

**A
CLINICAL
MANUAL ON
THERAPEUTIC TAPING FOR
PERIPHERAL AND SPINAL SYNDROMES
(Part I)**



®

By: Bahram Jam, M.Phty. B.Sc.P.T.
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Disclaimer

The authors of this book do not dispense medical advice nor prescribe the use of therapeutic taping as a form of treatment for medical problems without the consultation from a Physician or a primary health care provider.

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*To my wonderful parents,
ever supportive wife and
three adorable daughters
Nadia, Tara and Roxana
B.J.*

*To my supportive parents
and my lovely wife
A.V.*

About the Manual

Although there are a number of books and papers on athletic taping, we are not aware of any published literature exclusively on the particular methods of **therapeutic taping** that we review in this manual. The contents of this manual are based on our own personal clinical experience and the works of other excellent clinicians who have passed down their knowledge and findings to us. In return, we are passing the knowledge to as many clinicians as possible. Our influences include:

Jenny McConnell, PT (Australia), Brian Mulligan, PT (New Zealand), Shirley Sahrman, PT (USA), Bill Vicenzino, PT (Australia)

The following manual briefly covers only a few therapeutic taping options available to clinicians. This manual does not cover the essential components of a full clinical evaluation nor does it cover the multi-directional and individualized approach necessary for the management of each patient.

We have found taping to be clinically more effective in providing both immediate and long-term pain relief than any other single modality. The purpose of this manual is to share with clinicians the few examples of taping techniques that we have personally found most clinically effective.

We sincerely hope that you will regularly apply the suggested taping techniques reviewed in this manual in your practice. With repeated experience, you will be able to choose and predict more effectively the individuals and conditions that will best respond to each of the therapeutic taping procedures. With ongoing clinical experience you will also be able to detect individuals and conditions that are not appropriate for and are unlikely to respond to therapeutic taping.

We highly encourage you to experiment with the suggested taping techniques and continually modify them. The more creative you are, the more you and your patients will benefit. Continually experiment; therapeutic taping techniques are only limited by your imagination!

About the Authors

Bahram Jam graduated from the University of Toronto, Canada in 1992 with a Bachelors of Science in Physical Therapy. In 1999 he completed a clinical masters program at the University of Queensland, Australia receiving a Masters in Manipulative Physiotherapy Studies degree. He has the Canadian Diploma of Advanced Manual and Manipulative Physiotherapy and is also credentialled with the McKenzie Institute International.

He is the founder and director of Advanced Physical Therapy Education Institute (APTEI) and has been a chief instructor for over four hundred post-graduate orthopaedic clinical courses across Canada and internationally. He continues to practice and has extensive clinical experience with direct patient care.

Abbas Varamini graduated from the University of Tehran, Iran in 1992 with a Bachelors of Science in Physical Therapy. In 1998 he completed the clinical masters program in Physiotherapy at the University of Sydney, Australia receiving a Master of Science degree. He was a clinical instructor / lecturer and the head of the research program at the University of Zahedan under-graduate Physiotherapy program.

He is currently completing the Osteopathy program in Toronto, Canada and is an assistant instructor of post-graduate orthopaedic courses with Advanced Physical Therapy Education Institute. He continues to practice and has extensive clinical experience with direct patient care.

We strongly encourage you to contact us and provide us with feedback on the taping techniques reviewed in this manual. We would greatly appreciate your success stories and any suggested modifications on any of the material covered in this manual.

Sincerely,

Bahram Jam
Abbas Varamini

e-mail: info@aptei.com

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Important Facts Regarding Taping

- 1) A clinician must always receive a verbal consent from the patient prior to the application of the tape.
- 2) The patient may be asked the following questions in order to minimize the risk of skin irritation due to the tape:

Are you allergic to tape?

Does your skin get irritated when you put a Band-Aid on?

Do you know if you have extra sensitive skin?

- 3) If the answer is “yes” to any of the above questions, it may be wise to apply only a small ‘test patch’ first and re-assess the effects of the ‘test patch’ on the skin at the next treatment session.
- 4) If indicated, the area to be taped requires to be shaved, as hair will limit the effectiveness of taping.
- 5) If there is any form of lotions or oils on the skin, the tapes will not stick. The skin area must be washed or wiped off with an alcohol swab.
- 6) Usually a hypo-allergic tape is applied on the skin to minimize the potential risk of skin irritation related to taping. These tapes are generally ‘**white**’ in colour. The ‘white’ tape is applied over the skin with only a small amount of tension. When the ‘white’ tape is applied, it is necessary to firmly rub it on to the skin; especially the edges in order to maximize its effectiveness.
- 7) The second tape that is applied over the ‘white’ tape must be a non-stretch /rigid tape for optimum results. These non-stretch strong tapes are generally ‘**brown**’ in colour. These



tapes are not generally applied directly to the skin due to their strong adhesive properties. They are more likely to cause skin irritations especially on attempts to remove them.

- 8) To get the most durability out of the ‘brown’ tape, after applying it, once again firmly rub the surface areas; especially the edges to ensure the corners don’t get loose with time.



- 9) **For many of the techniques, taping effectiveness may be improved if the skin is ‘wrinkled up’ while applying the ‘brown’ tape (NOT when applying the ‘white’ tape). This is referred to as ‘soft-tissue unloading’.**



- 10) Following the application of the ‘white’ and the ‘brown’ tapes, a small anchor may be used using a small piece of the white tape at the two ends of the tape to even further secure the edges of the tape down.

- 11) Simply adding anchors with both the ‘white’ and the ‘brown’ tapes can dramatically increase the strength and durability of the tape. Think of making an “T”.



- 12) Immediately following the application of the tape, ask the patient to perform the activity that consistently reproduces their symptoms (e.g. walking, stair climbing, lifting arm overhead, gripping, etc.). As a general rule the patient must report of an at least 50% improvement in symptoms post taping.

- 13) Depending on the exact type of tape used, the patient can be instructed that the tape may be left on for up to one week, however the average time is 2-3 days.

- 14) Patients may be assured that the tape does not come off with showering.
- 15) Patients must be informed that if they feel the tape is aggravating their symptoms, it should be immediately removed. **The tape is to be left on ONLY if it ‘feels good’.**
- 16) Patients must be informed **if they feel ‘itchy’, ‘hot’ or feel any kind of skin ‘irritation’, to remove the tape.**
- 17) Explain to the patient clearly that the tape is not a cure or a substitution for exercising. The tape is however like training wheels on a bicycle and will be discontinued once muscular control is regained.
- 18) The tape is likely to loosen if the patient performs vigorous activities.
- 19) As a general rule it is better for the skin to leave the tape on for a few days rather than take it off and re-apply it each day over the same skin region.
- 20) For those who admit to having sensitive skin, you can minimize the risk of skin irritation, by applying a thin coating of “milk of magnesia” over the skin. Allow the milk of magnesia to dry for one minute, and then apply the ‘white’ tape over the whitened skin. The negative side is that the tape does not stick on as well with this method. Milk of magnesia can be purchased from most Pharmacy stores.
- 21) For tape removal, always pull in the direction of the hair. As the tape is being pulled away, the other hand is to gently pull the skin away. This helps minimize discomfort and hair loss when removing the tape.
- 22) NEVER tape over an open wound or an already irritated skin!

Indications For Taping

- A) To help correct biomechanical abnormalities related to pain
E.g. Abnormal foot pronation
E.g. Excessive anterior humeral head translation
- B) To help prevent the recurrence of a dysfunction following mobilization and/or manipulation techniques
E.g. Thoracic taping post extension mobilization / manipulation
- C) To help accelerate tissue repair by temporarily supporting and unloading injured soft-tissues
E.g. Supraspinatus tendonitis / partial tear
E.g. Plantar fasciitis
- D) To help temporarily support hypermobile segments or joints
E.g. Sacro-iliac Joint hypermobility and pain
E.g. Patellar hypermobility syndrome
- E) To help unload stress and reduce pain from hypertonic / over-active muscles
E.g. Upper fibers of trapezius over-use / increased tone
E.g. Tensor Fascia latae / ITB over-use
- F) To help restrict and limit potentially aggravating postures and movements
E.g. Lumbar flexion and rotation in “Low Back Pain”
E.g. Elbow extension and pronation in “Lateral Epicondylalgia”
- G) To help facilitate muscle activity, in order to increase effectiveness of therapeutic exercises
E.g. Patello-femoral taping to activate vastus medialis obliques
- H) To help relieve acute perfuse myofascial pain
E.g. Whiplash associated disorders

Possible Effects of Therapeutic Taping

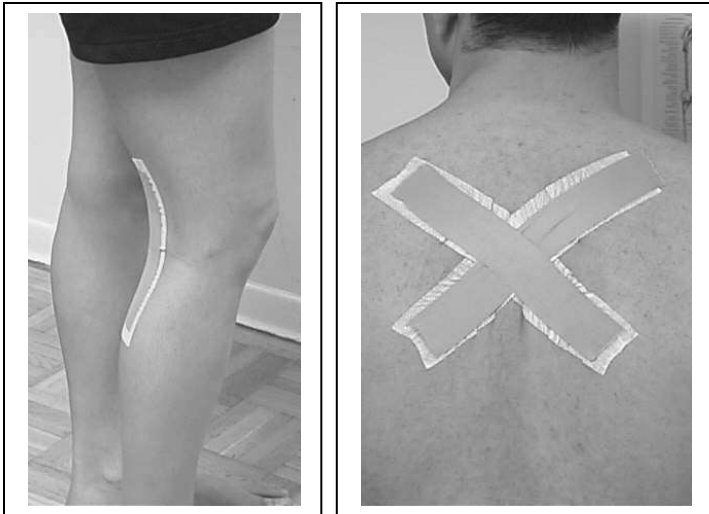
- 1) Proprioceptive feedback
- 2) Soft-tissue unloading effect
- 3) Neural tissue unloading effect
- 4) Bracing effect

Proprioceptive Feedback

Therapeutic taping may “pull” on the skin during movement towards an undesired direction. This sometimes-annoying “pull” continually reminds the patient of the movement or the posture that they are to temporarily avoid. The proprioceptive feedback function of the tape should be felt immediately following its application.

E.g. Taping the popliteal fossa to control habitual knee hyperextension

E.g. Taping the thoracic spine for postural correction

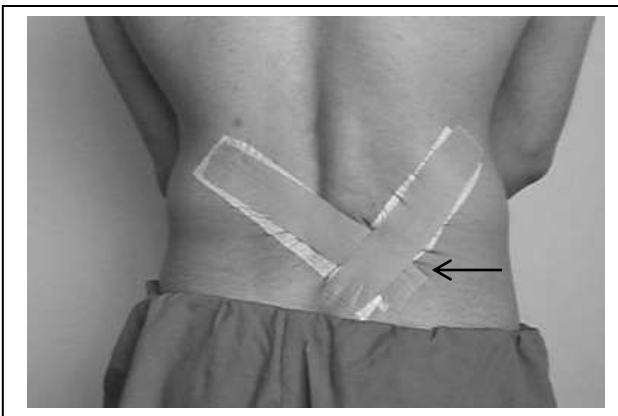
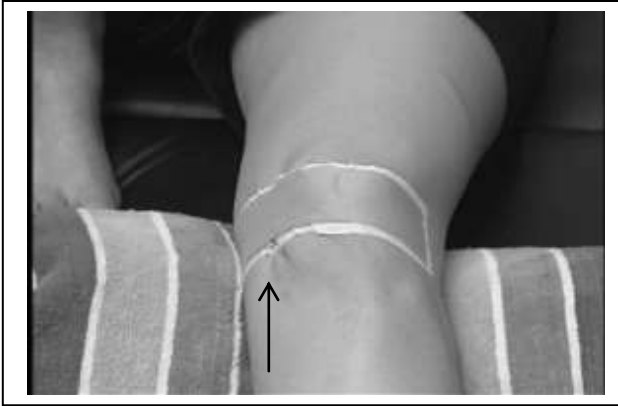


Soft-Tissue Unloading Effect

Perhaps the most valuable effect of therapeutic taping is related to this effect. For many of the techniques, the underlying skin is “wrinkled” or convolutions are formed in the skin. It is hypothesized that these convolutions increase the space between the skin and the underlying tissues. This may decrease pressure / compressive forces on the nociceptors directly deep to the skin. The soft-tissue unloading and pain-relieving effect of the tape should be felt immediately following its application.

E.g. Taping the patella to unload tissues for medial patellar pain

E.g. Taping the sacro-iliac joint to unload the overlying tissues



Neural Tissue Unloading Effect

Individuals presenting with mechanosensitive neural tissues are often instructed to avoid postures and movements that lengthen the sensitized peripheral nerve. For example individuals with sciatic nerve irritation are commonly instructed to avoid lumbar flexion and individuals with brachial plexus irritation are instructed to avoid cervical side flexion away from the painful side. Unfortunately simply educating individuals on avoiding these aggravating postures and movements is often of limited value.

Many patients benefit from taping as it provides them not only with proprioceptive feedback but it may also help decrease traction forces placed on the sensitized neural tissues. Unloading the overlying soft-tissues may indirectly unload mechanosensitive neural tissues. The neural tissue unloading and pain-relieving effect of the tape should be felt immediately following its application.

E.g. Taping the gluteal muscles to help unload the sciatic nerve

E.g. Taping the lateral elbow to unload the radial nerve



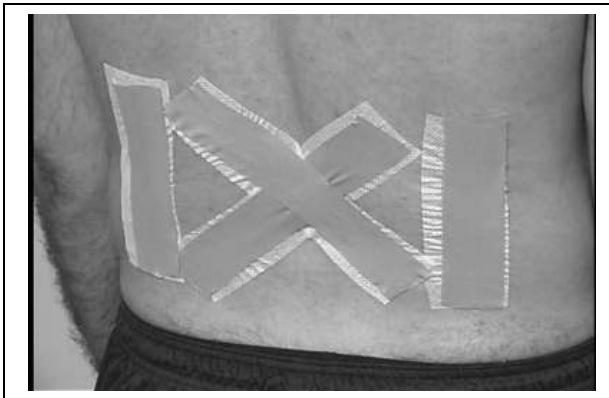
Bracing Effect

Therapeutic taping may be temporarily used in order to physically limit peripheral joint or spinal mobility. Sometimes individuals require complete rest from movement for a few days in order to allow soft-tissue healing to occur.

If a patient only temporarily benefits from the bracing effect of the tape, then a long-term solution must be found. This includes the use of orthotics or various supportive braces that can simulate the bracing function of the tape.

E.g. If taping to limit subtalar joint pronation is effective...think Orthotics

E.g. If taping to limit lumbar flexion and side flexion is effective...think lumbar corset



Maximizing the Tape Adhesiveness

One of the most common challenges with taping is the fact that it can loosen up with movement and functional activities. This unfortunately often occurs following taping techniques to the foot, the knee and the lumbar spine. If the tape is no longer firmly adhering to the skin, its effectiveness is dramatically reduced.

One method of dealing with this problem is to use a form of an adhesive skin spray such as “Tuf-Skin”[®] prior to the application of the tape. “Tuf-Skin”[®] is commonly used prior to athletic taping, however it may also be used just as effectively prior to therapeutic taping. Although spraying can considerably increase the tape adhesiveness, it can unfortunately also slightly increase the risk of skin irritation to the patient.

