

GenuPoint

EVALUATION OF THE PAIN-REDUCING AND PROPRIOCEPTIVE EFFECT OF THE PATELLAR TENDON SUPPORT

Zwerver, J.; v. d. Akker-Scheek, I.; de Vries, A. / Institute for Sports Medicine; University Medical Center Groningen (UMCG)

Jumper's knee (patellar tip syndrome, patellar tendinopathy) is a chronic, painful, and degenerative condition of the patellar tendon that is the result of overloading. The condition is caused, among other things, by repeated, unaccustomed, and/or violent tensile stresses with a "mismatch" between the physiologically tolerated tensile stress and actual tensile stress. A very common symptom is pain at the patellar tendon insertion point. In this study, the effect of a patellar tendon support on pain development and the proprioception of the knee in athletes with patellar tendinopathy is investigated.



GenuPoint®

Provides targeted relief for the patellar tendon

METHODOLOGY

Sample:	n = 28 (8 females, 20 males), age: 18–50 years
Test support:	GenuPoint patellar tendon support (Bauerfeind AG)
Test method:	Test set-up 1: functional stress tests with and without the patellar tendon support, two-week wearing test during sporting activity. International questionnaire [VAS] on pain and comfort Test set-up 2: angle reproduction test with the "MR Cube" from "FysioRoadmap moni- tored rehab systems"
Inclusion criteria:	• Age: 18–50 years • Unilateral or bilateral patellar tendinopathy • Knee complaints due to patellar tendinopathy greater than 80 on a 100-point VISA-P score (Victorian Institute of Sport Assessment-Patella score) • A knee condition that has existed for more than three months
Exclusion criteria:	• Acute knee pain • Knee complaints less than 80 on a 100-point VISA-P score • Patients with other knee conditions • Corticosteroid treatment in the last three months • Neurological impairments • Daily use of painkillers over the past year

Source:

Zwerver, J.; v. d. Akker-Scheek, I.; de Vries, A.; Evaluation der schmerzreduzierenden und propriozeptiven Wirkung der Patellasehnenbandage GenuPoint [Evaluation of the pain-reducing and proprioceptive effect of the GenuPoint patellar tendon support]; data has been submitted for publication

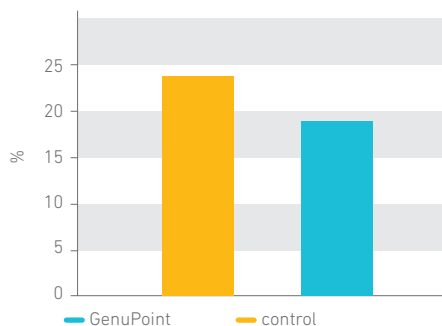
RESULTS

In functional tests, such as one-legged squats, one-legged and two-legged jumps, and a triple hop, young athletes with chronic patellar tip syndrome showed a significant reduction in pain in the affected knee when GenuPoint was used. In the triple hop, a 10.3-point reduction in pain was measured on average on the 100-point VAS scale. This value indicates that wearing the patellar tendon support causes a significant and clinically relevant reduction in pain. Test subjects with low proprioceptive capability (n=15) showed a 17.2 percent improvement (from 23.2 to 19.2) in joint perception through wearing the patellar tendon support.

→ **Less pain with GenuPoint**

→ **Improved proprioception with GenuPoint**

Analysis of the active angle reproduction test
Difference from the correct leg position during the extension test expressed as a percentage



Pain when carrying out functional squats and jumping exercises in accordance with the Visual Analog Scale (VAS)

