Acta Scientific Orthopaedics (ISSN: 2581-8635)

Volume 8 Issue 8 August 2025

Review Article

Kinesio Taping And Chronic Low Back Pain- A Narrative Review

Ashraf Y[1], Kannabiran B[2]*, Franklin Shaju[2] and Mahesh R[3]

[1]Ph.D. Scholar, RVS College of Physiotherapy, Professor, PSG College of Physiotherapy, Coimbatore, The Tamil Nadu Dr. M. G. R. Medical University, Chennai, India

[2]Professor, Ph.D. Guide, Department of Neurological Physiotherapy, R.V.S College of Physiotherapy, Coimbatore, The Tamil Nadu Dr. M. G. R. Medical University, Chennai, India

[3]Principal PSG College of Physiotherapy, Coimbatore, The Tamil Nadu Dr. M. G. R., Medical University, Chennai, India

***Corresponding Author:** Kannabiran B, Professor, Ph.D. Guide, Department of Neurological Physiotherapy, R.V.S College of Physiotherapy, Coimbatore, The Tamil Nadu Dr. M. G. R. Medical University, Chennai, India.

DOI:10.31080/ASOR.2025.08.1064

Received: July 09, 2025

Published: July 25, 2025

Abstract

Our body is made up of myofascial tissues. Tightness in this structure results in pain, restriction of movements which disturbs the person. Prolonged pain in these structures cause the chronic pain. Adaptation of abnormal posture for a long duration leads to continuous contraction of that particular muscles, which are not given a chance to relax themselves results in myofascial pain. Recent post covid working methods like work from home, prolonged awkward sitting posture also increases this risk. This usually affects the postural muscles, mainly in the neck and back regions. Many physiotherapy and manual therapy techniques are available in the treatment of chronic pain. Kinesio Taping is the one among them, where a tape is applied over the tight muscle to supports its activity, reduces stress, pain and improves movements. This review focuses on the application of Kinesio Taping technique at lower back region including various parts of the body to alleviate pain and to improve function.

Keywords: Kinesio Taping; Chronic Low; Back Pain; Narrative Review

Introduction

Our bodily function happens with the help of muscles, bones, nerve tissues, blood vessels and organs, which are covered by a connective tissue called as "myofascia". It connects all the structures in the body. The word 'Fascia' derived from Latin, means 'band or ribbon like'. The fascia spreads all over the body. It supports the tissues and organs for the smooth gliding of each by reducing the friction. Any problem or abnormal function of the fascia results in movement issue. The stickiness or tightness of fascia makes it move less and so other structures. The abnormality can occur due to injury, overuse which is identified by our immune mechanism, creates inflammation as a measure of healing. Earlier many nomenclatures were applied for this inflammation of fascia like 'fibrositis'. Now its been replaced with 'myofascial pain'. Myofascial trigger point term was coined by Travell and Rinzler during 1950s [1,3].

Myofascial pain syndrome

Myofascial pain syndrome (MPS) is classified as musculoskeletal pain syndrome, in which there is a motor (taut band) and sensory abnormality (tenderness, referred pain) found. This as a treatable condition by manual techniques or by injection . This connective tissue is important for ones' well being [2]. The review done by Zhuang et.al., gives an over view about the details on trigger points, types, location and their managements. They explained

few hypothesis like integration, excess acetylcholine, abnormal electrical discharges from trigger points, increased excitability of neurons in the central and spinal segmental levels, pathological process that happens at the site of scar, adhesion and spasm of muscles which gives the description on trigger points [5]. Jafri MS*., et al.,* in 2014 described a new 'Mechanistic theory' which explains about the mechanical stress triggers excess calcium release in the muscle via a mechano - transduction path. This path initiates and continues the development of trigger points [6].

