



On tape

Clare Anvar on Lymphascial Taping for Post-Surgical Recovery

Kinesiology taping was originally invented in the 1970's by Korean chiropractor, Kenzo Kase. It is probably best known in the UK for its use in sports medicine, where the colourful tapes are worn by athletes for musculoskeletal correction¹.

Lymphascial taping is an application method for Kinesiology tape, which has been developed specifically to enhance current best practice for post-surgical recovery. It can be used alongside physiotherapy, manual lymphatic drainage and myofascial release to speed results, or as a standalone treatment. Once applied, tapes can be worn comfortably for 3-7 days, while delivering 24-hour therapy; providing a simple, economical treatment approach, which is free from systemic adverse reactions². Most adverse skin reactions result from using cheap quality tape or having inadequate knowledge about application techniques².

WHICH TAPE?

There are many 5cm x 5m rolls of Kinesiology tape on the market. For optimum results, tape should be:

- Korean; EU medical grade
- 100% cotton with non-latex elastic fibres; backed with hypoallergenic acrylic glue in wave patterns to minimise sensitisation and enable skin to breathe
- Similar thickness, weight and elasticity of skin; 130-140% longitudinal stretch
- Water-resistant- to withstand daily showering/bathing/swimming

HOW DOES IT WORK?

As the name suggests, Lymphascial taping is applied to influence the inter-related lymphatic and myofascial systems. Myofascia is a pervasive, continuous web of

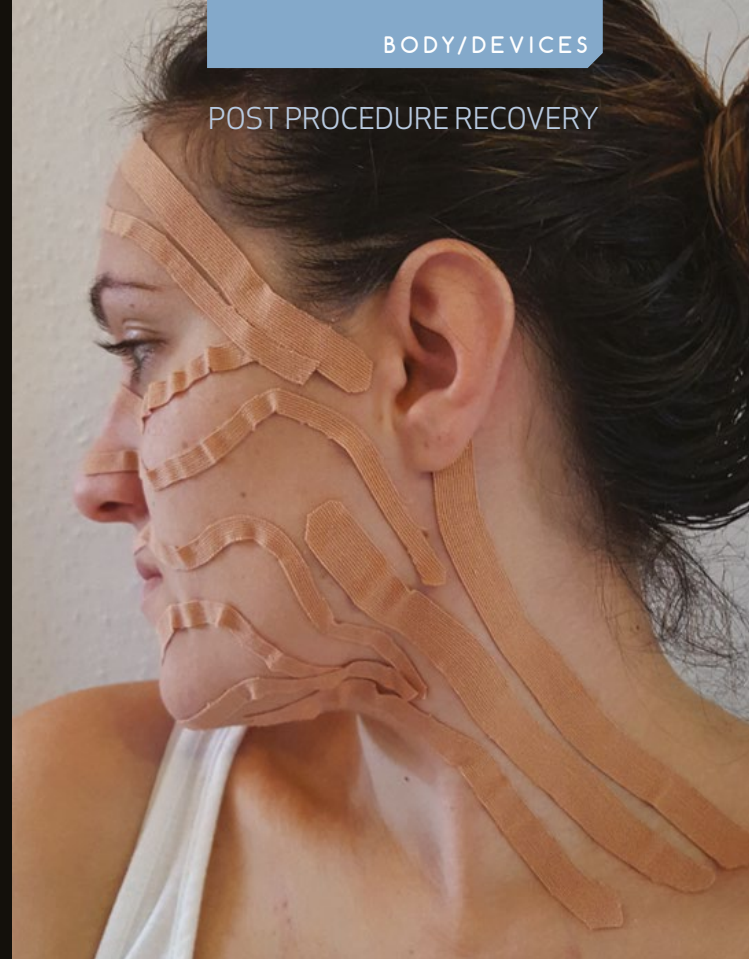
connective tissue, which gives structure and tensile support to the whole body³. Superficial fascia houses the interstitial nerves, vascular and lymphatic vessels. Myofascia is thixotropic, which means it can change consistency, alter tension or contract in response to injury, nervous messages or external stimuli (massage or taping). The deformations not only affect local tissues but the changes in consistency and tension affect deeper, more distant structures and the body as a whole⁴. These hypotheses are explained using theories of bio-tensegrity³, fascial plasticity⁴ and mechano-regulation⁵, recently verified by MRI⁶ and sonoelastography⁷ imaging methods.

