National Imaging Associates, Inc.*	
Clinical guidelines **PASSIVE TREATMENT**	**Original Date: November 2015**
Physical Medicine – Clinical Decision Making	**Last Revised Date: August~~December~~ 2022~~21~~**
Guideline Number: NIA_CG_604	**Implementation Date: July 2023~~22~~**

Policy Statement

This organization does not support the use of multiple passive treatments for the care of musculoskeletal pain within the scope of network practitioners. Most passive treatments have similar physiological effects related to pain control and reduction of inflammation. The use of treatments with duplicative physiological effects is unnecessary and inappropriate. Multiple passive treatments have not been shown to improve or accelerate patient health outcomes.

Scope

Physical medicine participating network practitioners, including rendering chiropractors, physical therapists, occupational therapists, speech therapists, and therapist assistants as applicable. This policy also applies to out of network practitioners as dictated by the health plan.

Definitions

Modality

Modality is defined as any group of agents that may include thermal, acoustic, radiant, mechanical, or electrical energy to produce physiologic changes in tissues for~~of~~ therapeutic purposes. Modalities affect tissue at the cellular level.

Multiple Modalities

Multiple modalities are defined as the use of and/or billing of two or more physical medicine modalities each visit or during the same session to the same region.

Passive Treatment

Treatment that is applied by the provider or in a clinical setting and does not involve active participation by the patient.

* National Imaging Associates, Inc. (NIA) is a subsidiary of Magellan Healthcare, Inc.

Procedure

Procedure is a service provided to increase the functional abilities in self-care, mobility, or safety.

The following is a list of procedures and modalities considered to be passive treatment:

- Thermal and light therapy – Hot/cold (97010), diathermy (97024), microwave (97020), infrared (97026), ultraviolet (97028), ultrasound (US) (97035), paraffin bath (97018), and whirlpool (97022).

- Electrical therapy – High volt, low volt, interferential current, transcutaneous electrical nerve stimulation (TENS) (97014 and 97032).

- Mechanical – mechanically assisted and often a sustained pull of the spine or limb, such as traction (97012).

- Therapeutic massage and manual therapy (97124 and 97140)—Manual therapy includes Active Release Technique, trigger point therapy, myofascial release, mobilization/manipulation, manual lymphatic drainage, and manual traction.

Appropriate Use of Passive Treatment

- Passive treatment modalities may be utilized in the initial period of an episode of treatment or exacerbation of a sub-acute or chronic condition for pain control, reduction of inflammation, or reduction of muscle spasm. As a condition progresses, passive care should be replaced by active treatment modalities, such as therapeutic exercise. Insufficient evidence exists to support the continued use of passive treatment as a means for improved clinical outcomes.

- Passive treatment is considered to be clinically appropriate and/or necessary in the conservative management of neuromusculoskeletal conditions when:
    - There are no contraindications to the intervention
    - Self-administration is implausible or places the patient at risk of harm
    - Used primarily during the initial period of an episode of treatment
    - Used to support an active care approach (i.e., therapeutic exercise)
    - Used for a particular condition for which there is an evidence-basis of significant benefit

- Passive treatment is considered NOT to be clinically appropriate and/or necessary when:
    - Patient safety is jeopardized by the application of the modality
    - The treatment can safely and effectively be administered by the patient or another individual
    - Used during a course of treatment, which continues beyond the initial period

- Used as the primary or sole therapy
- Greater than one passive treatment is used involving the same body region(s)
- Used largely for the comfort and convenience of the patient
- Used as part of the routine office protocol

Exclusions

- The use of chiropractic manipulation (98940-98943) is not considered a duplication of service or physiological effect when used in conjunction with passive treatment, except for the following:

    - The National Correct Coding Initiative (NCCI) edits require that the manual therapy techniques be performed in a separate anatomic site than the chiropractic adjustments in order to be reimbursed separately.