Myofascial tissue or fascia is made up of collagen, elastin, water, hyaluronic acid, mast cells, fibroblasts, white blood cells and adipocytes. This fascia also having rich nerve endings, receptors for pain, movement and spatial awareness. The integrated smooth movement of fascia with its receptors, prevents injury [4]. Chandola HC and Chakraborty A (2009) in their article 'Fibromyalgia and myofascial pain syndrome-a dilemma' described about the differences, clinical features, diagnositic criteria of Fibromyalgia and myofascial pain syndrome. Prolonged stable posture, lack of exercises, excessive exercise, trauma, sleep disturbance, high BMI, emotional stress also contributes to myofascial pain syndrome. They also discussed about the types of trigger points [7].

Myofascial tissue undergoes series of movements when we move. Undue strain or over use of the muscle results in fascial tightness or constriction called as Myofascial pain syndrome (MPS). The muscle fibers having tightness shows taut band like structure or nodule known as Myofascial trigger point (MTrP). There is a lack of blood supply to the fibers cause an energy crisis at the site of trigger.

The scientific explanation on the trigger point was 'energy crisis'. Adaptation of a particular posture for a long duration, even repeated movements results in energy crisis. There will be reduction of blood supply, oxygen supply and the nutritive materials. There will also be a stagnation of lymphatic flow. Because of this energy depletion, the calcium pumping mechanism also disturbed. Increase in the calcium ion inside the cells results sustained muscle contraction creates taut bands. In case of injury, there will be a local inflammation, muscle spasm to protect further injury. The accumulation of inflammatory mediators also causes pain, sustained contraction of injured muscle ends with energy crisis. So attention to the local site is important. This myofascial trigger points due to its very local tightness can be known as muscle knots or muscle cramps. It can be due to the dysfunction of muscle. This develops after an injury or with overuse, which is acute. Usually resolves within few weeks, but can extend to a long duration known as chronic. In case of chronic, this can be a repeated problem of more than 3 months. Local palpation on trigger point can elicit referred pain nearby. In case of Fibromyalgia, there will be diffuse tender point and no taut band or referred pain. They will also have anxiety, depression, insomnia, fatigue [8].

Myofascial tissue undergoes series of movements when we moves. Undue strain or over use of the muscle results in fascial tightness/constriction called as Myofascial pain syndrome (MPS). The muscle fibers having tightness shows taut band like structure or nodule known as Myofascial trigger point (MTrP). The MTrP is a hyperirritable nodule in a taut band of skeletal muscle, tender on palpation. MTrPs can be classified into active and latent. The local pain experienced or expressed by the patient on palpation is active one and the distal painful site due to referred pain is known as latent trigger point. There won't be any pain in latent point, until that point is triggered. Muscle dysfunction results in both types of trigger points [9].

Occupation or sports related repeated tasks makes the local site continue to be in the energy crisis. The long run strain creating tasks results in chronic pain. In these conditions there can be active and latent trigger points. Active is the one in which there is a complaint of pain. On palpation, we can find the taut band or jump sign. There won't be any complaint on latent trigger point, but can express pain on palpation. Recent evidences in chronic pain supports for the application of many physiotherapy and manual therapy techniques. One among them is Kinesio taping technique.

We can see there is an increase in researches on Myofascial pain syndrome (MPS). Nowadays application of this terminology in clinical setup is also increasing. Recent bibliometric analysis with 1099 researches on MPS from 1956- 2022, done by Tang F et.al.,2023, explains about the importance of MPS and the researches worldwide. Among many countries more publications were in USA about 270. Also described various places of researches and the publications globally, which enhances the knowledge on MPS [10].

Kinesio taping in various conditions

Kinesiology Tape is a special elastic tape developed by Dr. Kenzo Kase, DC in 1980s, designed to support muscles, ligaments and joints. On application the tape lifts the skin, provides better blood and lymphatic flow which manages the energy crisis. This reduces

the pain and improves function. The latex free, non-irritable, hypoallergic adhesive glue in the tape helps to stick properly to the skin. The stretchable quality of the tape accommodates the body part on movement. The mechano receptors responsible for the sensations like touch, pressure, movement, stretch are present in the skin. When the tape is applied, these receptors are stimulated, change the perception of pain and induce relaxation in the tight muscles.