Lymphascial taping works by dynamically manipulating tissue pressures under the skin. This affects local and systemic lymphatic drainage, while softening myofascial consistency and tension. It can be used at any stage of recovery from speeding initial wound healing and scar formation to assisting long-term unrestricted tissue remodelling for optimal outcomes².

INDICATIONS

The effects of taping differ according to the techniques used and degree of stretch applied to the tape. Each treatment can be specifically adapted to meet the individual, changing needs of the patient as their recovery progresses.

For initial stages of healing, tapes are cut into four or five individual strips, fans or webs. When applied, the tape lifts the skin to create distance between epidermal and dermal layers, where initial lymphatics and nerve receptors are located¹. During inflammation, the localised high pressure tends to close initial lymphatics, exacerbating interstitial stasis. Taping alleviates pressure and enables the myofascial anchor filaments to open initial lymphatics. Because the pressure beneath the tape is lower than skin areas without tape, the interstitial fluid is drawn towards the taped area, then into



initial lymphatics, where the pressure is lower still². Tapes can be applied to decrease oedema by re-routing lymphatic pathways or to provide several different pressures within one treatment area to focus the drainage intensity. For a stronger drawing effect, tapes can be stretched and/or crossed to form lattices to dissipate bruising, haematomas or seromas. The lower pressure environment also lessens nociceptor stimulation, thus reducing pain¹.

As with compression, muscular movement enhances drainage. To maximise this effect, the patient is positioned to stretch the skin but the tape is applied without stretch, so when the skin returns to its resting position, the tape recoils to form undulations, which move when the skin moves². Consequently, every time the patient moves, a pump or micro-massage effect is naturally created in the interstitium; intensifying any deeper muscular contraction.

To facilitate longer-term healing, taping can be applied with greater stretch and directional pull to release and soften scar tissue. It can also be applied to support and integrate myofascial postural changes resulting from corrective procedures¹.

HOW DOES TAPING COMPARE TO COMPRESSION?

Lymphascial taping can be used in conjunction with, or instead of, compression. Recommendations for wearing post-surgical compression vary enormously between surgeons and procedures. Traditionally, compression is applied to raise interstitial tissue pressure below the garment. The higher pressure reduces capillary filtration and interstitial fluid is drawn into the lower pressured initial lymphatic vessels, where it is propelled proximally, assisted by muscular movement². Although compression garments are effective, they have numerous limitations. Poorly fitting breast and trunk garments can restrict tissues with a tourniquet effect and cause fibrosis⁸. Additionally, because garments can be uncomfortable and inhibit free movement, compliance is often an issue.

POST PROCEDURE RECOVERY



As taping has the opposite mechanism of action to compression, the concept of taping can initially seem counterintuitive. However, comparative studies found taping to be equally effective in reducing oedema for breast cancer patients^{9, 10}. Moreover, taping had numerous advantages including better acceptance, less difficulty to use, pain relief and increased range of movement, comfort and convenience^{9, 10}. It can also be easily and comfortably applied to the genital area, face and neck, where compression is impractical.

WHAT IS THE EVIDENCE?

Although evidence for taping is in its infancy, there are many positive studies from other post-surgical fields, including oncology¹¹, orthopaedic¹², laparoscopic¹³ and maxillofacial¹⁴, which transfer seamlessly to aesthetic medicine.

In traumatic facial procedures, taping was applied directly following surgery. It significantly sped the initial inflammatory phase, improved quality of life and reduced overall morbidity, swelling, pain, trismus and the need for analgesia¹⁵. As taping stimulated initial lymphatic flow, oedema, bruising and haematomas were more efficiently absorbed¹⁶. It also provided a risk-free strategy for seroma prevention and management following breast cancer surgery¹⁷. Taping significantly reduced post-operative abdominal pain after laparoscopy¹⁸ and was useful in controlling myofascial pain¹⁹. For scarring, taping represented a low cost, non-invasive method that gave positive cosmetic outcomes in managing hypertrophic, keloid and contracture scars in a short time period²⁰.