In our personal experience and those of our colleagues, allergy to “Tuf-Skin”[®] is not very common, but definitely possible. It is therefore imperative to inform the patient of the potential risk of skin irritation prior to the application of the tape and especially when using a skin spray.



For taping procedures involving the lower extremities or the lumbar spine, the spray may simply be applied directly over the skin region. However, for taping procedures at the cervical spine or the shoulder, the spray should be applied to the actual ‘white tape’ instead of the skin. This is to prevent the risk of accidentally spraying into the patients face or the eyes. This will also help minimize inhalation of the spray especially when taping the neck and shoulder regions.



Lightly spraying just the tape instead of the actual skin also prevents needlessly spraying skin regions that will not actually be taped.

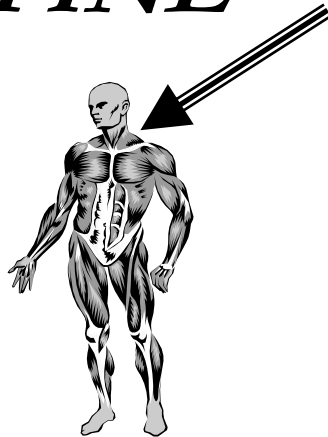
The spray is quite sticky and annoying if applied over regions that will not in fact be covered up with tape. The spray can be washed off with soap and water upon tape removal.

NOTES TO REMEMBER

In order to maximize your ongoing learning experience, use this page to document your positive and perhaps negative experiences with any of the taping techniques. Write down any modification options that you may have discovered to be even more effective. We would greatly appreciate your feedback and your comments on any of the techniques. Please e-mail us at: **info@apte.com**.

***THERAPEUTIC
TAPING OPTIONS
FOR

THE CERVICAL
&
THE THORACIC
SPINE***



Forward Head Posture Syndromes

Many painful syndromes can be related to a sustained excessively anteriorly translated cervical spine. These include headaches, temporomandibular joint pain and of course cervical pain syndromes. Sustained scapular protraction, chin protrusion and upper cervical hyperextension often aggravate cervical symptoms. Some individuals can have increased tension in their upper fibers of trapezius muscle with palpable tender points.

This taping technique can be potentially highly effective for those who admit to having their symptoms exacerbated by prolonged reading and keyboarding while in a forward head posture.

The purpose of this technique is to provide the patient with continuous proprioceptive feedback to maintain neutral cervical posture. The tape will also physically limit excessive cervical flexion, which is also often a contributing factor to cervical pain and neural irritations. The ultimate goal of this taping technique is to unload soft-tissues that are chronically under tension in individuals with a forward head posture.

Important Hints on the Technique:

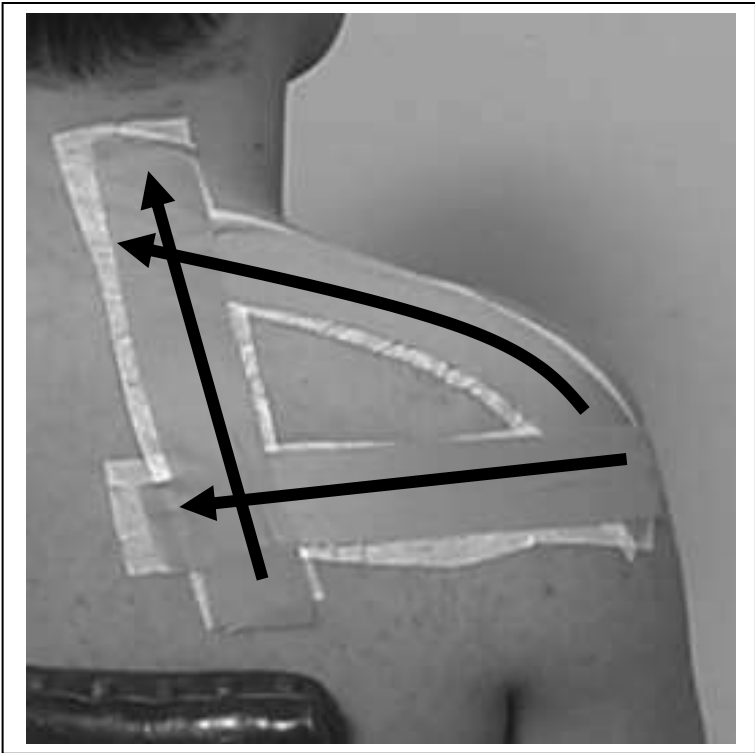
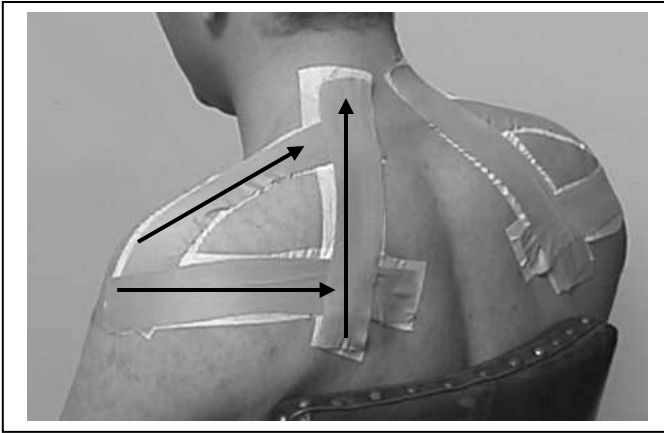
Prior to applying the tape ensure that the cervical spine is positioned in a slightly exaggerated neutral posture and that the shoulders are retracted to the neutral position.

Tape #1: Start from the lateral shoulder along the upper trapezius. (To unload and relax the upper trapezius muscle)

Tape #2: Start from the lateral shoulder towards the medial border of scapula. (To help retract the shoulder)

Tape #3: Start from the inferior angle of the scapula obliquely towards the postero-lateral aspect of the neck.

Note: You may wish to avoid anchoring tape #3 above the C6-7 levels as it can cause patient discomfort and intolerance to the tape.



Cervical Neural Tissue Unloading

This is an amazing taping technique that gives immediate pain relief to those with suprascapular pain related to neural tissue mechanosensitivity of the cervical spine. The patient may present with neural symptoms in the upper arm and/or the forearm and/or paraesthesia in the hand.

This technique is highly indicated if cervical side flexion away and scapular depression aggravate the symptoms. The tape will provide proprioceptive feedback to avoid cervical side flexion away and will even slightly support the scapula in elevation.

Try this often-effective taping technique also on individuals with thoracic outlet syndrome (TOS). The tape facilitates scapular elevation, which helps maximize the costo-clavicular space and unload the neural tissues (at least temporarily).

Important Hints on the Technique:

Ask the patient to passively elevate their scapula and support their arm via the elbow.

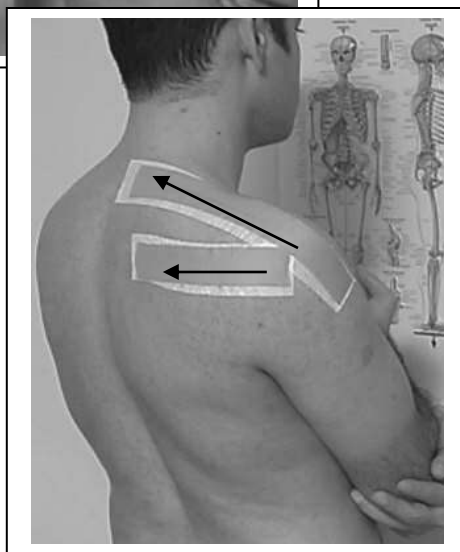
Tape #1: Start from the mid-deltoid region and tightly pull towards the cervico-thoracic junction.

Tape #2: Start from the posterior deltoid region and again tightly pull horizontally towards the thoracic spine.

Note: Ensure skin convolutions are made under the ‘brown’ tape.

Note: If the tape does not provide immediate relief, TAKE IT OFF! Either it has not been applied properly, or the patient is not appropriate for this taping technique!

Note: In order to dramatically increase the durability of the tape, you may use the ‘white’ and the ‘brown’ tapes as anchors at the distal and proximal ends of the tape to form an “T”.



Mid-thoracic Pain / Postural Feedback

This is a simple yet highly effective taping technique that provides proprioceptive feedback to avoid sustained and excessive thoracic flexion. This technique may be beneficial for those with cervical, thoracic or shoulder pain related to excessively flexed thoracic posture.

Although the tape can feel quite ‘annoying’, it does however provide excellent proprioceptive feedback to maintain neutral thoracic posture. The tape will also limit excessive thoracic rotation, which may be indicated with those with thoracic hypermobility. When taping for central thoracic pain and tenderness, the tape is pulled cranially in order to unload the inflamed soft-tissues in the region. When taping for postural feedback the tape is pulled caudally in order to retract the scapulae.

This straightforward taping technique can often provide immediate symptomatic relief.

Important Hints on the Technique:

Taping for Thoracic Pain

Ask the patient to stand up tall and make an “X” with the tapes.

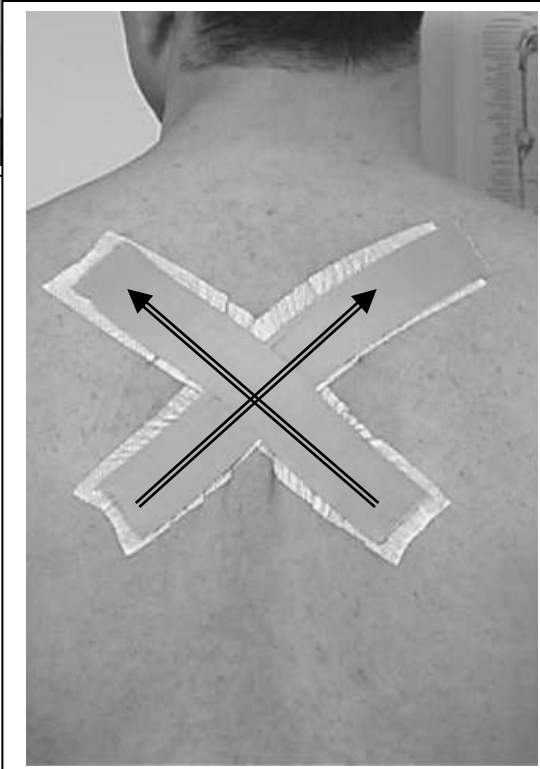
Tape #1 & 2: Pull the tapes **cranially** and ensure convolutions are formed underneath the ‘brown’ tapes.

The centre of the “X” is to be on the most painful / tender level (e.g. T6).

Taping for Postural Feedback

Ask the patient to stand up tall and make an “X” with the tapes.

Tape #1 & 2: Pull the tapes **caudally** and manually facilitate scapular retraction and depression.



Medial Scapular Pain

Persistent peri-scapular pain may be from irritation of the dorsal scapular nerve. Therefore, try this taping technique; if it is the nerve, it should give immediate relief.

Peri-scapular pain may also be due to irritation of the muscles and the soft-tissues in the region. Therefore tape it to temporarily unload the stress on the tissues and allow recovery.

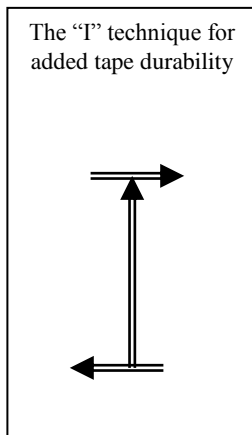
Peri-scapular pain may be due to the articular structures of the thoracic spine. After the appropriate mobilizations and/or manipulations, tape the region to temporarily allow the joints to rest and recover.

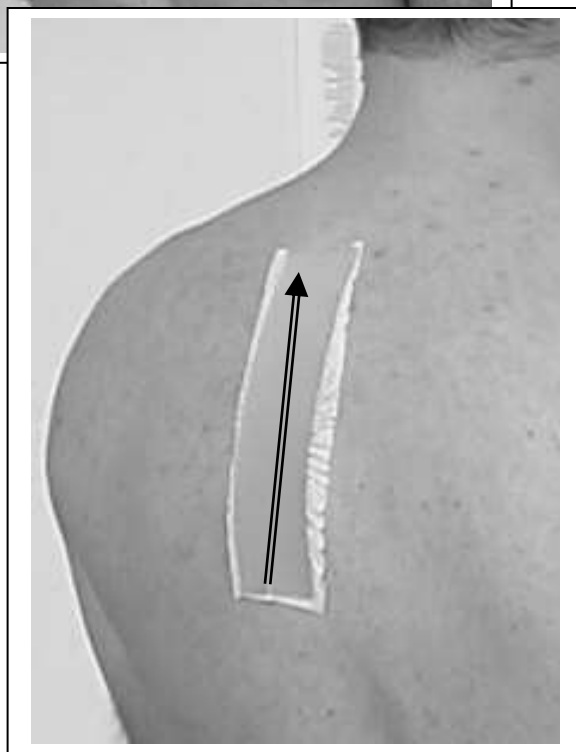
Important Hints on the Technique:

Tape #1: Firmly pull the tape cranially along the peri-scapular region.

Note: Ensure skin convolutions are made under the ‘brown’ tape.

Note: In order to dramatically increase the durability of the tape, you may use the ‘white’ and the ‘brown’ tapes as anchors at the distal and proximal ends of the tape to form an “I”.





Rib Pain

Costo-vertebral and costo-transverse joint sprains can occur following specific traumas to the thoracic spine and the rib cage. Pain associated with these sprains are often local, sharp and aggravated by deep breathing, coughing, thoracic side-flexion and rotation.

Management of this sometimes-persistent condition includes specific rib mobilizations and taping.

Important Hints on the Technique:

To decide on the location and the direction of taping, apply a manual compression force through the rib cage superiorly, and ask the patient to take in a deep breath. If the patient notes a significant improvement in the symptoms, then tape. You may have to try a few levels and a few directions before you find the level(s) that provides the most symptomatic relief.

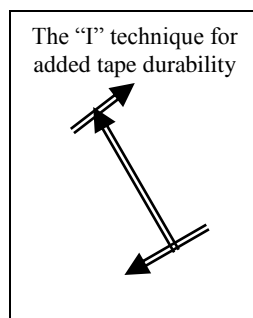


Tape #1: Start from the lateral aspect of the rib cage and pull medially and cranially towards the painful joints.

Tape #2: Same as above, but slightly above or below the previous tape.

Note: Ensure that the tissue underneath the 'brown' tape is 'wrinkled' for this taping technique to work.

Note: In order to dramatically increase the durability of the tape, you may use the 'white' and the 'brown' tapes as anchors at the distal and proximal ends of the tape to form an "I".





Acute Perfuse Spinal Pain **(E.g. Whiplash Associated Disorders)**

This taping technique is appropriate for those with perfuse cervical, thoracic and lumbar pain following a motor vehicle accident. Although this taping technique is involved, it may be well worth the time it takes to apply, as it will allow the spinal soft-tissues to temporarily rest and recuperate.

The patient can be informed that just like an acute sprained ankle is taped in order to stabilize it and allow it to heal more rapidly, the spine may also benefit from a few days of being supported by the tapes.

Some patients report of significant improvement of their acute perfuse spinal pain 3-4 days following this taping technique.