During 2008 Olympic games KT application in sports players made curiosity about its effects. After that many researches went on to find the effects. Williams., *et al*., 2012 had a review paper stated that KT had a small beneficial effect on improving strength, range in certain sports injury cohort studies, recommended to have more experimental researches to know its benefits [11]. During 2013 Karlon A et.al., had a systematic review on the effectiveness of Kinesio Taping. Analyzed 12 studies done in musculoskeletal, neurological and lymphatic issues and found that it aided for pain reduction for short duration in musculoskeletal conditions, but not in the neurological and lymphatic conditions [12].

In 2015, Kuba Ptaszkowski., *et al*. done a study on two groups with the application of KT and Post Isometric Relaxation(PIR) in upper trapezius muscle. The 24 hours application of PIR (three times) and KT in tight Upper Trapezius muscle showed better pain reduction in KT group than PIR on VAS scale. Also there was no significant improvement noticed in the resting bioelectrical activity of the muscle evaluated by surface electromyography (sEMG) [13]. Ay Saime., *et al*. 2017 applied KT in cervical myopain syndrome for 2 weeks along with exercises and found that it worked well on pain reduction, range improvement and the pressure pain threshold, but not on disability scale. Recommended the use of KT as an alternative therapy for MPS [14].

From the meta analysis of 20 RCTs which had KT application as the main mode of intervention in myofascial pain syndrome, analysed the effect on pain, range and functional disability levels, and found that KT proved to be a better non invasive technique [15]. The data of 308 patients, who involved in five RCTs were analysed for the effectiveness of KT in Osteoarthritis knee. They concluded that KT reduced the pain level, improved knee range and functional ability [16]. Dogan*., et al*., 2019 conducted a single blinded random study to compare the effectiveness of the kinesio taping and dry needling techniques in trigger-point related myofascial pain syndrome of the muscle upper trapezius. To inactivate the trigger points, KT can be the better option of non invasive method of treatment [17].

Labianca., *et al*., 2022 conducted a RCT to find out the effects of KT during early rehabilitation phase after Anterior Cruciate Ligament Reconstruction and concluded that this reduced pain, edema. Recommended to have further research on analyzing muscle activation, strength also [18]. A systematic review and meta-analysis published in 2023, with the total of 152 papers on the use of Kinesiology Taping in musculoskeletal disorders and pain, recommended to have more RCTs to explain KT appication methods, and the effectiveness. Among this 27 were on muscular and sports pain. Three were on foot, seven on shoulder pain, four on knee pain and three on myofascial system [19].

Kinesio taping technique in chronic low back pain

Castro-Sánchez, A. and colleagues conducted a randomised trial to investigate whether the Kinesio taping reduces the disability and pain levels in chronic low back pain condition. The effect of KT (n=30) was compared with the placebo group (n = 30) provided with 30 minutes of supervised exercises for 4 weeks. Both groups had significant reduction of pain and disability, but on between group there was no statistical significant difference seen. They recommended to have comparison with no tape group [20]. During 2013, Bae SH et.al., published a research on the effects of KT in those who had low back pain for more than 12 weeks. They assessed the pain level in VAS scale, functional disability level with ODI. Also assessed the anticipatory postural control and movement-related cortical potential (MRCP) using electromyography and electroencephalography respectively. They found that the pain and the disability level was reduced significantly in KT group than in control group [21].

Montalvo AM., *et al*. in 2014 had a meta-analysis with the level II evidences of researches for the duration of ten years on KT in musculoskeletal injuries. They found 13 relevant articles among 80, expressed that the effect was not that much clinically meaningful when compared with other modalities and can be applied with traditional therapies. Also suggested to have further [22]. In case of nonspecific low back pain, with 40 subjects, a comparative study

was done to know the effects of Kinesio Taping application with traditional or conventional treatment. Conventional treatment included were strengthening for abdominal muscles, stretching for back, hamstrings & iliopsoas muscles. This study concluded that both methods were equally effective [23].

