-pain cycle comes from studies which show that analgesics can reduce muscle spasm, and that a variety of muscle relaxant techniques can reduce pain at the surface level or even a placebo effect could be tested,

- ★ There are substantial methodological problems in many of the studies cited, but the evidence reviewed provides general support for the existence of a pain-spasm-pain cycle.
- ★ However further work is required to determine the nature of spasm and to evaluate methods for its detection, particularly an acute back pain syndrome. The value of therapeutic intervention may then be assessed.

Study may consider practitioner who suffer from lumbar disc herniation who complains of radicular pain and in 15 normal subjects. PPTs will be measured at five points bilaterally using an electronic pressure algometer. Low-back pain could be evaluated using visual analogue scale (VAS) ratings. Pressure pain threshold, Muscle spasm, Low-back pain, Lumbar disc herniation, Sciatic scoliosis can be given a different set of practices and kept under frequent observation.

Conclusion

In a study conducted in 2018 by Dr. William A. Sands, Jeni R. It was observed that stretching within limits did not appear to be an unusual threat to gymnasts' health. Based on the assessment of (including decided parameters) it was concluded that a clinical trial back pain has been beneficial using designed methodology lessons.

It was observed in 21 days of traditional yoga practices reduced the back pain by 28% in a sample size of 42 participant age group from 25-50 years as compared with the control group with the same number of participants having chronic back pain/spasm. The scale used was 0-10 along with questionnaire and personal interviews. (hypothetical statement)

Thus, we can conclude that Yoga intervention helps in reducing back pain or spasm frequency compared to earlier practices.

Literature Review

The research studies pertaining to literature review has been divided in the following sections:

- 1) **Pharmacological treatment** of musculoskeletal pain and spasm, mentioned are the findings The pharmacologic management of spasm is based on the emerging evidence that pain in this disorder is primarily related to central pain sensitization. There is strong evidence that pain and symptom management relaxes with medication which is temporary solution example Carisoprodol 250mg back ache. Dependent variable 20 minutes of breathing on 54 sample students.
- 2) **Alternative medicine treatment** of musculoskeletal pain and spasm. Journal Arch phys med reh- common muscle relaxants Cyclobenzaprine hydrochloride Carisoprodol Cyclozaprine Hydrochloride and Metaxalone Carniomamdbular disorder (Europe PMC Sites).

Yoga Therapy for musculoskeletal pain. Mindful stretches including Hatha yoga practices In a study conducted by Dr Christoph J. Siepe in the year 2018, it was observed

that regular yoga practice reduced the stress level in 60 participants by 30% and blood pressure by 25% 2018)

1) A hypothesis of chronic back pain: ligament subfailure injuries lead to muscle control dysfunction

European Spine Journal

Publisher-Springer Berlin Heidelberg

2) Clinical Biomechanics

A critical review of the evidence for a pain-spasm-pain cycle in spinal disorders

Author links open overlay panel M.A., M.R.C.G.P.M.O. Roland

[https://doi.org/10.1016/0268-0033\(86\)90085-9](https://doi.org/10.1016/0268-0033(86)90085-9)

3) Back and hip extensor fatigability in chronic low back pain patients and controls

PUBLISHED | 1998 in Archives of Physical Medicine and Rehabilitation

Markku Kankaanpää

3) and meditations, help increase the supply of oxygenated blood flow to various parts every cell is stimulated

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