

# Bandaging and Taping Considerations for the Dancer

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## Abstract

Although widely disputed, bandaging and taping techniques are common practice in sports medicine. This article reviews literature related to the efficacy of bandaging and taping procedures and their role in sport and dance medicine. It further examines dance-specific application principles, and outlines selected techniques for treatment of common dance-related pathologies.

Dance medicine research demonstrates injury rates at approximately 65% repetitive use and 35% traumatic injury. The majority of injuries are reported to occur in the lower extremities, of which 42% are foot and ankle injuries. A combination of skeletal structure variations and abnormal kinematics in the foot and ankle complex may increase the risk for injury.<sup>1,2</sup> Abnormal structure creates persistent or recurrent demand for compensation, often resulting in repetitive use pathology. For example, pes planus, a compensated foot posture commonly seen as a result of forced turnout, may predispose the dancer to posteromedial shin splints, flexor hallucis tenosynovitis, and plantar fasciitis. Likewise, it is thought by some that excessive pronation

with a hypermobile, dorsiflexed first ray may lead to metatarsal stress fracture or increased internal rotation of the tibia, resulting in distal iliotibial band syndrome or patellofemoral pain syndrome (PFPS). These conditions account for 50% of knee problems in dancers.<sup>3</sup>

Although traumatic injuries comprise fewer of the total injuries observed in dance, an acute injury may cause the loss of a performance, a season, or a career. Lateral ankle sprain, for example, is reported to be the most common acute injury in sport and dance<sup>4</sup> and may be associated with the development of overuse injuries secondary to altered arthrokinematics. One study reporting on factors associated with traumatic injuries suggested that both anterior tibiofemoral laxity and pronation are predictive of anterior cruciate ligament knee injury in adolescents.<sup>5</sup> From other recent research, more is being learned about the epidemiology of traumatic injuries in dance. For example, one recent study revealed the incidence of ACL injury among dancers,<sup>6</sup> and another reported on the frequency of muscular strains to the thigh, citing an 8.2% prevalence

of injuries. Similarly, acute injuries of the dancer's hip are beginning to receive more attention.<sup>3</sup>

During the acute phase of recovery from these musculoskeletal disorders, the healing of most, if not all, of these injuries can be facilitated with athletic bandaging and taping techniques. Although widely disputed, these techniques are common practice for athletic trainers and other healthcare practitioners and are routinely used in the management of acute and chronic injury, injury prevention, and rehabilitation, with the following goals: 1. to minimize edema and internal hemorrhaging; 2. to support ligaments and capsules of unstable joints; 3. to support muscle-tendon units by limiting or assisting movement; and 4. to secure dressings, protective pads, or splints. Numerous studies have investigated the effectiveness of these procedures for musculoskeletal injuries and have reported varied results. This article reviews studies affirming the use of bandaging and taping procedures.

## Efficacy of Elastic Bandages

Elastic bandages are used to limit internal bleeding and accumulation of fluid in the interstitial tissues. Compression effectively reduces hemorrhaging, thereby limiting the inflammatory response and subsequent soft tissue scarring.<sup>7</sup> Chronic inflammation due to unresolved acute inflammation or repeated microtrauma may

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