To find out the **e**ffectiveness of KinesioTaping on pain and functional disability in Non-Specific Low Back Pain, a RCT study was conducted with two groups compared for conventional therapy and kinesio taping. Both gender aged 18-45 with chronic non specific low back pain subjects were included. The treatment duration was 4 weeks. The KT group additionally received conventional therapy, includes moist heat and spinal strengthening exercises. Outcome analyzed were VAS for pain, Range of motion and RMDQ (Roland Morris Disability Questionnaire) for disability. KT group showed better pain relief than conventional alone. Recommended to add KT application in chronic non specific low back pain [24].

The RCT done with 148 patients who had chronic nonspecific low back pain, allocated into 2 groups - Physical therapy group, Physical therapy with Kinesio Taping group. With the interventions like joint mobilization, myofascial release, strengthening and stretching exercises for trunk muscles, lower limb muscles twice a week foe five weeks of program one group was added with KT application. Tape was kept in position for 48 hours. They also added the same strengthening exercises as home program, but were not monitored. The study also had the followup of 3 and 6 months and concluded that adding KT with regular Physical therapy intervention not added the benefit as there was no statistical significant difference between groups on the outcome variables [25].

One RCT conducted by Al-Shareef A., *et al*. with 44 patients who had chronic non specific low back pain, allocated into KT for Erector spinae and placebo group. Treated for 2 weeks. The assessments were done on VAS for pain, ODI Arabic version for disability, trunk flexion range in Modified Schober test at base line, at 2 weeks and 4 weeks of followup. The statistical evidence showed that there was a significant improvement on pain and disability on comparing with placebo group [26]. Nelson N. L. (2016) done a systematic review with five RCTs comprises of 306 subjects, to find out the effects of KT in chronic low back pain compared with sham taping, conventional exercises. stated that there was a limited to moderate evidences supports the usage of KT than conventional physical therapy and exercises [27].

To find out the effects of kinesiotape on pain and disability in chronic low back pain. Li Y., *et al*., (2018) conducted a systematic review and meta-analysis of ten studies with 627 chronic low back pain patients, found that the KT is not superior to placebo taping on pain reduction. This KT can be applied when the patient not able to get other physical therapy programs [28]. The Meta-Analysis of Randomized Controlled Trials involved 11 RCTs with 785 patients diagnosed with chronic non specific low back pain for more than 12 weeks duration. The studies also included with leg pain or without leg pain. They considered to add KT as a single treatment method or combined with other physical therapy methods. According to the pain and disability outcomes they concluded that there was low quality evidence for KT application in CNSLBP condition [29]. A double blinded RCT was done by Abbasi et.al., in non specific chronic low back pain patient where KT was applied with 15-25% tension for 72 hours, and the placebo without tension in non specific chronic low back pain patients. Along with pain, disability they assessed lumbar repositioning error (lumbar RE), as an indirect measure of proprioception, with bubble inclinometer at 15,45 and 60 degrees, as the previous studies supported that the low back pain patients found difficulty on reproducing these three target positions.On pain and disability reduction KT showed better effect than placebo taping. But the effect was not supported for proprioception [30].

In case of chronic low back pain one RCT was done to compare the effects of 'Star shaped KT, Sham taping and Minimal Intervention (MI) to assess the pain, and postural control. The MI group had given counselling and an educational booklet supplied for the self care. Pain, centre of pressure, mean sway speed were primary outcomes, disability was the secondary outcome. These were assessed three time during the treatments- immediate after application of KT and Sham tape, 7th day of intervention and one month followup. There was a less significant effect of star shape KT group on pain, postural control when compared with other two groups [31].