Important Hints on the Technique:

Tapes #1: Start from lateral aspect of the shoulders and pull towards the medial border of the scapula.

Tapes #2: Make and “X” in the upper thoracic spine. Firmly pull the tapes cranially (or caudally) and make convolutions in the skin when applying the ‘brown’ tape NOT when applying the white tape.

Tapes #3: Apply two strips vertically on each side of the thoracic spine and once again pull the tape cranially and make wrinkles when applying the ‘brown’ tape.

Tapes #4: Finally make and “X” in the lumbar spine. Firmly pull the tapes cranially and make convolutions in the skin when applying the ‘brown’ tapes.

Note: This technique should provide immediate support and symptomatic relief for it to be considered effective.

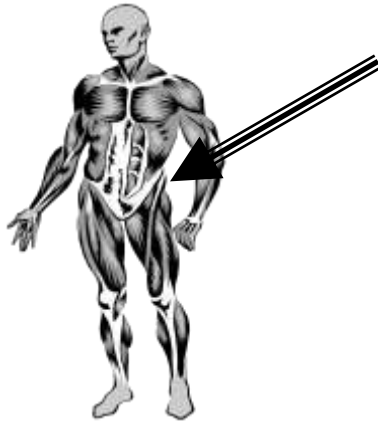


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THERAPEUTIC TAPING OPTIONS FOR

THE LUMBAR SPINE & THE PELVIS



Lumbar Spine Unloading / Central Low Back Pain

Mechanical lumbar pain may be due to inflamed and irritated structures in the lumbar spine such as the intervertebral discs, zygapophyseal joints, ligaments, fascia, etc. These structures are frequently aggravated by prolonged sitting and by repeated trunk flexion and rotation activities.

This taping technique helps provide proprioceptive feedback that may help individuals remember to maintain neutral lumbar lordosis during daily functional activities. It is hypothesized that this unloading technique may help reduce tension on the soft-tissues and muscles of the involved area.

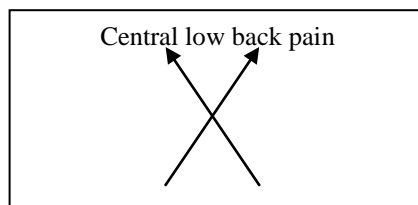
Important Hints on the Technique:

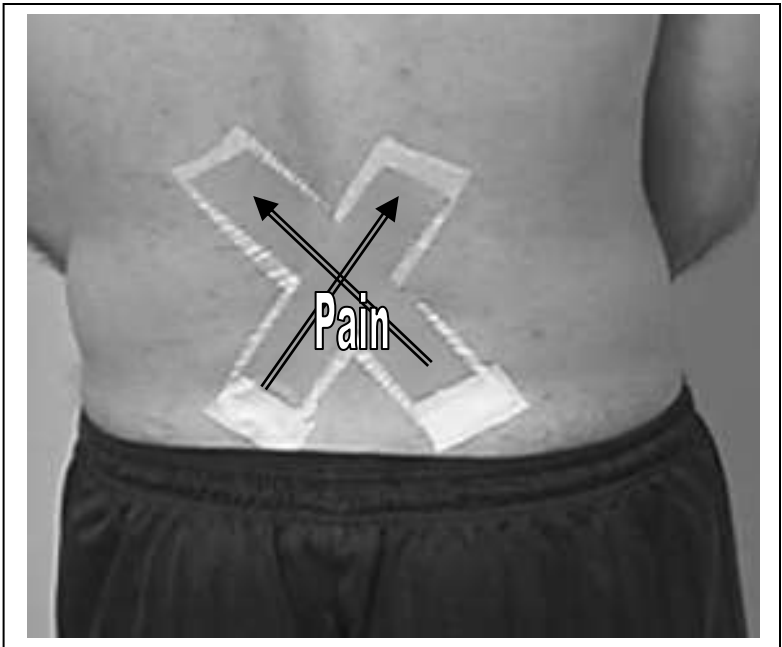
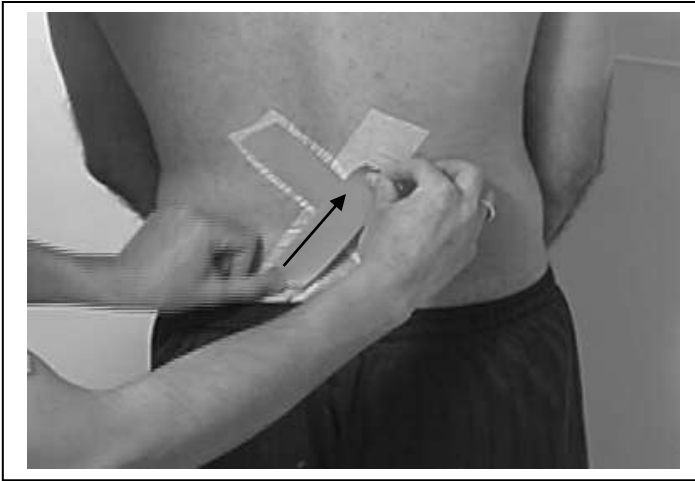
Make an “X” in the lumbar spine. Firmly pull the tapes cranially and make wrinkles when applying the ‘brown’ tape.

Tapes #1 & 2: For central low back pain both tapes begin lateral to the L5 transverse processes of either side and are pulled up cranially towards L1 transverse processes on the opposite side.

Note: Anchors are often required at the end of the tapes in order to help prevent them from getting “pulled off” during trunk flexion.

Note: In individuals with a hyper-lordotic posture, the tape may be applied while the patient is in prone lying with pillows under the stomach.





Lumbar Spine Unloading / Unilateral Low Back Pain

For unilateral low back pain, the focus is to primarily unload only the tissues on the painful side. Unilateral low back pain may be related to compressive forces on pain sensitive structures such as the zygapophyseal joints, intervertebral discs, neural tissues, etc.

This taping technique helps provide proprioceptive feedback that may help individuals remember to maintain neutral lumbar lordosis during daily functional activities. The tape may also help minimize repetitive compressive loads on the sensitive unilateral structures.

Important Hints on the Technique:

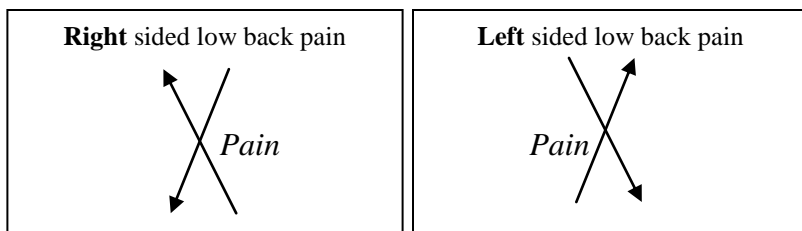
For unilateral low back pain, make an “X” in the lumbar spine.

Tape #1: Begin lateral to the L5 transverse process of the painful side and pull **cranially** towards the L1 transverse process on the opposite side.

Tape #2: Begin lateral to the L1 transverse process of the painful side and pull **caudally** towards the L5 transverse process on the opposite side.

Note: Anchors are often required at the end of the tapes in order to help prevent them from getting “pulled off” during trunk flexion.

Note: In individuals with a hyper-lordotic posture, the tape may be applied while the patient is in prone lying with pillows under the stomach.





Lumbar Flexion & Side Flexion Stabilization

Mechanical lumbar pain is frequently aggravated by prolonged sitting in lumbar flexion and by repeated trunk flexion and side flexion in sitting or standing. This technique may be effective if on physical assessment, lumbar flexion and side flexion are the most aggravating movements.

This taping technique provides proprioceptive feedback that may help individuals remember to maintain neutral lumbar lordosis during daily functional activities. The tapes partially restrict lumbar flexion and side flexion movements.

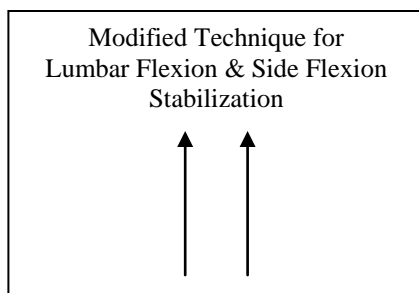
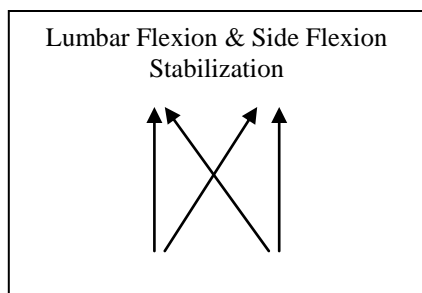
Important Hints on the Technique:

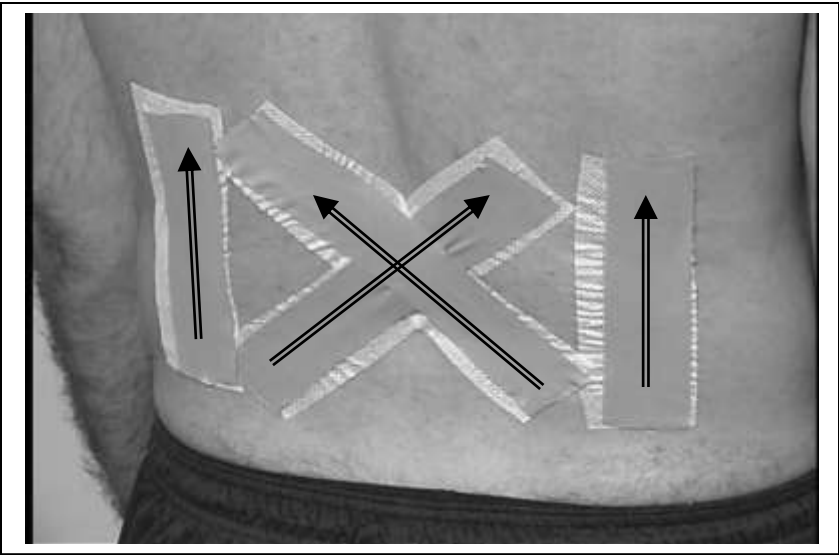
Make an “X” in the lumbar spine. Firmly pull the tapes cranially and make wrinkles when applying the ‘brown’ tape.

Tapes #1 & 2: Begin lateral to the L5 transverse processes of both sides and pull up cranially towards the L1 transverse processes on the opposite sides.

Tapes #3 & 4: Vertically pull up on both lateral sides of the “X”.

Modified technique for those presenting with increased lumbar lordosis: You may choose to only apply tapes #3 & 4 without tapes #1 & 2, as it can sometimes be difficult to make the “X” tape stick to the lumbar spine in individuals with a hyper-lordotic posture. The two vertical strips will need to be close to each other in this case scenario. (i.e. over the erector spinae muscles)





Lumbar Rotation Stabilization

Mechanical lumbar pain is frequently aggravated by repeated trunk flexion and rotation activities either in sitting or standing. This technique may potentially be effective if on physical assessment, lumbar rotation is the most aggravating movement.

This taping technique provides proprioceptive feedback that may help individuals remember to maintain neutral lumbar lordosis during daily functional activities. The tapes partially restrict lumbar flexion and rotation movements.

Important Hints on the Technique:

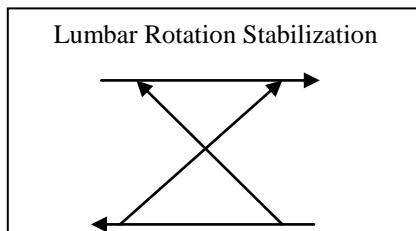
Make an “X” in the lumbar spine. Firmly pull the tapes cranially and make wrinkles when applying the ‘brown’ tape.

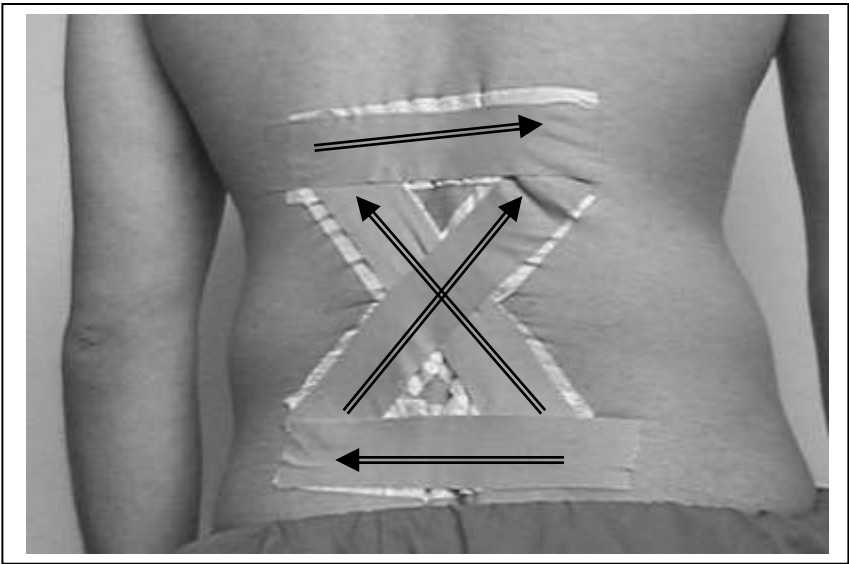
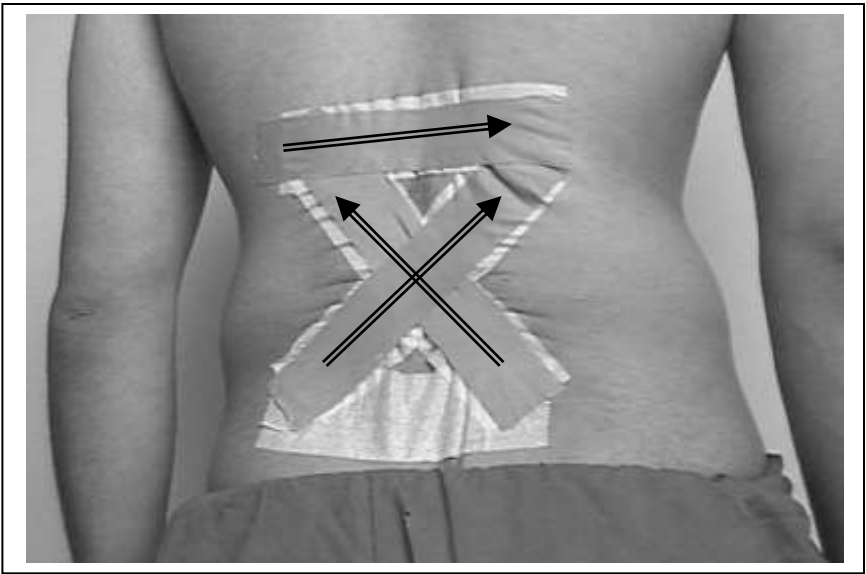
Tapes #1 & 2: Begin lateral to the L5 transverse processes of both sides and pull up cranially towards the L1 transverse processes on the opposite sides.

Tapes #3 & 4: Horizontally pull across from the left to right or visa versa on both the superior and inferior aspects of the “X”.

Note: In individuals with a hyper-lordodic posture, the tape may be applied while the patient is in prone lying with pillows under the stomach.

Note: In order to increase the support into rotation, you may apply the tapes #1 & 2 using an even wider “X”.