BACKGROUND

The preponderance of evidence appears to support either a lack of efficacy or insufficient data to make a judgment on benefit for the modalities evaluated. When a positive outcome was described, the reported treatment effects were modest. Similarly, the duration of treatment effectiveness was typically reported as short (2 weeks to 2 months). Most international guidelines recommend these interventions should only be used reservedly based upon individual circumstances, and not as a princip~~l~~al ~~e~~ component of a treatment regime.

The use of passive modalities in the treatment of neuromusculoskeletal conditions presents the inherent risk of promoting passive dependence. It is the responsibility of the treating practitioner to judiciously apply passive modalities and encourage active patient participation in the treatment plan. Passive treatment is generally viewed as appropriate when used for a short period of time and in conjunction with active care.

Low Back Pain and Passive Interventions

A review on non-pharmacological therapies for acute and chronic LBP by the American Pain Society and the American College of Physicians concluded that therapies with good evidence of moderate efficacy for chronic or sub-acute LBP are cognitive-behavioral therapy, exercise, spinal manipulation, and inter-disciplinary rehabilitation.[1]

Studies suggest that spinal manipulation may provide modest pain relief and improved function for patients with acute low back pain (pain that has come on within the last four weeks) or chronic (longer-term) low back pain and generally appears to be safe.[2] A meta-analysis of 26 RCTs report statistically significant improvement in both pain and function for patients with LBP who received SMT with only a reporting of minor transient adverse events, including muscle

stiffness, pain, and headache.[3] Clinical Guidelines from The North American Spine Society (2020) recommend, based on good evidence, that "[f]or patients with acute low back pain, spinal manipulative therapy (SMT) results in similar outcomes to no treatment, medication or modalities. Periodically, short-term improvement is statistically better, but clinical significance is uncertain."[4]

Surface electrical muscle stimulators (direct or alternating current, not high-voltage galvanic current) are considered experimental and investigational for the management of idiopathic scoliosis because there is inadequate evidence of its effectiveness and safety in the peer-reviewed published medical literature.[5]

For patients with low back pain, the use of transcutaneous electrical nerve stimulation (TENS) is not a recommended intervention.[6,7] Green et al found that transcutaneous electrical nerve stimulation (TENS) offers no significant benefit for chronic low back pain particularly concerning multiple disability and quality of life measures, but it does offer a small benefit in pain reduction compared with sham treatment. Their study suggests that TENS may be a useful adjunct in select patients for pain control to reduce the need for medication.[8] Likewise, a 2017 study of 127 patients with LPB split into five different comparison groups, including TENS, or a control concluded that the "TENS currents and high voltage [electrical stimulation] were helpful, but not as effective. The use of diadynamic currents appears to be useless."[9]

Guidelines on treatment of low back pain from the National Collaborating Centre for Primary Care found insufficient evidence for the use of interferential stimulation in LBP and recommended against its use for that indication.[10,11]

A Cochrane review of 32 RCTs involving 2762 participants found that "traction, either alone or in combination with other treatments, has little or no impact on pain intensity, functional status, global improvement and return to work among people with LBP. There is only limited-quality evidence from studies with small sample sizes and moderate to high risk of bias. The effects shown by these studies are small and are not clinically relevant."[12] Similarly, the study by Alrwaily and colleagues found that the use of traction in the treatment of low back pain is inconclusive,[13] and Chou et al (2016) found that traction has little or no impact on pain intensity, functional status, or global improvement.[14]

No high-quality evidence was found to support the use of ultrasound for improving pain or quality of life in patients with non-specific chronic LBP. There is some evidence that therapeutic ultrasound has a small effect on improving low-back function in the short term, but this benefit is unlikely to be clinically important. Evidence from comparisons between other treatments and therapeutic ultrasound for chronic LBP were indeterminate and generally of low quality.[15] The current evidence does not support the use of therapeutic ultrasound in the management of chronic LBP.[16]