With 35 patients who had non-specific chronic low back pain treated in three groups with KT alone, Core-stabilization exercises (CSE) alone and the combination of both for pain, lumbar range, depression, anxiety, kinesiophobia and sleep disturbance. Within group all type of treatment methods gave statistically significant difference, whereas between group analysis the KT+ CSE group showed far better result than other two groups in all the parameters [32].

Conclusion

Many research were done to find out the effectiveness of Kinesio Taping technique at various parts of body to alleviate pain, disability and to improve the range in the joints. The research in non specific chronic low back pain is also increasing recent years. Evidences of research works supports for the usage of kinesio taping, as it reduces pain even in chronic low back pain patients. In some studies KT been added with other treatment techniques like physiotherapy modalities, myofascial release techniques, myofascial trigger release and other manual therapy and chiropractic techniques. From this review many research supports KT as an adjunct or add-on therapy which helps to reduce myofascial pain. The KT application never restricts the movements of the applied area like braces, along with the KT tape the patient can do exercises and their regular activities with minimal or no pain. This review gives an overview on KT application which helps for the better function in patients with chronic low back pain.

Bibliography

1. Travell J and Rinzler SH. "The myofascial genesis of pain". *Postgraduate Medicine* 11.5 (1952): 425-434.

2. Gerwin RD. "Classification, epidemiology, and natural history of myofascial pain syndrome". *Current Pain and Headache Reports* 5.5 (2001): 412-420.

3. Simons DG., *et al*. "Travell and Simons' myofascial pain and dysfunction : the trigger point manual. 2nd edition. Williams and Wilkins; Baltimore (1999).

4. Michael Sudbury LMT. "What is Myofascia? And why is it important?" (2021).

5. Zhuang X., *et al*. "Understanding of myofascial trigger points". *Chinese Medical Journal* 127.24 (2014): 4271-4277.

6. Jafri MS. "Mechanisms of Myofascial Pain. International scholarly research notices (2014): 523924.

7. Chandola HC and Chakraborty A. "Fibromyalgia and myofascial pain syndrome-a dilemma". *Indian Journal of Anaesthesia* 53.5 (2009): 575-581.

8. Tantanatip A and Chang KV. "Myofascial Pain Syndrome. In: StatPearls. Treasure Island (FL): StatPearls Publishing (2005).

9. Shah JP., *et al*. "Myofascial Trigger Points Then and Now: A Historical and Scientific Perspective". *PM R* 7.7 (2015): 746-761.

10. Tang F., *et al*. "Global hotspots and trends in Myofascial Pain Syndrome research from 1956 to 2022: A bibliometric analysis". *Medicine* 102.12 (2023): e33347.

11. Williams S., *et al*. "Kinesio Taping in Treatment and Prevention of Sports Injuries". *Sports Med* 42 (2012): 153-164.

12. Kalron A and Bar-Sela S. "A systematic review of the effectiveness of Kinesio - Taping-fact or fashion?" *European Journal of Physical and rehabilitation medicine* 49.5 (2013): 699-709.

13. Ptaszkowski K., *et al*. "Comparison of the Short-Term Outcomes after Postisometric Muscle Relaxation or Kinesio Taping Application for Normalization of the Upper Trapezius Muscle Tone and the Pain Relief: A Preliminary Study. Evidence-based complementary and alternative medicine *:* eCAM (2015): 721938.

14. Ay S., *et al*. "The effectiveness of Kinesio Taping on pain and disability in cervical myofascial pain syndrome". *Revista Brasileira de Reumatologia* 57.2 (2017): 93-99.

15. Zhang XF., *et al.* "Evidence for kinesio taping in management of myofascial pain syndrome: a systematic review and meta-analysis". *Clinical Rehabilitation* 33.5 (2019): 865-874.

16. Lu Z., *et al.* "Kinesio taping improves pain and function in patients with knee osteoarthritis: A meta-analysis of randomized controlled trials". *International Journal of Surgery (London, England)* 59 (2018): 27-35.