Unilateral Rotation & Side Flexion Lumbar Stabilization

Mechanical lumbar pain is sometimes aggravated by rotation and side flexion to one side. This technique may be effective if, on physical assessment, lumbar side flexion and rotation to one side are the most aggravating movements.

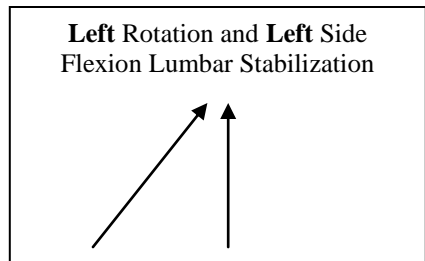
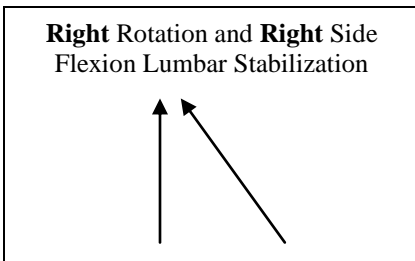
This taping technique helps provide proprioceptive feedback that may help individuals remember to avoid unilateral rotation and side flexion during daily functional activities. The advantage of this technique is that side flexion and rotation to the contra-lateral side remain relatively unrestricted, allowing more freedom of movement towards the non-aggravating directions.

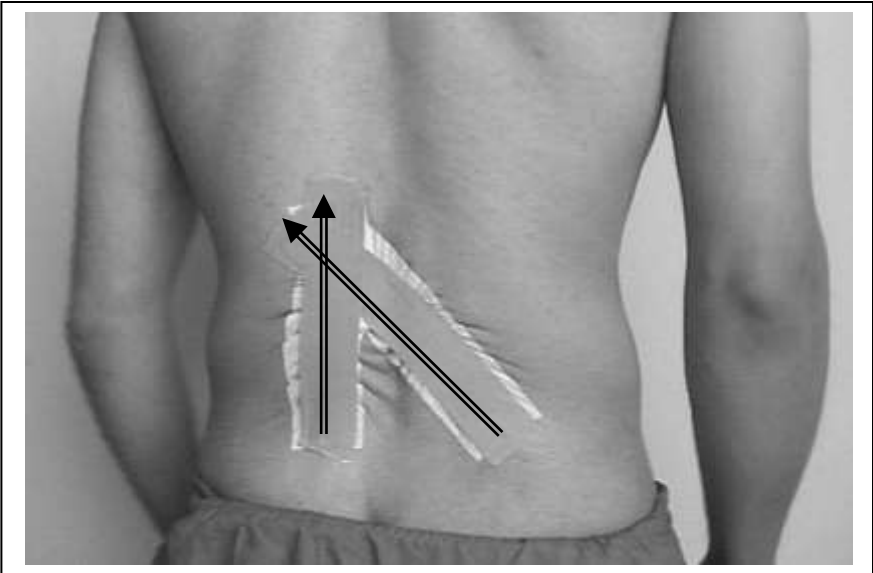
Important Hints on the Technique:

Tape #1: Begin lateral to the L5 transverse process and pull up cranially towards the L1 transverse process on the opposite side. Taping from right to left will restrict right rotation and vice versa.

Tapes #2: Vertically pull up along the lateral aspect of the lumbar spine. Taping the left side will restrict right side flexion and vice versa.

Note: Anchors are often required at the end of the tapes in order to help prevent them from getting “pulled off” during trunk flexion.





Sciatica / Gluteal Unloading

(Reference: McConnell 1999)

This gluteal taping technique is indicated and may be highly effective for some patients presenting with signs & symptoms of sciatic nerve mechanosensitivity with referral into the gluteal and lower extremity regions. The purpose of the tape is to help unload the gluteal soft-tissues, which is clinically hypothesized to reduce traction forces on the sensitized sciatic nerve. This taping technique may also help facilitate gluteal contractions.

This technique is usually reserved for those who have failed to respond to postural education, exercises and mobilizations. As with all other techniques, ensure that you clearly explain the technique and get full consent from the patient prior to initiating the taping.

Important Hints on the Technique:

Note: Gluteal taping is only effective if it produces a significant “rise” in the gluteal bulk. The patient must be asked to use their own hand to help “lift up” their buttock when taping.

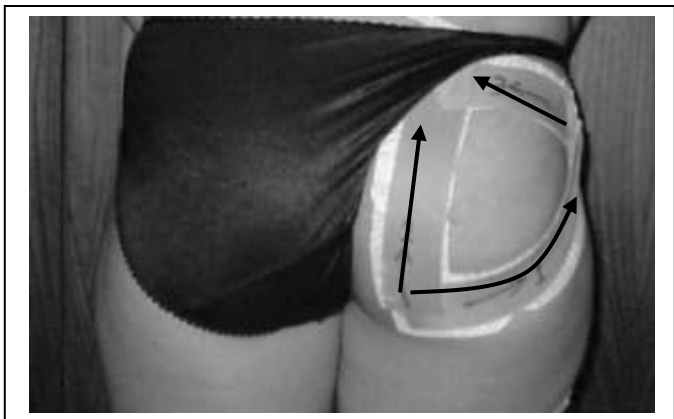
Tape #1: Apply along the gluteal fold from medial to lateral while putting a significant pull on the tape. Anchor the tape just superior to the greater trochanter.

Tape #2: Apply lateral to the gluteal cleft from inferior to superior towards the PSIS while putting a significant pull on tape.

Tape #3: Apply from the greater trochanter region to the PSIS.

After taping, request the patient to walk around and ask them how they feel. If they report of no significant change in their symptoms, the tape should be removed. If the tape doesn’t work right there and then, then it will not work in an hour’s time or the next day.

If however, the patient reports that their gluteal symptoms have resolved but their posterior thigh pain has now increased, then apply the hamstrings unloading taping technique ...reviewed next.



Sciatica / Hamstring Unloading

(Reference: McConnell 1999)

There are many potential causes of sciatic nerve sensitization, however this technique may help provide symptomatic relief of posterior thigh pain irrespective of the cause of the nerve root irritation. The tape may work best after the application of the lumbar and the gluteal unloading taping techniques.

Important Hints on the Technique:

Tape #1: In standing, start from the postero-medial thigh and pull the tape laterally and firmly in a cranial direction. The clinician must use one hand to manually unload the hamstring muscles while the other hand applies the tape with a strong cranial pull.

Following the tape application, ask the patient to walk. If the tape does not provide immediate symptomatic relief take it off and re-apply it. This time start from the postero-lateral thigh and pull the tape medially and firmly in a cranial direction.

If the patient reports that their posterior thigh symptoms have resolved but their calf pain has now increased, then apply the calf unloading taping technique...reviewed next.

Note: If the referred symptoms are primarily on the postero-lateral aspect of the thigh, then the unloading taping technique can be simply applied more laterally instead of directly over the hamstrings.

Interesting experiment: On a patient with sciatica and posterior thigh pain, experiment and pull the hamstrings tape caudally instead of cranially. Inevitably the patient will report of worsening of their symptoms. Simply re-apply the tape, but pull the tape cranially this time to unload the hamstrings muscle and notice an improvement in symptoms. This straightforward experiment will help convince you that the tape has more than just a placebo effect!



Sciatica / Calf Unloading

(Reference: McConnell 1999)

There are many potential causes of sciatic nerve sensitization, however this technique may help provide symptomatic relief of calf pain irrespective of the cause of the nerve root irritation. The tape may work best after the application of the lumbar, gluteal and the hamstrings unloading taping techniques.

Important Hints on the Technique:

Tape #1: In standing, start from the postero-medial calf and pull the tape laterally and firmly in a cranial direction. The clinician must use one hand to manually unload the calf muscles while the other hand applies the tape with a strong cranial pull.

Following the tape application, ask the patient to walk around. If the tape does not provide immediate symptomatic relief take it off and re-apply it. This time start from the postero-lateral calf and pull the tape medially and firmly in a cranial direction.

If the referred symptoms are primarily on the lateral aspect of the calf, then the unloading taping technique can be simply applied more laterally instead of directly over the calf.

Note: The lumbar, gluteal, hamstring and the calf unloading taping techniques are frequently done together for maximal effectiveness.

Note: Some individuals who also report of symptoms of pain and/or paraesthesia in the foot and ankle may benefit from anti-pronation taping, custom or over the counter orthotics to help unload the tibial nerve, which is often sensitized with sciatica.



Piriformis Unloading / “Piriformis Syndrome”

This taping technique can be effective for those diagnosed with “piriformis syndrome”. Pain caused by piriformis muscle strain can be felt deep in the buttock with occasional referral in the sciatic distribution. Although the underlying cause of the piriformis spasm must always be treated, this taping technique helps temporarily unload the muscle, which may provide some symptomatic relief. Unloading the piriformis may also prove effective for symptoms of sciatic nerve sensitization.

As with all the taping techniques, prior to the tape application the technique must be clearly explained to the patient and consent must be received. The need to expose the gluteal region and the presence of excessive hair can be major limiting factors to this taping technique; therefore you need to be selective with your patients.

Important Hints on the Technique:

The tape should always be placed on in standing while the natural forces of gravity are in effect. The patient stands in neutral pelvic alignment with the hip in slight lateral rotation.

Tape #1: Start posterior to the greater trochanter and pull towards the lateral edge of sacrum (S2-S4). You may need to apply two strips in slightly different angles.

Tape #2: Start from the lateral femoral condyle and pull cranially and medially towards the medial thigh to encourage hip lateral rotation.

Note: Patient must report of immediate symptomatic relief in standing and walking for this taping technique to be considered effective.

Note: If the tape is too long or put on too tightly, it will simply come off when the patient attempts to sit on a chair.



Sacro-iliac Joint Unloading

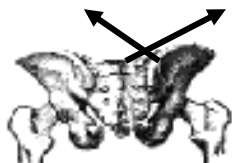
The sacro-iliac (SI) joint may be the source of pain in some individuals with acute or persistent low back pain. The joint, the ligaments and the soft-tissues overlying the SI region can become inflamed and tender.

The primary purpose of this taping technique is to unload the soft-tissues overlying the SI joint. It is hypothesized that the tapes may also facilitate force closure at the joint.

Having the tape on may also provide a friendly continuous reminder for the patient to perform their home exercise program.

Important Hints on the Technique:

Following an appropriate mobilization and/or manipulation technique, ask the patient gently draw in their lower abdomen.



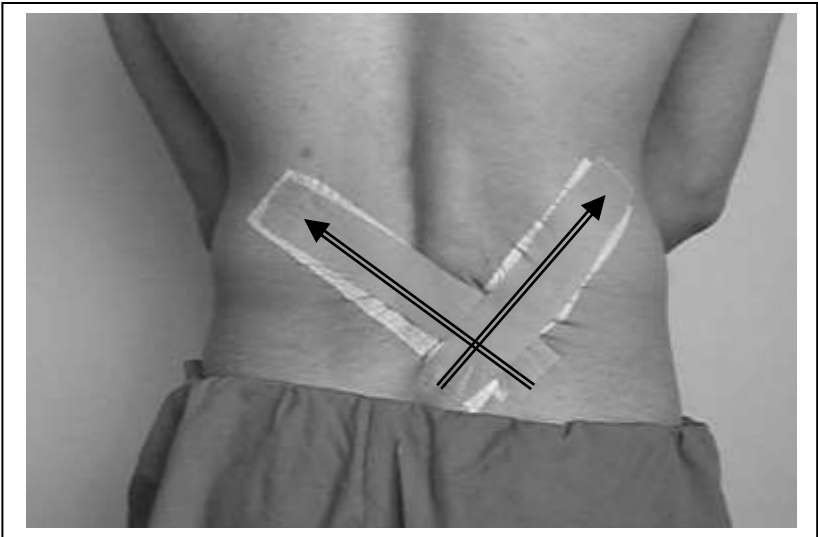
Tape #1: Start from the lateral aspect of the PSIS and pull cranially and medially. The tape is pulled in the direction of the latissimus dorsi muscle.

Tape #2: Start from the base of the sacrum adjacent to the PSIS and pull cranially and laterally.

Important note: Apply a manual compressive force on the pelvis during the tape application in order to maximize the force closure effect of the tape.

Note: This “V” shaped taping technique is indicated for those presenting with local pain and tenderness over the SI joint. The use of an SI belt is also often necessary as it may further enhance force closure.

Note: A patient must immediately feel an improvement in symptoms or at least feel that the tape is providing support, if not...remove the tapes.

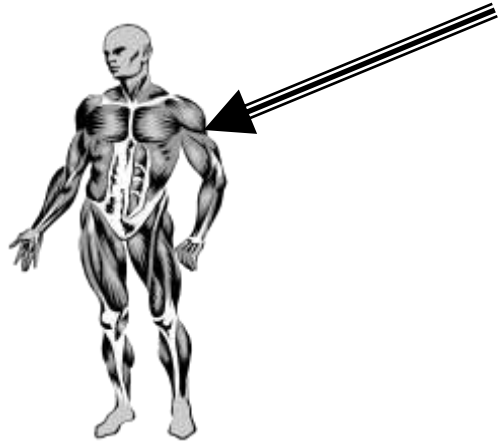


NOTES TO REMEMBER

In order to maximize your ongoing learning experience, use this page to document your positive and perhaps negative experiences with any of the taping techniques. Write down any modification options that you may have discovered to be even more effective. We would greatly appreciate your feedback and your comments on any of the techniques. Please e-mail us at: **info@apte.com**.

THERAPEUTIC TAPING OPTIONS FOR

THE UPPER EXTREMITY



Supraspinatus Unloading / Tendonitis / Partial Tear

A partially torn, inflamed or irritated supraspinatus tendon sometimes benefits from being simply unloaded. When standing, the load of the arm places a continuous traction force on the supraspinatus tendon. Facilitating the abduction torque of the humerus may provide temporary symptomatic relief as it helps unload the traction forces and the tension on the tendon. This unloading may assist recovery from an inflamed tendon.

In highly irritable cases, the patient should be asked to maintain the shoulder in 30-45° of abduction throughout the day as often as possible. The tape may provide the patient with proprioceptive feedback and help remind them of maintaining that position which may help minimize traction forces on the tendon.