The Cochrane Back and Neck Group reported little confidence that massage is an effective treatment for LBP. Acute, sub-acute, and chronic LBP had improvements in pain outcomes with massage only in the short-term follow-up. Functional improvement was observed in participants with sub-acute and chronic LBP when compared with inactive controls, but only for the short-term follow-up.[17]

A number of nonpharmacological, noninvasive treatments for low back pain are associated with small to moderate, primarily short-term effects on pain versus placebo, sham, wait list, or no treatment. Effects on function are generally smaller than effects on pain. More research is needed to understand optimal selection of treatments, effective combinations, and sequencing of treatments, and effectiveness of treatments for radicular low back pain.[18] There ~~are~~is insufficient data to draw firm conclusion on the clinical effect of back schools, low-level laser therapy, patient education, massage, traction, superficial heat/cold, and lumbar supports for chronic low back pain.[19] Clinical Guidelines from The North American Spine Society (2020) recommend, based on good evidence, that "[i]n patients with subacute or chronic low back pain, traction is not recommended to provide clinically significant improvements in pain or function." An additional recommendation, based on fair evidence, states "[u]ltrasound does not improve functional outcomes in patients with chronic low back pain."[4]

Neck Pain and Passive Interventions

No trials at low risk of bias support the use of traction, stretching, or ultrasound therapy for chronic neck pain. However, Yang et al found that intermittent cervical traction (ICT) may have short-term pain relief effects, but generally the information regarding ICT is inconclusive.[20] Likewise, a 2018 systematic review reported "some support to the use of the mechanical and manual traction for CR [cervical radiculopathy] in addition to other physical therapy procedures for pain reduction, but yielding lesser effects on function/disability", but the reviewers note a lack of homogeneity in diagnostic criteria among the included studies.[21,22]

Low quality evidence suggests clinically important long-term improvements in neck pain, function/disability, and global perceived effect, when manual therapy and exercise are compared to no treatment. High quality evidence suggests greater short-term pain relief than exercise alone,[23] but no long-term differences across multiple outcomes for (sub) acute/chronic neck pain with or without cervicogenic headache. Moderate quality evidence supports this treatment combination for pain reduction and improved quality of life, over manual therapy alone for chronic neck pain and suggests greater short-term pain reduction when compared to traditional care for acute whiplash. Evidence regarding radiculopathy was sparse.[24]

Coulter et al found that there is low to moderate quality evidence that various types of manipulation and/or mobilization will reduce pain and improve function for chronic nonspecific neck pain compared to other interventions, however ~~a~~ multimodal approaches have the greatest potential impact.[25] Likewise, Díaz-Pulido et al report that manual therapy resulted in

significantly better improvement in patients with chronic neck pain at post-intervention and at 6-month follow-up as compared to patients undergoing TENS therapy.[26]

Both stretching exercises and manual therapy considerably decreased neck pain and disability in women with non-specific neck pain. The difference in effectiveness between the two treatments was minor. Low-cost stretching exercises can be recommended in the first instance, as an appropriate therapy intervention to relieve pain, at least in the short-term.[27]

Combining different forms of manual therapy with exercise is better than manual therapy or exercise alone.[28]

Manual trigger point treatment of head and neck muscles may reduce frequency, intensity, and duration of attacks in tension-type headaches and migraine headaches, but the quality of evidence according to GRADE approach was very low for the presence of few studies, high risk of bias, and imprecision of results.[29]

There is a linear dose-response relationship between SMT visits and days with cervicogenic headache (CGH). For the highest and most effective dose of 18 SMT visits, CGH days were reduced by half and about 3 more days per month than for the light-massage control.[30]

For the treatment of the diagnostic label Non-Specific Neck Pain (NP), strong evidence of efficacy was only found for multimodal care (manipulation/mobilization and supervised exercises).[31] A prospective double-blind randomized controlled trial examining the effects of multimodal care on patients with NP, plus/minus addition of neck-specific aerobic exercise, showed statistically significant reduction in both NP and cervicogenic headache.[32]

Interferential current (IFC) therapy is effective in the treatment of chronic neck pain patients. However, the results of clinical trials, to date, have been conflicting regarding whether IFC has additional benefit or superiority over neck stabilization exercises. Additional research is required.[33,34]

In regards to chronic mechanical neck pain, stabilization exercises with or without connective tissue massage (CTM) might be a useful treatment, however stabilization exercises with CTM are superior in improving pain intensity at night, pressure pain threshold, state anxiety, and mental health compared to stabilization exercises alone.[35]

Thrust manipulation and non-thrust mobilization was less effective when performed alone than when combined with therapeutic exercises for mechanical neck pain with or without headaches.

