

Based on the above, we asked all team doctors of the German Bundesliga two questions:

1. You diagnose a player with a grade 3 hamstring injury (supporting leg), i.e. a muscle-fibre injury at the proximal musculotendinous junction. What is your treatment strategy and on what criteria do you base the decision that the player is fit to return to training and competition?
2. Which of these criteria (and how) do you then later use in subsequent preventive treatment in conjunction with specific training with your therapist and trainer team?



**Dr Burak Yildirim MD,**  
Bayer 04 Leverkusen

1. Initial reduction of swelling (MLD, Vacuum-sport) and physical therapy, usually followed (48/72 hrs post-trauma) by infiltration with PRP (injection interval every 3 days for 2 weeks post-trauma). Concomitant physical functional therapy, EMG biofeedback training and osteopathy as well as TMG diagnostics. Approx. 3 weeks post-trauma (depending on the clinical course) first round of biomechanical diagnostics to return to running. Approx. 6

weeks post-trauma (depending on the clinical course) second round of biomechanical diagnostics to return to training.

2. EMG biofeedback training and functional training therapy based on the final findings are then integrated into a prevention programme implemented by the responsible physiotherapist and rehabilitation trainer.



**Dr Wulf Schwietzer MD**



**Dr Christoph Seeger MD,**  
Eintracht Frankfurt

1. Acute care: RICE (rest, ice, compression, elevation). Infiltration along the muscle length and at the associated vertebral level. Ultrasound-guided local infiltration of the structural defect with ACP, infiltration along the muscle length and associated vertebrogenic segment with local anaesthetic and Traumeel (day 1, 3 and, depending on clinical symptoms, day 7 post-trauma). Manual lymphatic drainage and compression bandages (or lymphologic compression bandaging). Depending on the findings, where applicable, a few days on crutches with no weight-bearing (in rare cases combined with thromboembolic prophylaxis). Anti-inflammatory supplements (no NSAIDs). Physiotherapy/osteopathy, massage, acupuncture, high-tone therapy, electrotherapy. Weight-bearing during the clinical course, depending on clinical and radiological course (MRI monitoring) and after close consultation with physiotherapists and athletics/rehabilitation trainers. Form of treatment dependent on outcome of functional muscle diagnostics (origin/insertion lesions, muscle reaction pattern, myofas-

cial problems, agonist/antagonist imbalance, visceral or vertebrogenic cause). High-speed strength training after 4 weeks at the earliest, sport-specific training units (e.g. shooting drills) also to be avoided for the first 4 weeks.

2. Individual training to fix confirmed muscle and functional imbalances. Fascial training, Blackroll® and yoga together with training units. Search for foci of infection, particularly in recurring injuries (dentist, kinesiological diagnostic workup). Prevention training is usually managed for all players based on laboratory parameters (CK, lactate, urea) and heart rate variability. Diet is also controlled to prevent injury (exclusive use of bionutrients as well as reduced intake of dairy products and food containing white flour and gluten, no pork, etc.). In addition, individual orthomolecular supplements are given at fixed times during the season for anomalies identified in routine laboratory diagnostics.