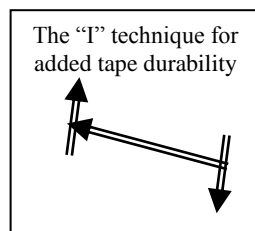
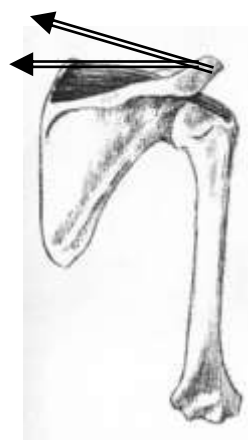
Important Hints on the Technique:

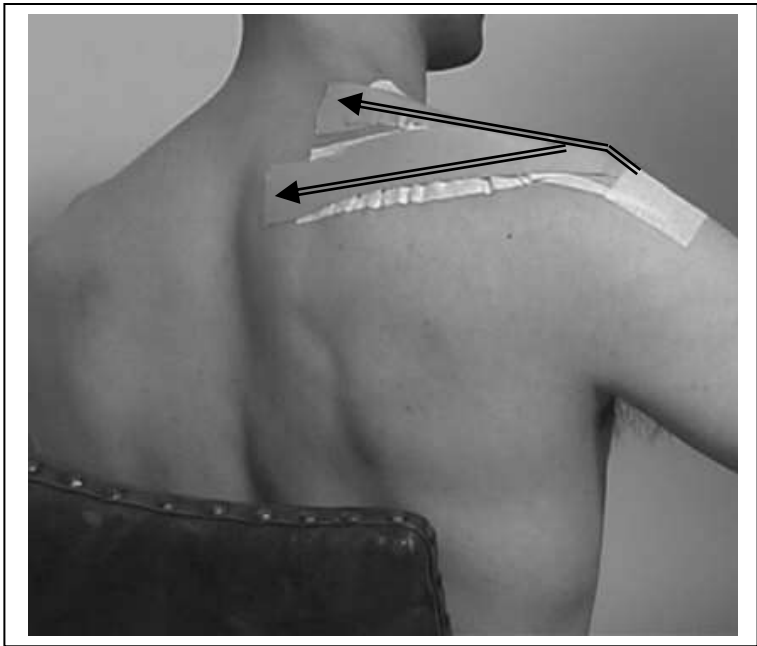
The patient requires positioning the shoulder in 30°-40° of passive abduction prior to the application of the tape. A pillow or a towel roll may be placed under the axilla to achieve this.

Tape #1: Start from the deltoid muscle, just inferior to the acromio-clavicular (AC) joint and pull cranially along the suprascapular region towards the cervico-thoracic junction.

Tape #2: Start from the deltoid muscle, just inferior to the AC joint and pull horizontally across the suprascapular region towards the T3-4 spinous process.

Note: In order to dramatically increase the durability of the tape, you may use the ‘white’ and the ‘brown’ tapes as anchors at the distal and proximal ends of the tapes to form an “T”.





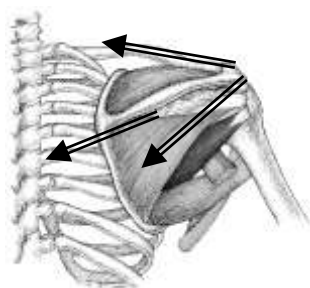
Rotator Cuff Facilitation / Impingement Syndromes

The primary function of the rotator cuff (RC) muscles is to maintain the humeral head in the glenoid fossa throughout functional activities. Rotator cuff insufficiency can lead to impingement syndromes due to compromised stability at the gleno-humeral (GH) joint. Along with an appropriate RC retraining program, this taping technique may also help facilitate the muscles to maximize compression forces in the GH joint. This technique may only provide symptomatic relief for functional activities performed below the shoulder level; overhead activities may still be painful.

Important Hints on the Technique:

A pillow or a towel roll may be placed under the axilla in order to position the shoulder in 30°-40° of passive abduction and slight lateral rotation prior to the application of the tape. achieve this.

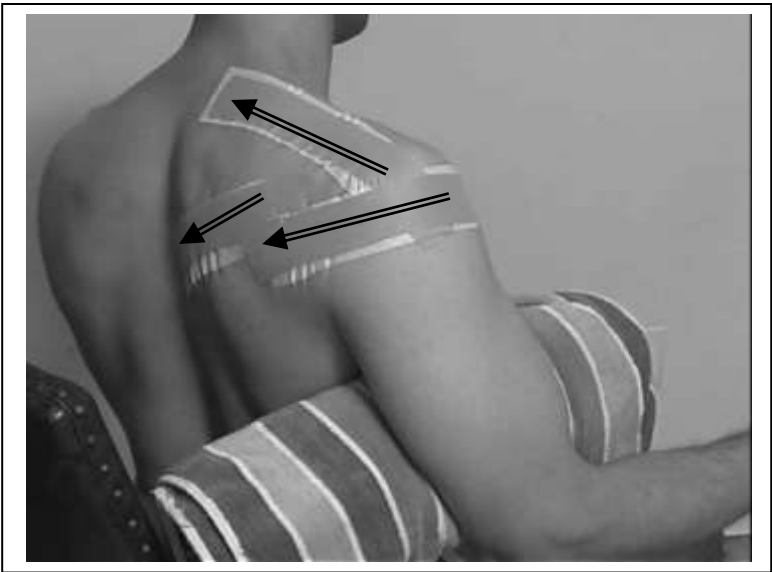
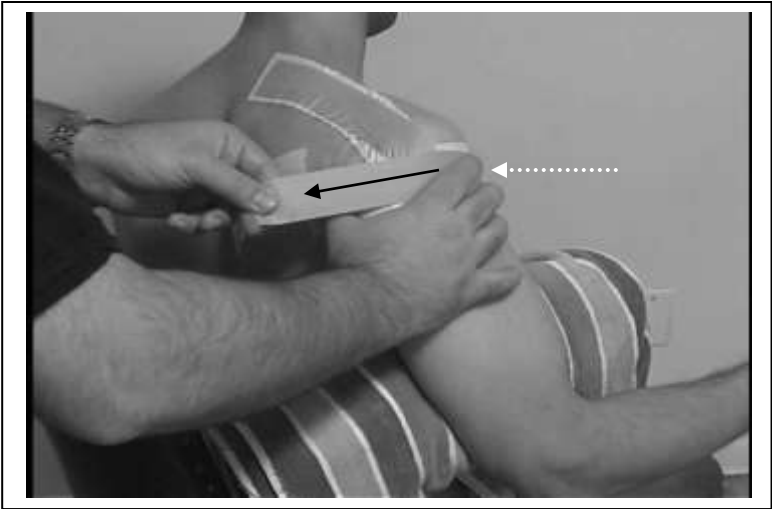
Tape #1: Start from the deltoid muscle, just lateral and inferior to the acromio-clavicular (AC) joint and pull cranially along the suprascapular region towards the cervico-thoracic junction. This tape may help to slightly unload the weight of the arm, and may reduce deltoid activity.



Tape #2: Start from the anterior deltoid muscle, wrap around the shoulder and pull slightly caudally towards the medial border of the scapula. This ‘pulling’ of the tape may help facilitate lateral rotation of the humerus, which is a preferred position for those with rotator cuff irritations.

Note: A manual posterior pressure on the humeral head may be provided during the application of this tape.

Tape #3: Start from the infraspinous fossa region and pull slightly caudally towards the thoracic spine. This tape may help maintain length-tension relationship of the scapular muscles by facilitating scapular retraction and upward rotation.



Scapular Upward Rotation Facilitation

This “V” taping technique can be quite effective for some patients presenting with impingement syndrome related to insufficient scapular upward rotation. Facilitation of scapular upward rotation helps maximize the sub-acromial space during arm elevation, which may help relieve symptoms related to impingement syndromes. Retraining of the serratus anterior, and the trapezius muscles is always essential in these patients.

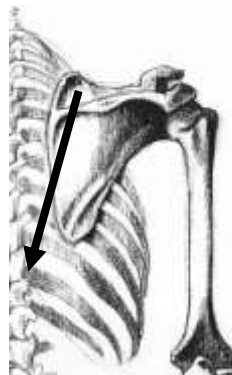
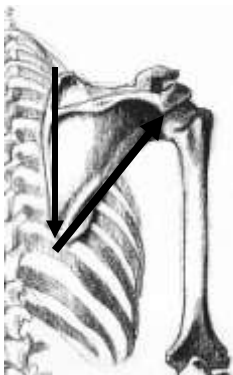
Important Hints on the Technique:

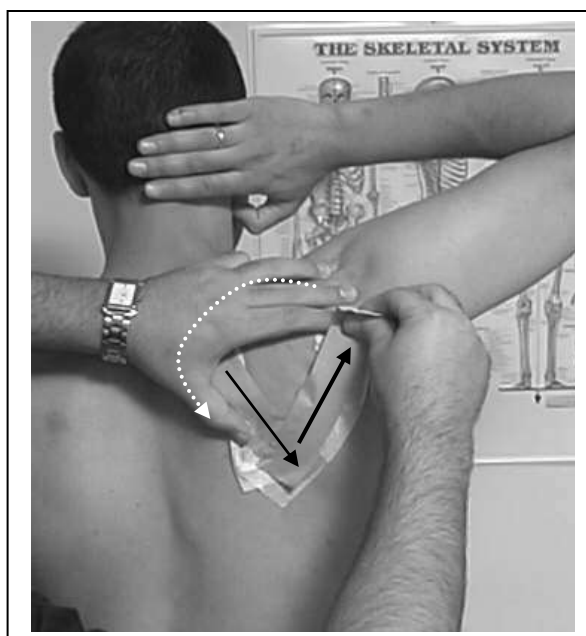
The patient requires to maintain the arm in 100°-110° abduction and the clinician needs to manually assist the scapula into upward rotation while applying the tapes.

Tape #1: Start from the superior angle of the scapula and pull the tape down towards the inferior angle of the scapula while the other hand applies a manual upward rotation force on the scapula.

Tape #2: Start from the inferior angle of the scapula and pull the tape up towards the glenoid fossa while the other hand applies a manual upward rotation force on the scapula.

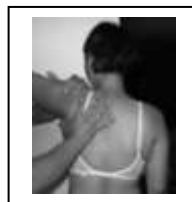
Optional Tape #3: To help even further facilitate upward rotation of the scapula, apply a third tape from the base of the spine of the scapula towards T7-8 and tape along the lower fibers of the trapezius muscle. This may help the activation of this muscle.





Gleno-humeral Stabilization / Impingement Syndrome: Option “A”

This taping technique is particularly effective for those who have an anteriorly translated humeral head and signs and symptoms of impingement syndrome. To determine if this taping technique will be effective for an individual, active abduction with a posterior glide must be applied first.



Ask the patient to abduct their arm and note the intensity of pain and the degree of the painful arc. Then apply and maintain a manual posterior glide of the humeral head and ask the patient to once again abduct the arm.

If the patient reports of a significant improvement in symptoms with the manual posterior glide, then they will most likely also benefit from this taping technique.

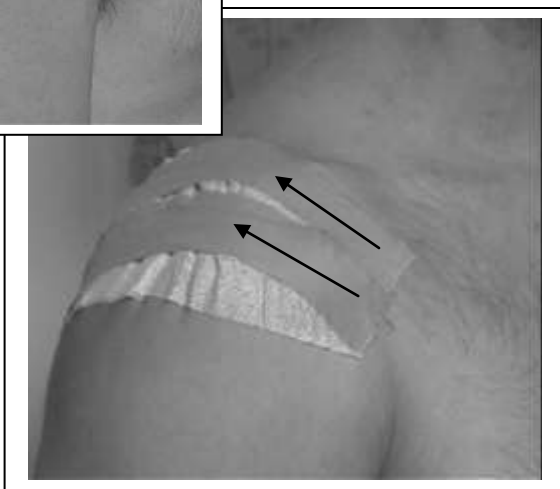
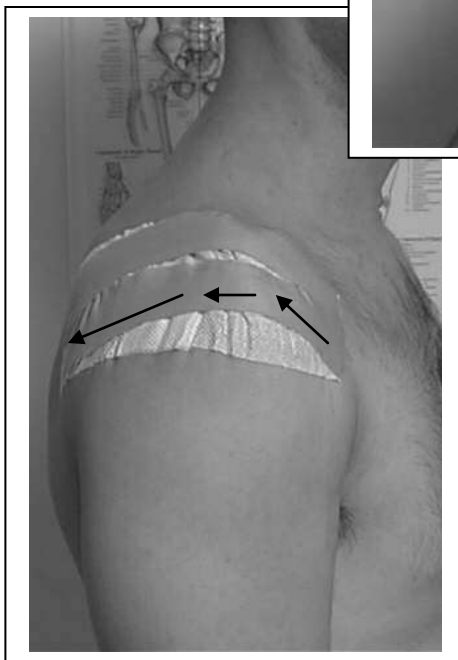
Ask the patient to abduct and note the pain intensity and the range of the painful arc. Repeat the abduction after the application of the taping technique and note a change in the symptoms. If there is no significant and immediate improvement in the symptoms during shoulder abduction, remove the tape.

This taping technique works best when applied after posterior mobilization techniques to the gleno-humeral joint.

Important Hints on the Technique:

Tapes #1 & 2: Start from the anterior deltoid muscle (humeral head region) and pull the tape tightly towards the posterior aspect of the shoulder. Apply the second tape simply at a slightly different angle.

Note: While applying the tape, manually apply a posterior humeral glide and ask the patient to visualize taking their humeral head ‘backwards in its socket’. This simple visualization technique can often dramatically improve symptoms related to an anteriorly translated humeral head.



Gleno-humeral Stabilization / Impingement Syndrome: Option “B”

To increase the effectiveness of the taping technique shown in option “A”, you may add a third strip of tape.

Some individuals presenting with GH hypermobility or multidirectional instability, may benefit from further added stability provided by this tape. The purpose of the tape is to help slightly unload the weight of the arm and facilitate compression of the humeral head into the glenoid fossa. It is hypothesized that by reducing the traction forces placed on the arm, the previous tapes may work more effectively at preventing excessive translation of the humeral head.

The tape may provide the patient with proprioceptive feedback to avoid end range movements into horizontal abduction. It may also function as a friendly reminder for them to comply with their home exercises.

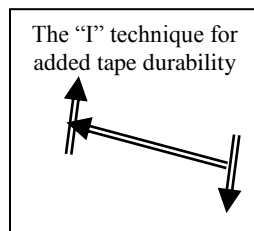
Important Hints on the Technique:

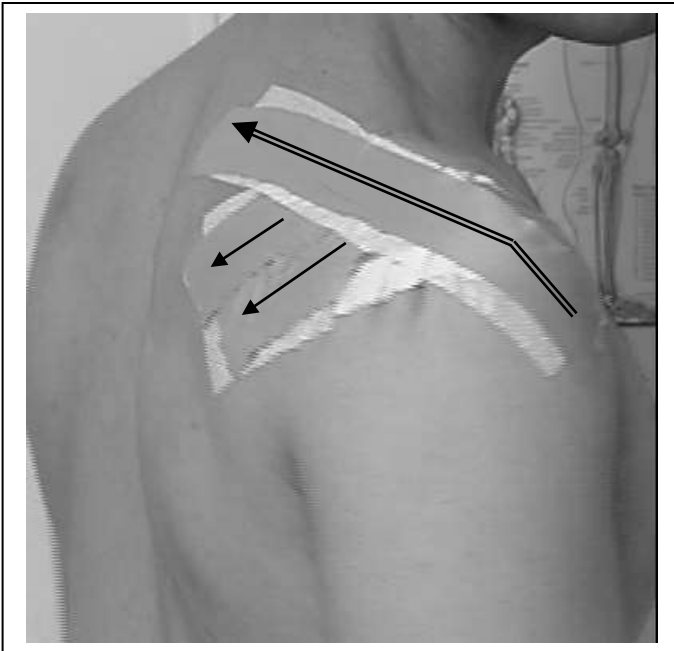
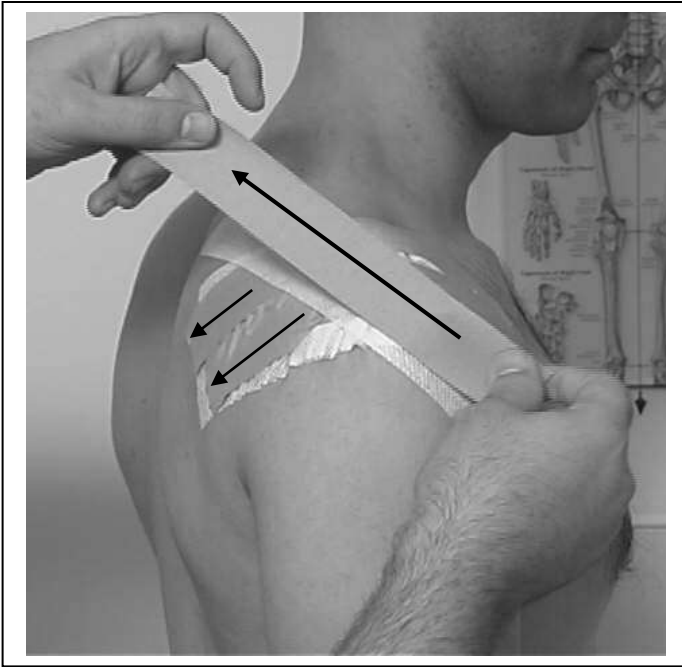
The patient requires positioning the shoulder in 30°-40° of passive abduction prior to the application of the tape. A pillow or a towel roll may be placed under the axilla to achieve this.