Cervical traction has not been shown to be effective in the treatment of neck pain.[36] A meta-analysis of randomized controlled trials showed that the use of intermittent cervical traction for

treating neck pain did not differ significantly from a placebo during the follow-up period after treatment.[20]

TMJ and Passive Interventions

No high-quality evidence was found, indicating that there is great uncertainty about the effectiveness of exercise and manual therapy for treatment of temporomandibular joint dysfunction. A 2022 systematic review compared the efficacy of nonpharmacological therapies (such as acupuncture, physiotherapy, low-level laser, and massage) for painful temporo-mandibular disorders and found "the overall quality of evidence of nonpharmacological treatments was low showing that there is lack of certainty about these therapies as options for the pain-relieving in TMJD". Laser therapy, and physiotherapy were found to be "potentially useful interventions" lasting effects could not be determined due to the lack of consistency and short-term follow-up in included studies.[37]

Shoulder Pain and Passive Interventions

For adults with nonspecific shoulder pain of variable duration, cervicothoracic spinal manipulation and mobilization, in addition to usual care, may improve self-perceived recovery compared to usual care alone. For adults with subacromial impingement syndrome of variable duration, neck mobilization in addition to a multimodal shoulder program of care, provides no added benefit.[38]

For patients with rotator cuff tendinopathy, based on low to moderate-quality evidence, manual therapy may decrease pain; however, it is unclear whether it can improve function.[39] One meta-analysis notes, "When combined with exercise, manual therapy was superior to exercise alone, but only at the shortest follow-up".[40]

There was little evidence that active therapeutic ultrasound is more effective than placebo ultrasound for treating people with pain or a range of musculoskeletal injuries or for promoting soft tissue healing.[41,42] A Cochrane Database Review of the use of ultrasound with patients suffering from rotator cuff disease notes no difference between the US and control grounds in long-term follow-up (nine months).[43] ~~Additionally, a~~A double-blind study by Analan et al showed that ultrasound does not provide additional benefit to the physiotherapy treatment regimen concerning pain, function, and isokinetic shoulder rotator cuff strength.[15] Additionally, a systematic review and meta-analysis that evaluated the clinical outcomes of ultrasound deep heat therapy in patients with adhesive capsulitis reported improvement in pain when accompanied by co-interventions. However, when compared to other treatment modalities together with exercise or physiotherapy, no additional benefits were found.

Deep tissue friction massage has been shown to be beneficial in improving function and range of motion in supraspinatus tendinitis patients.[44]

Hip Pain and Passive Interventions "

The best available evidence indicates that exercise therapy (whether land-based or water-based) is more effective than minimal ~~control~~ intervention in managing pain associated with hip osteoarthritis (OA) in the short term. Larger high-quality randomized controlled trials (RCT) are needed to establish the effectiveness of exercise and manual therapies in the medium and long term.[45-47]

Knee Pain and Passive Interventions

Chaves found that deep friction massage (DFM) significantly decreased pain intensity over time in individuals with patellar tendinopathy, regardless of the pressure used. The authors note, "DFM induces an immediate reduction in pain intensity upon palpation,… Notwithstanding, the reader should take into account the small sample size and the caution needed in the results' interpretation."[48]