CONCLUSION

Lymphascial taping enhances and supports every stage of post-surgical recovery. For aesthetic patients, especially during initial stage healing, it offers a simple, cost-effective method of providing patient comfort, speeding cosmetic results and delivering best available practice. **AM**



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REFERENCES

1. Kase K. et al. *Clinical Therapeutic Applications of the Kinesio Taping Method*. Tokyo: Kinesio Taping Association. 2003.
2. Sijmonsma J. *Lymph Taping*. Hof van Twente: Fysionair. 2010.
3. Sharkey J. *BioTensegrity-Anatomy for the 21st Century*. Available from: <http://www.johnsharkeyevents.com/blog/March 2015>. [accessed 10th November 2015].
4. Schleip R. *Fascial Plasticity—a new neurobiological explanation: Part 1*. *Journal of Bodywork and Movement Therapies*. 2003; 7(1): 11-19.
5. Tomasek J. et al. *Microfibroblasts and Mechano-Regulation of Connective Tissue Remodelling*. *Molecular Cell Biology*. 2002; 3:349-363.
6. Pamuk U. & Yucesoy C. *MRI analyses show that kinesio taping affects much more than just the targeted superficial tissues and causes heterogeneous deformations within the whole limb*. DOI: <http://dx.doi.org/10.1016/j.jbiomech.2015.10.036> (2015).
7. Rodrigues R. & Galan del Rio F. *Mechanistic Basis of Manual Therapy in Myofascial Injuries. Sonoelastographic Evolution Control*. *Journal of Bodywork and Movement Therapies*. 2013; 17(2): 221-234.
8. Williams A. *Breast and Trunk Oedema after Treatment for Breast cancer*. *Journal of lymphoedema*. 2006; 1(1): 32-39.
9. Hassan M. & Ismail S. *Kinesio Tape Versus Compression Garment on Post Mastectomy Lymphoedema*. *Medical Journal of Cairo University*. 2015; 83(2): 187-192.
10. Tsai H-J et al. *Could Kinesio tape replace bandage in Decongestive Lymphatic Therapy for Breast-Cancer Related Lymphoedema?—a Pilot Study*. *Supportive Care in Cancer*. 2009; 17(11):1353-1360.
11. Pop T. et al. *The Influence of Kinesiology Taping on the Reduction of Lymphoedema among Women after Mastectomy—Preliminary Study*. *Contemporary Oncology*. 2014; 18(2):124-129.
12. Donec V & Kriciunas A. *The Effectiveness of Kinesio Taping after total knee Replacement in Early Post-operative Period. A randomized clinical trial*. *European Journal of Physical and Rehabilitation Medicine*. 2014. Available from: <http://liguria.aifi.net/files/2014/08/kinesiotaping-e-protesi-ginocchio.pdf> [accessed 10th November 2015].
13. Krajczyk M. et al. *The Influence of Kinesio Taping on the Effects of Physiotherapy in Patients after Laparoscopic Cholecystectomy*. *The Scientific World Journal*. 2012. DOI:10.1100/2012/948282.
14. Tozzi U. et al. *Influence of Kinesiological Tape on Post-operative Swelling After Orthognathic Surgery*. *Journal of Maxillofacial Oral Surgery*. 2014:1-6. doi:10.1007/s12663-015-0787-0.
15. Ristow O. et al. *Kinesiological Taping reduces Morbidity after Oral and Maxillofacial Surgery: a Pooled Analysis*. *Physiotherapy Theory and Practice*, 2014; 30(6): 390-398.
16. Kafa N. et al. *Effects of kinesiological taping on epidermal—dermal distance, pain, edema and inflammation after experimentally induced soft tissue trauma*. *Physiotherapy Theory and Practice*. 2015;31(8): 551-561.
17. Bosman J. & Piller N. *Lymph Taping and Seroma Formation Post Breast Cancer*. *Journal of Lymphoedema*. 2010; 5(2): 12-21.
18. Tantawy S. & Kamel D. *Effect of kinesio taping on pain post laparoscopic abdominal surgery: randomized controlled trial*. *International Journal of Therapies and Rehabilitation Research*. 2015; 4(5): 250-255.
19. Wu W-T. et al. *The Kinesio Taping Method for Myofascial Pain Control. Evidence-Based Complementary and Alternative Medicine*. 2015; DOI:10.1155/2015/950519.
20. Karwacinska J. et al. *Effectiveness of Kinesio Taping on Hypertrophic Scars, Keloids and Scar Contractures*. *Polish Annals of Medicine*. 2012; (19): 50-57.



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