Tape #1: Start from the deltoid muscle, just lateral and inferior to the AC joint and pull cranially along the suprascapular region towards the cervico-thoracic junction.

Note: You may choose to apply this tape first and apply the two tapes reviewed in option (A) on top of this tape.

Note: In order to dramatically increase the durability of the tape, you may use the ‘white’ and the ‘brown’ tapes as anchors at the distal and proximal ends of the tapes to form an “I”.





Lateral Epicondylalgia / "Tennis Elbow"

Option "A"

(Reference: Vicenzino 1995)

Pain in the lateral epicondyle region is frequently due to irritation of the local myofascial structures or due to the entrapment of the deep branch of the radial nerve as it pierces through the supinator muscle. This taping technique can help unload the stress on both the soft-tissues and the neural tissue.

Individuals with lateral epicondylalgia are frequently educated on avoiding repetitive and heavy gripping with the elbow in full extension and pronation. This taping technique will provide proprioceptive feedback and help remind the patient to avoid gripping in full forearm pronation.

The taping procedure is primarily effective after the application of the Mulligan lateral glide mobilizations.

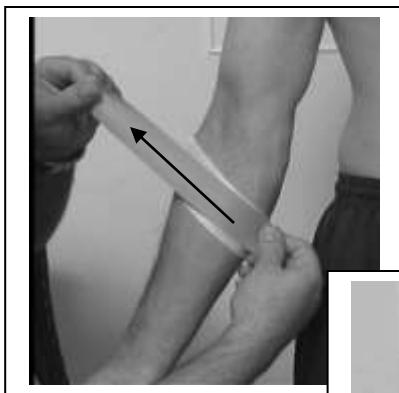
Important Hints on the Technique:

Ask the patient to fully supinate and flex the elbow to approximately 5° before the tape application.

Tape #1: The tape is attached to the medial aspect of the forearm (at the common flexor origin) and tensioned across the anterior aspect of the forearm and fixed on the postero-lateral aspect of the distal humerus.

To test if the tape has worked simply ask the patient to make a grip and ask them if there has been any change in their symptoms.

Note: Taping directly over the cubital fossa may increase the risk of skin irritation.



Lateral Epicondylalgia / “Acute Tennis Elbow”

Option “B”

This is a potentially effective taping technique for those with highly irritable lateral epicondylalgia. The tape helps once again unload the sensitive / irritated soft-tissues and neural tissues at the common extensor origin. This taping technique will also help limit terminal elbow extension and full forearm pronation. The tape will therefore remind the patient to avoid gripping with the elbow in full extension and pronation, which is often an aggravating factor.

Important Hints on the Technique:

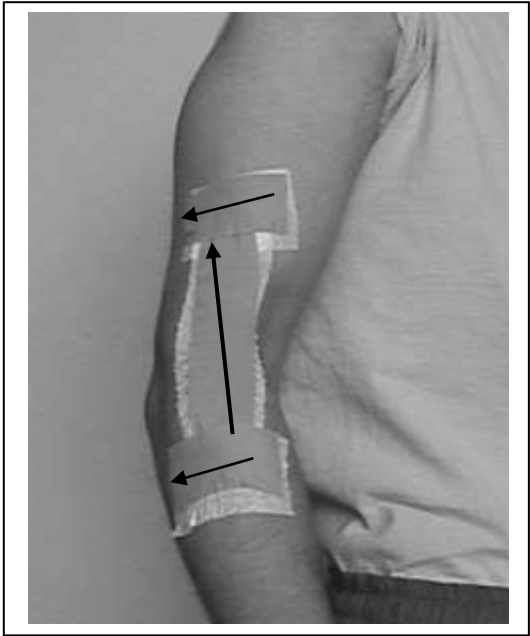
Ask the patient to fully supinate and flex the elbow to approximately 20° before the tape application.

Tape #1: Start from the common extensor muscle belly and pull the tape obliquely and slightly posteriorly towards the distal lateral humerus.

Note: Ensure skin convolutions are made when applying the ‘brown’ tape.

Tape #2 & 3: Anchor the distal and proximal ends of the tapes to secure the edges.

Note: This taping technique will still allow the patient to have full functional elbow flexion and supination.



DeQuervain's Syndrome / Thumb Stabilization

These taping techniques temporarily help stabilize and limit mobility of the thumb carpo-metacarpal (CMC) joint following sprains or related tendonopathies.

The advantage of taping is that the hand remains more functional than if a brace was used.

The disadvantages of taping are that it limits hand washing and the tape comes off after 2-3 days.

If the taping technique provides effective temporary symptomatic relief, it is a good indication that the patient may also benefit from a supportive thumb brace.

Important Hints on the Technique:

For the thumb taping technique to work, the patient must be asked to hold their thumb and index finger in the shape of a “U” while the tape is being applied. This will help the tape limit hyperextension and hyper-abduction of the thumb, which are often the aggravating factors.

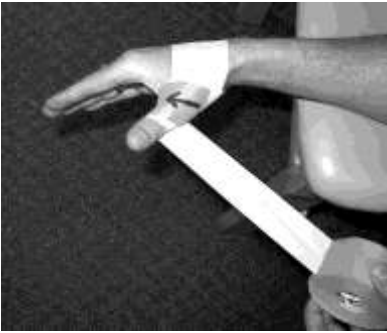
Finger / Inter-phalangeal Joint Stabilization **“Buddy Taping”**

This taping technique temporarily helps stabilize and limit mobility of the inter-phalangeal (IP) joints following sprains.

Important Hints on the Technique:

Two narrow strips are applied around the injured and the neighboring un-injured fingers. This is commonly referred to as “buddy taping”.

Tape #1 & 2: The tapes are applied around the proximal and the middle phalanges. The tapes should still allow some movement at the IP joints to still occur while ‘resting’ the collateral ligaments.



Step #1: From dorsal and radial side of the thumb CMC joint.

Note: The position of thumb is determined by the degree of restriction required.



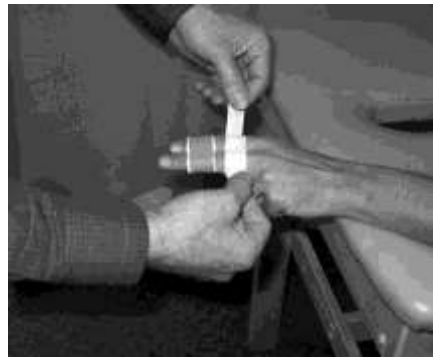
Step #2: Across the dorsum of hand.

Note: Keep fingers slightly apart.



Step #3: Across the palmar surface of wrist, around the thumb and to the web space.

Note: The position of thumb is determined by the degree of restriction required.

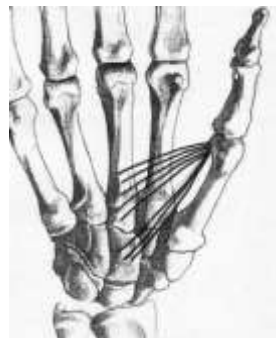


**“Buddy” Taping
For Inter-Phalangeal Joint
Stabilization**

Thumb stabilization technique

This taping technique may be highly effective for those presenting with first metacarpo-phalangeal (MCP) joint pain with referral into the palmar aspect of the base of the thumb.

Some clinicians who use their thumbs for palpation, manual therapy or myofascial release techniques eventually develop significant thumb pain, which can even be disabling. The thumb pain may be related to excessive anterior and/or medial translations of the head of the 1st metacarpal bone. It is hypothesised that the repetitive strong contractions of the thenar muscles may be responsible for this translation.



Thenar Muscles

Individuals with this condition often have pain and significant tenderness over the palmar aspect of the MCP joint with referral into the thenar eminence. The symptoms are often aggravated with forced extension and abduction with the thumb in a 'weight bearing' position. The biomechanical goal of this taping technique is to help limit excessive anterior and medial translations of the head of the 1st MT produced by the overuse of the thenar muscles.

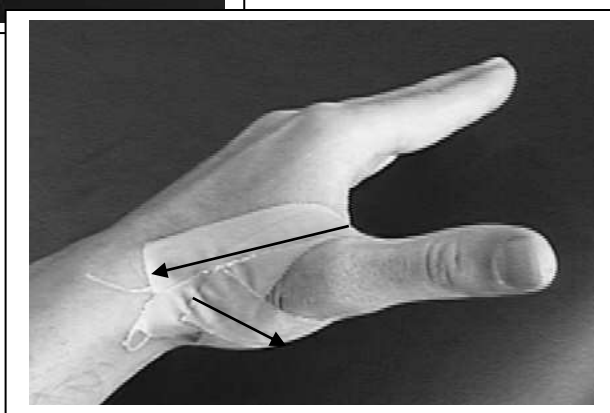
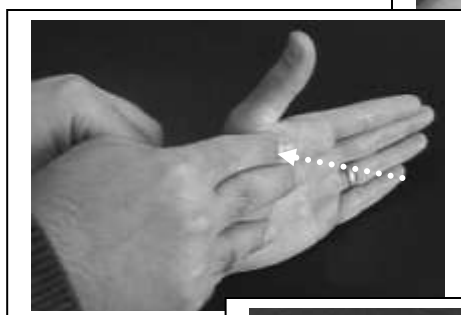
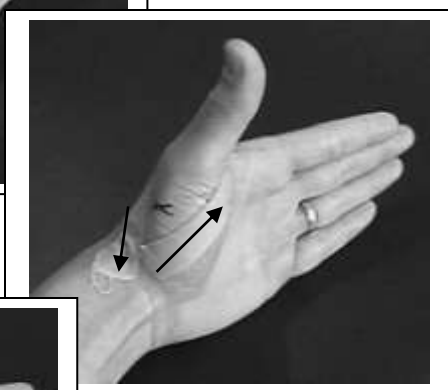
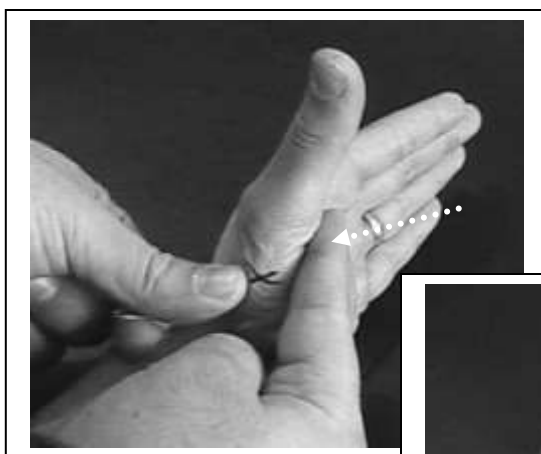
Important Hints on the Technique:

Tape #1: Start from the thenar eminence, pull the tape towards the web space and wrap it around the base of the thumb then anchor the tape at the dorsum of the 1st carpo-metacarpal (CMC) joint.

Tape #2: Start from the dorsum of the 1st CMC joint, pull the tape towards the web space and wrap it around the base of the thumb then once again anchor the tape at the dorsum of the 1st CMC joint.

Note: The tape is directly wrapped around the 1st MCP joint.

Note: A manual dorsal and lateral glide must be applied to head of the 1st metacarpal bone during this taping technique.



NOTES TO REMEMBER

In order to maximize your ongoing learning experience, use this page to document your positive and perhaps negative experiences with any of the taping techniques. Write down any modification options that you may have discovered to be even more effective. We would greatly appreciate your feedback and your comments on any of the techniques. Please e-mail us at: **info@apte.com**.

THERAPEUTIC TAPING OPTIONS FOR

THE LOWER EXTREMITY



Abnormal Pronation Syndromes

Option “A” (A Quick Test)

Abnormal pronation is one of the most common causes of various foot and ankle pain syndromes. This taping technique helps you immediately determine if the patients symptoms are related to abnormal pronation. If symptoms significantly reduce following this quick taping technique, the patient will likely benefit from a more supportive anti-pronation taping technique (e.g. Option “B”).

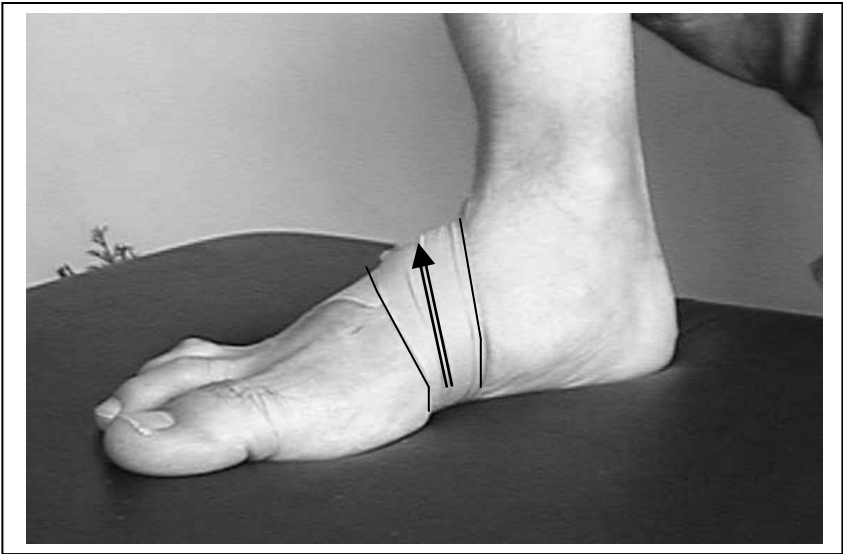
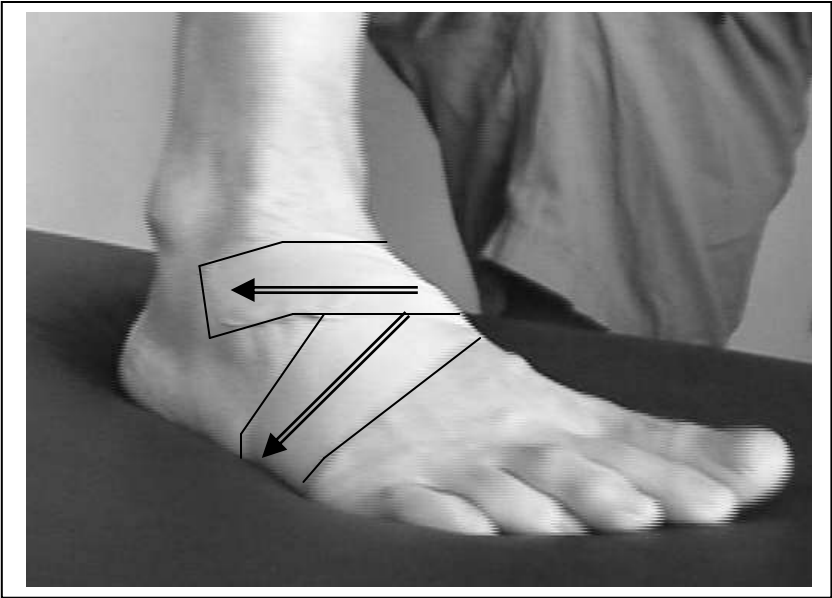
Controlling the abnormal foot pronation by taping may temporarily help reduce trauma to the affected structure(s) and allow more rapid recovery. The advantage of taping is that it is easy to clinically apply before recommending custom orthotics. The disadvantage of taping is that the tape becomes loose after 2-3 days.