17. Doğan N., *et al.* "Kinesio taping versus dry needling in the treatment of myofascial pain of the upper trapezius muscle: A randomized, single blind (evaluator), prospective study". *Journal of Back and Musculoskeletal Rehabilitation* 32.5 (2019): 819-827.

18. Labianca L., *et al.* "The effectiveness of Kinesio Taping in improving pain and edema during early rehabilitation after Anterior Cruciate Ligament Reconstruction: A Prospective, Randomized, Control Study". *Acta bio-medica : Atenei Parmensis* 92.6 (2022): e2021336.

19. Krajczy Marcin., *et al.* "The review of literature on the possibility of the use of Kinesiology Tape in musculoskeletal diseases. Meta-analysis". *Fizjoterapia Polska* 5.21 (2017): 90-103.

20. Castro-Sánchez AM., *et al.* "Kinesio Taping reduces disability and pain slightly in chronic non-specific low back pain: a randomised trial". *Journal of Physiotherapy* 58.2 (2012): 89-95.

21. Bae SH., *et al.* "The effects of kinesio taping on potential in chronic low back pain patients anticipatory postural control and cerebral cortex". *Journal of Physical Therapy Science* 25.11 (2013): 1367-1371.

22. Montalvo AM., *et al.* "Effect of kinesiology taping on pain in individuals with musculoskeletal injuries: systematic review and meta-analysis". *The Physician and Sports Medicine* 42.2 (2014): 48-57.

23. Kachanathu SJ., *et al.* "Comparison between Kinesio Taping and a Traditional Physical Therapy Program in Treatment of Nonspecific Low Back Pain". *Journal of Physical Therapy Science* 26.8 (2014): 1185-1188.

24. Neeru Bharti., *et al.* "Effectiveness of Kinesio-Taping on pain and functional disability on Non-Specific Low Back Pain-A Randomized Clinical Trial". *International Journal of Advanced Research* 3.10 (2015): 1159-1163.

25. Added MA., *et al.* "Kinesio Taping Does Not Provide Additional Benefits in Patients With Chronic Low Back Pain Who Receive Exercise and Manual Therapy: A Randomized Controlled Trial". *The Journal of Orthopaedic and Sports Physical Therapy* 46.7 (2016): 506-513.

26. Al-Shareef AT., *et al.* "Effect of Kinesio Taping on Pain and Functional Disability in Chronic Nonspecific Low Back Pain: A Randomized Clinical Trial". *Spine* 41.14 (2016): E821-E828.

27. Nelson NL. "Kinesio taping for chronic low back pain: A systematic review". *Journal of Bodywork and Movement Therapies* 20.3 (2016): 672-681.

28. Li Y., *et al.* "Effects of kinesiotape on pain and disability in individuals with chronic low back pain: a systematic review and meta-analysis of randomized controlled trials". *Clinical Rehabilitation* 33.4 (2018): 596-606.

29. Lin S., *et al.* "Short-Term Effect of Kinesiotaping on Chronic Nonspecific Low Back Pain and Disability: A Meta-Analysis of Randomized Controlled Trials". *Physical Therapy* 100.2 (2020): 238-254.

30. Abbasi S., *et al.* "Short-term effect of kinesiology taping on pain, functional disability and lumbar proprioception in individuals with nonspecific chronic low back pain: a double-blinded, randomized trial". *Chiropractic and Manual Therapies* 28.1 (2020): 63.

31. Jassi FJ., *et al.* "Star-Shape Kinesio Taping Is Not Better Than a Minimal Intervention or Sham Kinesio Taping for Pain Intensity and Postural Control in Chronic Low Back Pain: A Randomized Controlled Trial". *Archives of Physical Medicine and Rehabilitation* 102.7 (2021): 1352-1360.e3.

32. Ogunniran IA., *et al.* "Effects of kinesiology taping and core stability exercise on clinical variables in patients with non-specific chronic low back pain: A randomized controlled trial". *Journal of Bodywork and Movement Therapies* 33 (2023): 20-27.