Studies using therapeutic ultrasound for the treatment or management of knee pain have had conflicting results to date. In a meta-analysis of the use of ultrasound (US) therapy in treating myofascial pain syndrome (MPS), the researchers conclude, "Owing to the high risk of bias and the across-trial heterogeneity of the studies, the current evidence is not clear enough to support US as an effective method to treat MPS."[49] Another meta-analysis notes a statistically significant decrease in pain for patients with knee osteoarthritis undergoing therapeutic ultrasound therapy as compared to the individuals in a sham ultrasound control group.[50]

For patients with knee osteoarthritis, the use of transcutaneous electrical nerve stimulation (TENS) may provide pain relief; however, the evidence is limited.[51-53]

Ankle Pain and Passive Interventions

For adults with grade I-II ankle sprains of variable duration, lower extremity mobilization, in addition to home exercise and advice, provides greater short-term improvements in activities and function over home exercise and advice alone.[38]

For patients with acute exercise-induced A~~a~~chilles tendinopathy, low level laser therapy may be helpful in reducing inflammation and pain.[54]

In patients with A~~a~~chilles tendinopathy of < 3 months, the use of iontophoresis was shown to help with pain. However, the control group still demonstrated improvements with the use of a comprehensive rehabilitation program.[55]

Chronic Pain and Passive Interventions

"Passive therapy (those treatment modalities that do not require energy expenditure on the part of the patient) can provide short-term relief during chronic pain flare-ups and is directed at controlling symptoms such as pain, inflammation, and swelling. Passive therapies may be useful over the short term but have limited benefit for chronic pain conditions overall."[56]

Electrical Stimulation and Laser Therapy
In a systematic review and meta-analysis, Fuentes analyzed the available information regarding the efficacy of interferential therapy in the management of musculoskeletal pain. Interferential current alone was not significantly better than placebo or other therapy at discharge or follow-up.[57] In addition, a systematic review and meta-analysis analyzed the efficacy of interferential current in alleviating musculoskeletal pain. It was reported that interferential current alone demonstrated a significant pain-relieving effect compared to a placebo and that there was "no significant difference when added to standard treatment compared with placebo plus standard treatment or standard treatment alone."

There is a paucity of evidence in the peer-reviewed literature regarding the effectiveness of high-voltage, pulsed current treatments in humans as a means of controlling edema and post-traumatic pain; thus, a clear evidence base has not yet been established.

Scientific evidence in the peer review literature is lacking regarding the use, safety, improvement, or effectiveness on health outcomes for light emitting diode (infrared) therapy.

In a systematic review and meta-analysis, Song, et al (2018) found that high intensity laser therapy is able to significantly reduce pain and disability in patients with back and neck pain.[58]

Documentation Requirements
The treatment plan or plan of care must include the clinical rationale for each service, a description of the service, the area of the body the service will be provided, goals for each service, and a time component, if indicated.

Applicable contraindications for passive modalities (e.g., ultrasound therapy) should be considered.

POLICY HISTORY

Date	Summary
August 2022	• No changes to indications • Additional information added to the Background section for Low Back Pain and Passive Interventions, TMJ and Passive Interventions, Shoulder Pain and Passive Interventions, and Electrical Stimulation and Laser Therapy • Updated references
December 2021	• Added "General Information" statement • Expansion of the Background section to strengthen the presentation of the evidence-base in support of the indications.

	• Minor copyediting changes
October 2020	• Modified the definition of "Modality" to include manual/massage therapy • Modified "Appropriate Use of Passive Treatment" by clarifying when passive modalities may be utilized • Modified "Appropriate Use of Passive Treatment" by clarifying passive modalities as not clinically appropriate and/or necessary by adding effectively be performed by the patient or another individual • Modified the "Definitions" section to better distinguish between modalities and passive treatment
January 2020	• No changes to indications • Expansion of the Background section to strengthen the presentation of the evidence-base in support of the indications. • Minor copyediting changes
July 2019	• Older references updated or omitted as appropriate. • Background information expanded to reflect scope of current evidence base.

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Reviewed/Approved by NIA Clinical Guideline Committee

GENERAL INFORMATION

It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.