This taping technique can be effective for several conditions potentially exacerbated by abnormal pronation including plantar fasciitis, tibialis posterior tendonitis, Achilles tendonitis, shin splints, hallux valgus, tibial nerve sensitization and Morton’s neuroma.

Important Hints on the Technique:

Tape #1: Start from the dorsum of the foot at the 1st meta-tarsal and lightly pull the tape laterally and around the plantar aspect of the foot. Once the medial longitudinal arch is reached, firmly pull the tape up and around the navicular region in order to supinate the foot. Anchor the tape on to the dorsum of the foot just inferior and anterior to the lateral malleolus.

Only one piece of tape is required for this quick and easy technique. However, in order to add more support, the same taping procedure may be repeated by simply overlapping by half over the original tape. Following the tape application, ask the patient to walk around or run. If there is an immediate and significant improvement in the symptoms, then they may benefit supportive shoes, over-the-counter or custom orthotics as a longer-term solution.



Abnormal Pronation Syndromes

Option 'B'

Controlling the abnormal foot pronation by taping may temporarily reduce trauma to the injured structure(s) and allow more rapid recovery. The advantage of taping is that it is easy to clinically apply before recommending custom orthotics. The disadvantage of taping is that the tape becomes loose after 2-3 days.

This taping technique can be effective for several conditions potentially exacerbated by abnormal pronation including heel pain, plantar foot pain, tibialis posterior tendonitis, Achilles tendonitis, shin splints, tibial nerve sensitization and Morton's neuroma.

Important Hints on the Technique:

Tape #1: Start from the dorso-lateral aspect (lateral edge) of the foot and lightly pull the tape medially and across the plantar aspect of the foot. Once the medial longitudinal arch is reached, firmly pull the tape up and obliquely continue across the dorsum of the foot in order to produce supination. Anchor the tape on to the posterior aspect of the calcaneus.

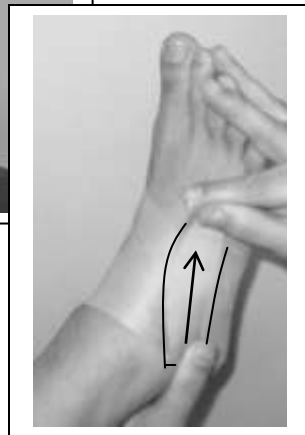
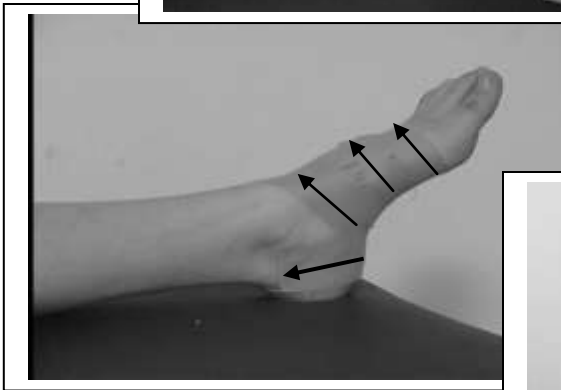
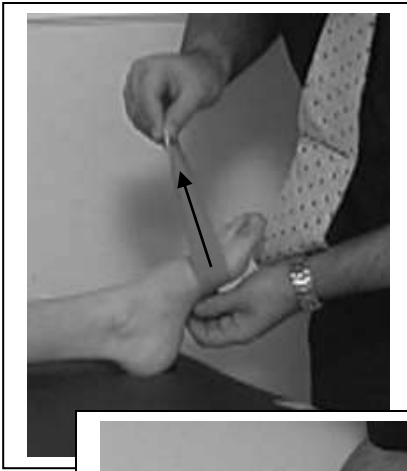
Tapes # 2 & 3: Repeat the exact same process as above, however overlap the tapes and apply each tape a little more proximal along the medial longitudinal arch.

Tape #4: Start from the lateral aspect of the calcaneus and strongly pull the tape underneath the heel and anchor it to the medial aspect of the calcaneus in order to invert the calcaneus. (This is required for those with an everted calcaneus when standing.)



Tape #5: Apply a small piece over the dorso-lateral aspect of the foot to cover up the edges of the tapes #1-3.

Note: Even if the tape loosens after 1-2 days, it will still provide proprioceptive feedback for the patient to actively maintain the medial longitudinal arch when standing.



Plantar Fasciitis / Fasciosis

Since plantar fasciitis / fasciosis is one of the most common causes of heel pain, you should have many opportunities to try this effective taping technique.

The biomechanical goal of this taping procedure is to unload the stress on the plantar fascia by approximating the calcaneus to the forefoot. The tape may help support the medial longitudinal arch and should immediately improve the patient's symptoms. If there is no significant change in the symptoms, remove the tape. If it does not work there and then, it will not work at a later time either!

Important Hints on the Technique:

Note: A strong anterior force must be manually applied at the calcaneus during the application of the tapes #1,2 and 3.

Tape #1: Start from the postero-lateral aspect of the calcaneus, pull the tape along the medial aspect of the foot and anchor it to the lateral aspect of the 1st metatarsal head.

Tape #2: Start from the postero-medial aspect of the calcaneus, pull the tape along the lateral aspect of the foot and anchor it to the dorsal aspect of the 5th metatarsal head.

Tape #3: Start from posterior aspect of the calcaneus, firmly pull the tape along the plantar aspect of the foot and anchor it to the middle of transverse arch between the head of the 1st and the 5th metatarsal heads.

Tape #4: Start from the plantar aspect of the 1st MT head and pull up in order to raise the 1st MT head. Apply the tape around the foot making a full circle. Two more slightly overlapping circles could be applied for greater support.

Note: You may simply repeat all the above steps for more support.



Achilles Tendonitis / Tendinopathy

(Reference: Mulligan 1999)

This taping technique can be quite effective for some individuals presenting with Achilles tendonitis / tendinopathy who report of pain and tenderness on the medial side of their tendon.

Look at your next patient with pronated feet and notice if their calcaneus is in valgus / eversion in weight bearing.

When the Achilles tendon is looked at from behind, at times you may notice a convexity on the medial aspect and a concavity on the lateral aspect of the tendon. This factor may make the medial side of the tendon more vulnerable to injury and strain.



Courtesy of Vasyli
Orthotics International

Although orthotics can be highly effective at reducing the stress on the Achilles tendon, taping is another easy and effective way of temporarily unloading the medial aspect of the tendon. The biomechanical goal of the taping technique is to help lessen the convexity of the tendon medially. This may temporarily help relieve symptoms and facilitate recovery from Achilles tendonitis / tendinopathy.

Important Hints on the Technique:

Tape #1: In weight bearing, ask the patients to actively supinate, then pull the tape firmly from medial to lateral and across the mid-Achilles tendon region. This technique helps “pull” the tendon laterally.

Tape #2: Start from the lateral aspect of the calcaneus and strongly pull the tape underneath the heel and anchor it to the medial aspect of the calcaneus in order to invert the calcaneus.

Note: This may be effective for those presenting with excessive valgus of the calcaneus in standing.



Patello-femoral Pain Syndrome / Medial Glide & Tilt

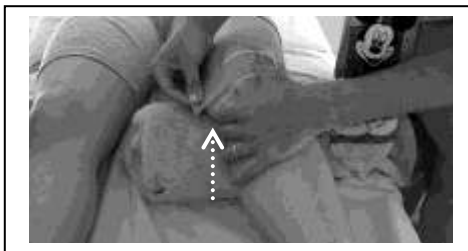
(Reference: McConnell 1996)

Of all the taping techniques that exist, this is the most researched and proven effective taping procedure of them all. Evaluate the patient going up and down the stairs and ask them to rate their pain on a scale of 0-10. After taping, re-do the step up and down test. Most patients with patello-femoral pain syndrome (PFPS) should have an at least 50% reduction in their knee symptoms following the basic medial glide and tilting taping techniques.

Important Hints on the Technique:

Tape #1: Start from the lateral femoral condyle, firmly pull across the patella and anchor the tape on to the medial femoral condyle. It is absolutely necessary to use the thumb to push the patella medially during the application of the tape.

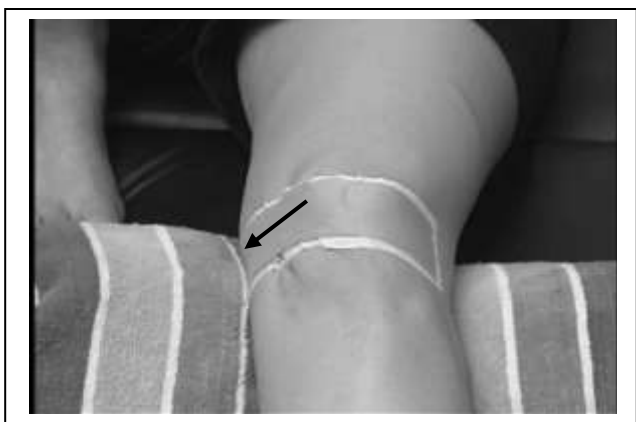
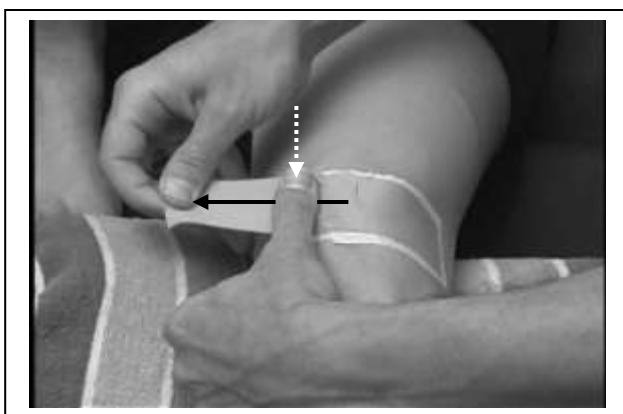
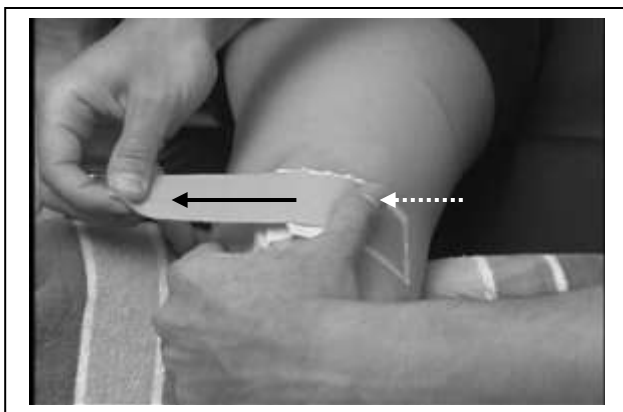
Note: Ensure “wrinkles” are made by pulling up on the soft-tissues on the medial aspect of the knee. This is crucial for the effectiveness of the taping technique.



Tape #2: Start from the middle of the patella, firmly pull across and down, and then anchor the tape on to the medial femoral condyle. It is absolutely necessary to use the thumb over the medial aspect of the patella to produce a medial tilt during the application of the tape.

Note: Often, both of the above taping techniques are applied simultaneously and are overlapped.

Note: If there is no significant change immediately following the application of the tape, remove the tapes and re-apply them again, but this time slightly more superiorly on the patella. This may help unload compression forces at the inferior pole of the patella. If there is still no change, try the next taping option.



Patello-femoral Pain Syndrome / Medial Rotation

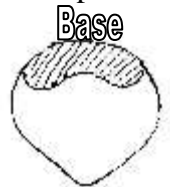
If the patient fails to positively respond to the previously described taping techniques, the rotational component of the patella may need to be addressed.

This taping option may be considered for those who present with a laterally rotated patella. This is frequently seen on individuals with genu valgum where the inferior pole / apex of the patella is pointing laterally. To determine if this taping technique is indicated, ask the patient to perform a quarter squat and note the intensity of pain. Then manually medially rotate the patella and repeat the quarter squat test. If the symptoms improve, then this taping technique will likely be beneficial.

Important Hints on the Technique:

Position the knee in slight flexion by placing a towel roll under the knee. Hold the patella between your thumb and index finger and turn the patella medially and attempt to point the apex of the patella medially.

Tape #1: Start medial to the base of the patella and firmly pull the tape laterally, around the base and anchor it on to the lateral femoral condyle.



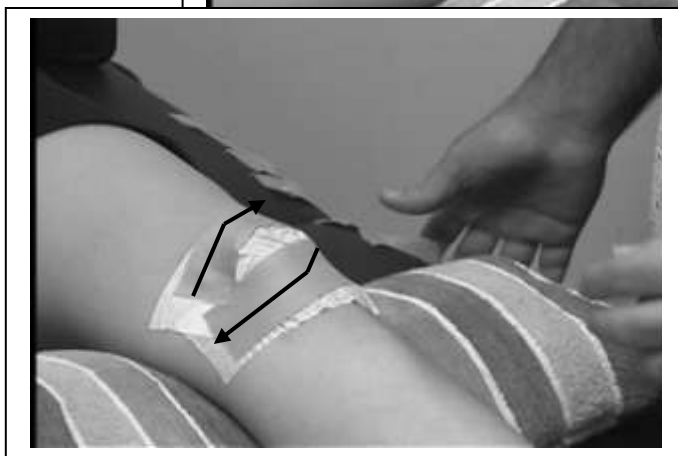
Tape #2: Start from the apex of the patella and firmly pull the tape medially, around the apex and anchor it on to the medial femoral condyle.



Repeat the taping process if it is necessary.

Note: Assess step ups and downs before and after the application of the tapes. You may combine this technique with the medial glide and tilt taping techniques.

Note: If on step up and down test the patient is observed to have excessive femoral medial rotation, you may add the femoral lateral rotation facilitation taping technique also shown in this manual.



