



Dynamic Taping - A Biomechanical Taping Approach

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Abstract

Dynamic taping works on load absorption; manages load and improves pattern of movement, Bungee cord effect describing the end point of deceleration and rebound effect creating resistance over the movement. The management of load, movement and function permeate many physiotherapeutic interventions and for good reason. Load has been shown to induce Tendinopathy and drive it through its various stages but is also essential in recovery. A combination of tensile load (overuse) and compressive load is most detrimental and tendons respond differently to different types of loading at different stages of the pathology. Specificity of loading is critical. Biomechanical evaluation and intervention is regularly incorporated into the management of musculoskeletal conditions. Alterations in kinetic and kinematic factors can be identified and addressing such factors can improve pain and function. Effect of dynamic taping in comparison with other taping methods has shown load absorption with the resistance provided by the tape. Dynamic Tape gives you springs.

Keywords: Dynamic taping; Biomechanical taping; Sporting; Musculoskeletal

Introduction

Aim

Dynamic Tape, a biomechanical Tape is completely a new approach to sports and therapeutic taping. This taping methodology aims towards managing load, modifying movement patterns and functions. This Tape acts like a spring and is used like a bungee cord. It is applied with the body part (muscle or joint) in the short position to use the strong elastic energy of the tape which would provide a deceleration/load absorption force. Working like a bungee cord, this unique, 4-way stretching tape allows taping in a way that can resist and decelerate, store energy and thereby assisting in moving through full range of motion without limitation.

Design

It is an extremely soft, breathable, and water resistant tape made of Nylon/Lycra or Recycled PET/Lycra material. It is an innovative, 4-way stretching tape with very strong elastic resistance and recoil, which absorbs load and contribute to force generation to reduce the workload on the body. This improves biomechanical efficiency and modifies faulty movement patterns. It has been originally developed to provide solutions in sports medicine.

Benefits of Biomechanical Tape

Use of Dynamic tape is a very mechanical approach which can modify faulty movement patterns, assist muscle action and reduces the load on injured or painful structures. This Load reduction when combined with powerful neurophysiological effects may provide quick relief in pain, reduces metabolic demand, facilitates recovery and improves function.

Due to its ability to manage load, modify movement patterns and assist function, this Biomechanical approach has been very quickly adopted worldwide and is proving extremely popular with neurologic, pediatric and hand therapists.

It is used by players of rugby, volleyball, soccer tennis, and many other sporting professions. It is also used in the treatment of sporting and condition such as patella tendinopathy, Achilles tendinopathy, plantar fasciitis, tennis elbow, rotator cuff problems, musculoskeletal and neurological conditions.

Biomechanical Evaluation and Intervention

The intervention is designed to restore the strength, endurance, structural stability, tissue integrity and range of motion (ROM). Biomechanical evaluation is an assessment designed specifically to give an insight into muscle, joint, or movement dysfunction. It involves evaluation of entire kinetic chain of your body including legs, hips and spine. This includes the angular relationships, ROM, and dynamic interactions also.

The ultimate aim of this evaluation is to identify movement asymmetries, muscle strength and flexibility imbalances, and joint motion restrictions. As it prevents, detect actual or potential anomalies and helps in analyzing the consequences of these problems on other articulations (knees, hips, back) so it must be regularly incorporated in order to manage deformations and musculoskeletal conditions and improve mechanical efficiency. Biomechanical evaluation may consist of Video Gait Analysis, Mechanical assessment, Recommendations for intervention depending on the factors.

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