Patellar Stabilization / Osteoarthritis / Post-op

The biomechanical goal of this taping technique is to support the patella within the femoral groove during functional activities. The tape may also help unload inflamed and sensitive tissues surrounding the patella.

Patellar stabilization taping is primarily indicated for individuals with the following conditions:

Patellar hypermobility / instability leading to PFPS

Recurrent patellar subluxations /dislocations

Osteoarthritis at the patello-femoral and/or the tibio-femoral joints

Post-surgery including arthroplasty

Important Hints on the Technique:

Position the knee in slight flexion by placing a towel roll under the knee.

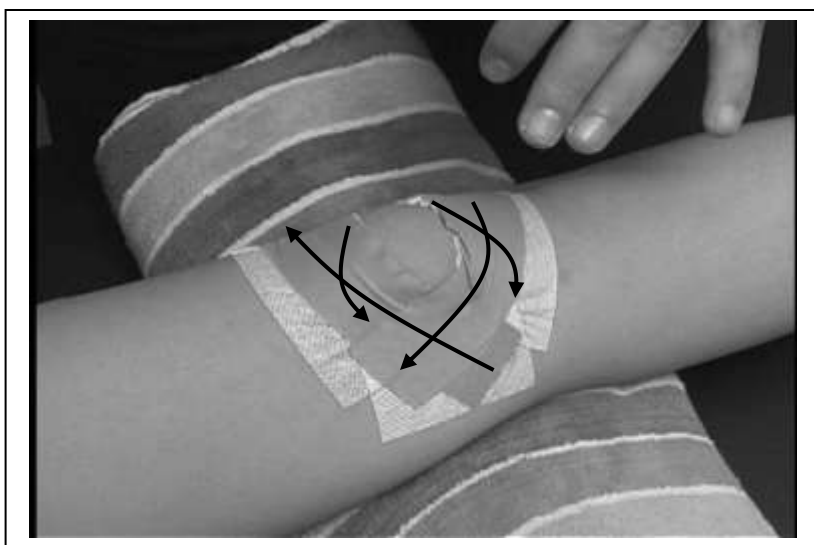
Although this technique looks complicated, it can be made simple by just remembering that the goal is surround the patella with tape in order to support it and unload the tissues adjacent to it.

Tape #1, 2, 3 & 4: Apply four tapes obliquely around patellar borders. Ensure wrinkles are formed during the application of the tapes.

Note: If the patella is laterally glided and/or tilted, the tilt and glide may be simultaneously corrected manually during the application of the tapes.

Note: Apply this taping technique prior to exercising as it may help improve quadriceps contractions. Patients will often have decreased knee pain and less apprehension about the patella subluxing.

Note: All the patellar taping techniques will significantly limit knee flexion range of motion. Patients should be advised to temporarily avoid knee flexion beyond 90° as it will loosen the tapes.



Patellar Tendonitis / “Jumper’s Knee” / Osgood Schlatters

Irritation of the patellar tendon and its insertion at the tibial tuberosity is common among young athletes involved in sports that require sprinting, jumping and repetitive squatting. In many cases, the symptoms resolve if the stresses on the tendon is simply temporarily reduced.

Since most athletes do not wish to give up their sport, taping may provide effective symptomatic relief and speed up the rate of recovery.

Important Hints on the Technique:

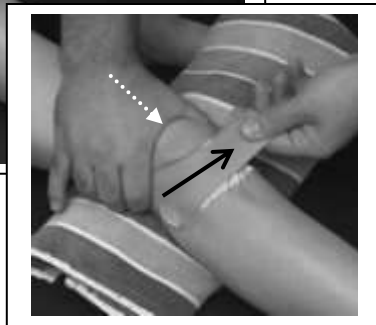
Position the knee in slight flexion by placing a towel roll under the knee.

Tape #1 & 2: Using your web space, push the patella caudally and tape the patellar tendon obliquely with two narrow tapes. Apply the two tapes in order to make an “X”, with the center of the “X” located the middle of the tendon.

Tape #3: While maintaining the patellar caudal glide, apply another half width tape transversely across the tendon from lateral to medial.

Tape #4: While maintaining the patellar caudal glide, apply a full width tape again transversely across the tendon from lateral to medial over the previous tapes in order to support them.

Note: The tape should provide immediate symptomatic relief during walking and a quarter squat test.



Genu Recurvatum & Related Syndromes

Habitual standing with the knees in hyperextension may eventually lead to inner range quads insufficiency. This insufficiency may be the primary cause of various knee conditions including osteoarthritis, patello-femoral pain, patellar subluxations and recurrent knee sprains.

Taping can be a very effective way of controlling habitual knee hyperextension by giving a continuous feedback when just standing and during gait.

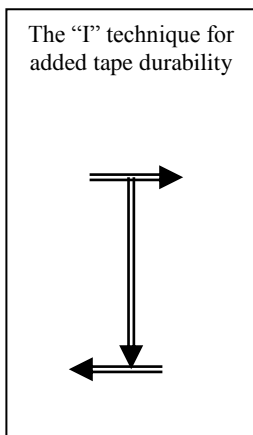
Important Hints on the Technique:

In standing ask the patient to flex the knee 10-15°.

Tape #1: Start from above the popliteal fossa, lightly pull the tape inferiorly, past the popliteal fossa and anchor it to the calf muscle belly.

Note: You may use two strips to further strengthen the tape.

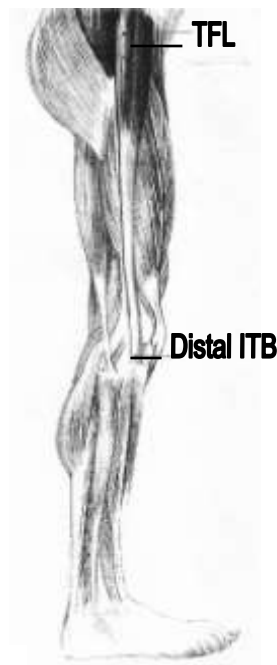
Note: In order to dramatically increase the durability of the tape, you may use the ‘white’ and the ‘brown’ tapes as anchors at the distal and proximal ends of the tape to form an “I”.





Ilio-tibial Band Unloading / **Greater Trochanteric Bursitis** **Option “A”**

Overuse of tensor fascia latae (TFL) may lead to the conditions known as ilio-tibial band (ITB) friction syndrome and greater trochanteric bursitis. Excessive stress on the ITB may also produce symptoms in the area covered by the fascia along the lateral aspect of the thigh and knee. Occasionally symptoms may refer to the buttock region. When the TFL and the ITB are overused, the ITB fascia is often very tender to palpation, especially around the greater trochanter and the lateral regions of the patella.



Important Hints on the Technique:

With the patient in side lying, place the hip in slight lateral rotation. Three strips of tape are applied over ITB with each angled slightly differently (one straight up, one antero-medial and one postero-lateral).

Tape #1: Start from the mid ITB region and firmly pull the tape cranially towards the greater trochanter.

Tape #2 & 3: Form a narrow “X” along the ITB once again firmly pull the tapes cranially towards the anterior and posterior aspects of the greater trochanter.

Note: Ensure wrinkles are formed when applying the ‘brown’ tapes.

Note: If the symptoms are primarily at the distal end of the ITB, the tapes can simply be applied more distally along the ITB.



Ilio-tibial Band Unloading / **ITB Friction Syndrome** **Option “B”**

Frequently, lateral knee pain in runners is related to friction of the ITB as it runs over the lateral femoral condyle. The irritation may be related to increased mileage beyond tissue tolerance and to poor shock absorbency through the shoes and the feet. This syndrome is clinically more common in individuals with rigid/supinated feet.

Pain may be local to the distal ITB or run diffusely along the ilio-tibial tract. There is often tenderness over the lateral femoral epicondyle. Compressing the distal ITB against the lateral femoral epicondyle while the patient actively moves the knee through 30° of knee flexion may reproduce the symptoms.

Individuals with this condition should be educated on wearing shoes with good shock absorbency along with the possible use of orthotics. Runners with lateral knee pain need to avoid hill running and can be instructed to perform regular self ITB stretches. Most importantly the possible muscle imbalances leading to the overuse of the TFL must be addressed; this frequently includes the retraining of the gluteal muscles.

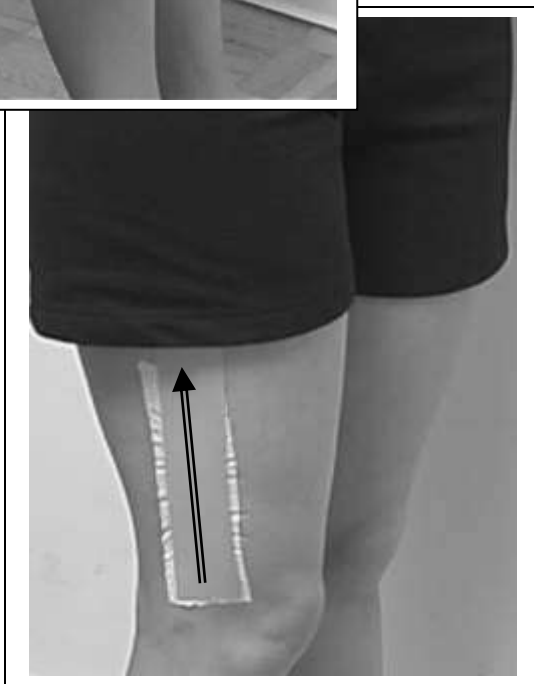
In order to temporarily unload an irritable ITB friction syndrome, you may of course also try the following taping technique.

Important Hints on the Technique:

This simple taping option is applied with the patient in standing and the hip in slight lateral rotation.

Tape #1: Start from the distal ITB region and firmly pull the tape cranially.

Note: Ensure wrinkles are formed when applying the ‘brown’ tape.



Ilio-tibial Band Unloading /
ITB Friction Syndrome
Option “C”

(Reference: Hall 1999)

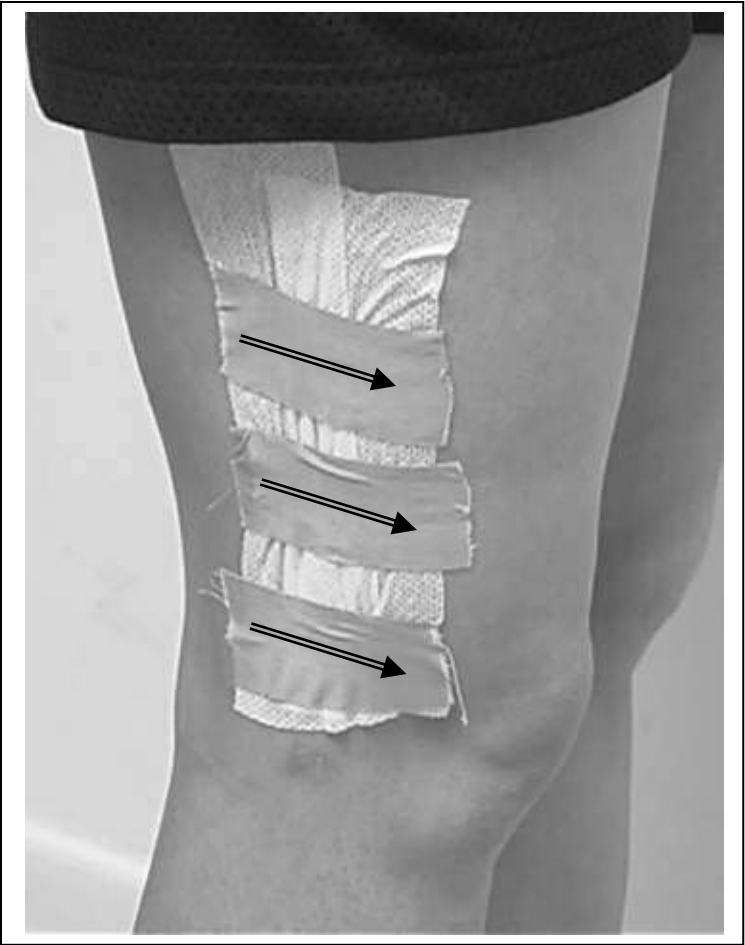
In order to temporarily unload an irritable ITB friction syndrome, you may try the following taping technique.

Important Hints on the Technique:

This taping procedure is applied with the patient in standing and the hip in slight lateral rotation.

Tape #1, 2 & 3: Pull each tape transversely across different points along the ITB.

Note: Ensure wrinkles are formed when applying the ‘brown’ tapes.



Femoral Lateral Rotation Facilitation / Groin Pain / Patello-femoral Pain Syndrome

Habitual femoral medial rotation may be an aggravating factor for several lower extremity conditions including:

Patello-femoral pain syndrome

Greater trochanteric bursitis

Sacro-iliac joint dysfunctions

Piriformis overuse syndrome

Femoral anterior translation syndrome leading to groin pain

This simple taping technique may facilitate femoral lateral rotation by providing proprioceptive feedback. The patient will have greater awareness to avoid excessive femoral medial rotation when standing, walking, using stairs, going from sit to stand and when lying down.

This technique may be applied at the same time as the patellar taping techniques. Excessive femoral medial rotation can easily be observed during slow descending and ascending of stairs.

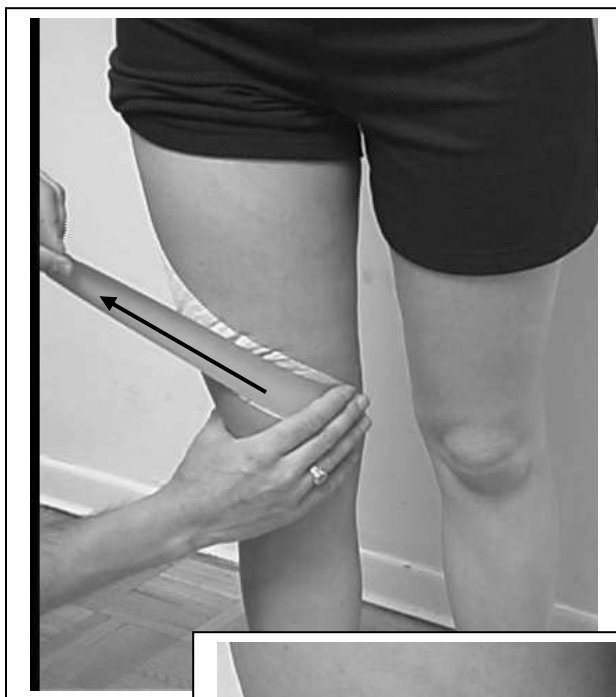
This is also another effective taping option for unloading the piriformis muscle.

Important Hints on the Technique:

This taping procedure is applied with the patient in standing and the hip in exaggerated lateral rotation.

Tape #1: Start from the medial aspect of the thigh in the region of the vastus medialis obliques muscle and firmly pull the tape across the anterior thigh towards the greater trochanter.

Note: After the tape is applied, it is best to inform the patient to sleep with pillows between the knees when in side lying. The pillows will limit femoral adduction and medial rotation throughout the night and help prevent the loosening of the tape over time.



NOTES TO REMEMBER

In order to maximize your ongoing learning experience, use this page to document your positive and perhaps negative experiences with any of the taping techniques. Write down any modification options that you may have discovered to be even more effective. We would greatly appreciate your feedback and your comments on any of the techniques. Please e-mail us at: **info@aptei.com**.

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