

The Solution for Anterior Knee Pain

Dynamic Re-alignment with Patella Pro



Quality for life



"My experience with Patella Pro was very good: I felt that my knee was stable and that I didn't need to be afraid any more."

Judith, 24, patient with anterior knee pain

Innovative Solution for Pain

Dynamic Patella Tracking

Every fourth knee problem is anterior knee pain. Anterior knee pain is one of the most frequent indications in orthopaedics.

This makes it all the more surprising that it has thus far been extremely difficult to break the vicious circle of pain, avoiding movement and relieving posture. For many patients therapeutic measures go on for years. They rarely achieve complete pain relief.

Working together with experts from the Clinical Excellence Circle, a group of specialised physicians, therapists, biomechanics, and engineers, Ottobock developed a new technology: Dynamic patella re-alignment in the Patella Pro.

It secures the patella at every relevant flexion angle. Patella Pro thus allows pain-free movement and breaks the vicious circle. This makes it an innovative aid that can end your years of suffering.

We would be happy to provide you with more details – even at your location – or we will send you more information. Just send an email to: export@ottobock.de

For more information: www.ottobock.com

Developed jointly with

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Stop the Pain

Causes and Therapy of Anterior Knee Pain

A number of symptoms that cannot be assigned to any specific structure are combined under the term “anterior knee pain” or “patellofemoral pain syndrome.” The risk of maltracking is particularly high for low flexion angles of 10°-30°, when the patella is not tracked firmly in the patellofemoral groove.

It is often triggered by joint strain, such as from excessive stress in sports, in connection with weak hip muscles or malposition of the foot, and from imbalances of the thigh muscles.

The usually conservative treatment is prolonged and can hardly break the vicious circle caused by the pain. Patients either avoid movements or adopt relieving posture, which delays strengthening the muscles and leads to even more pain.

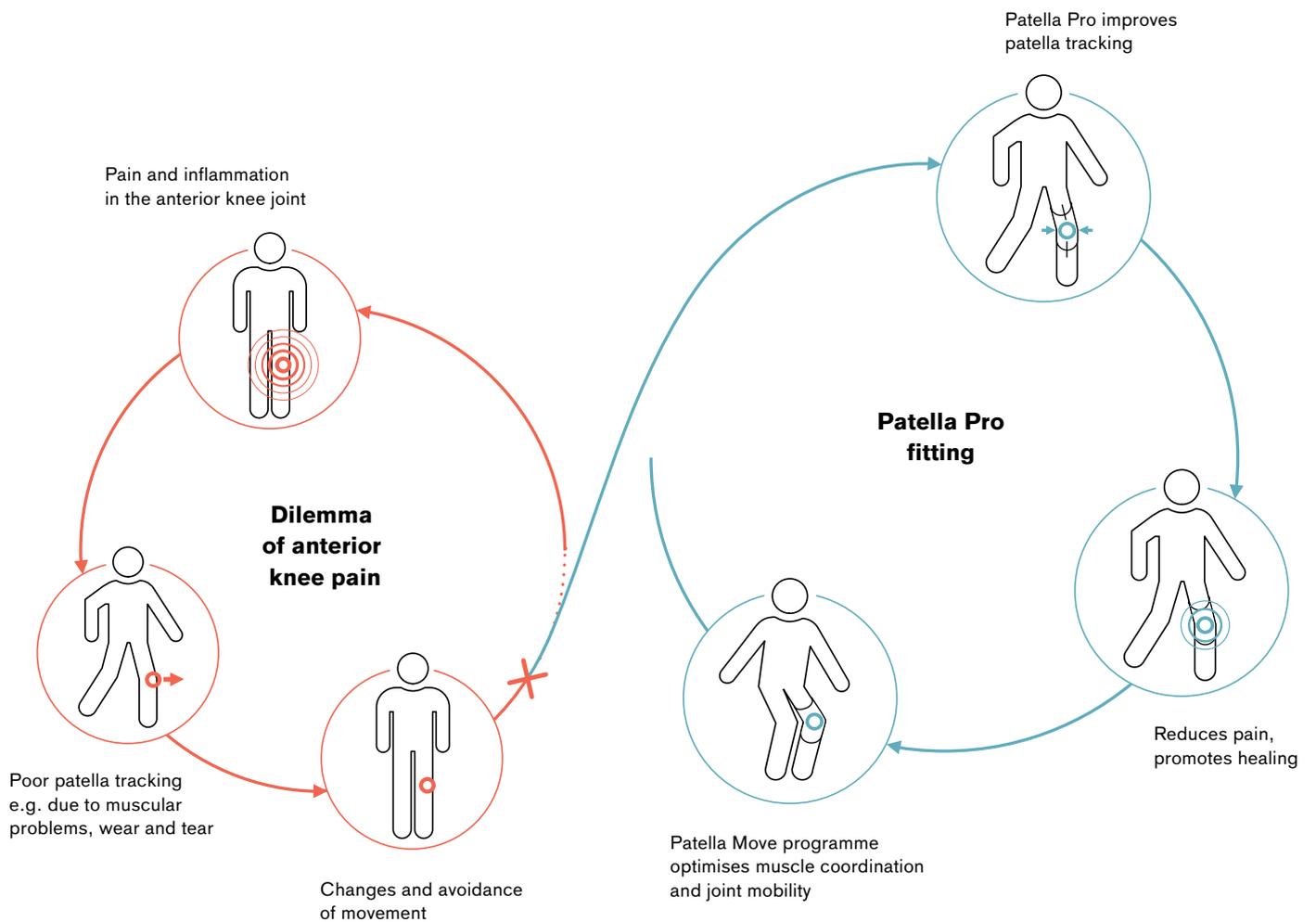
Patella Pro with the unique dynamic re-alignment technique breaks this cycle. The patient is again without pain – and that applies to all movements.

Indications

- Patellofemoral pain syndrome
 - Patella maltracking
 - Retropatellar arthrosis
 - Chondropathia patellae/
chondromalacia patellae
 - Patellar luxation and subluxation
 - Patella tendon injury
 - Anterior knee pain after knee surgery
(e.g. total knee replacement, lateral release surgery)
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Breaking the Vicious Circle



The End of Her Suffering



In 2004, Judith's dream of an athletic career ended. The ambitious roller figure skater was diagnosed with "anterior knee pain." At first the 24-year-old thought the pain would go away on its own. But she was wrong: it wasn't until eight years later that she found the right therapy.

She could hardly move due to the pain: she could no longer use the clutch when driving and she was in pain when she walked down stairs. This was a major restriction in the quality of life for a young woman.

Treatment took a long time: Physical therapy, electrostimulation and a training program specifically designed for her. But improvement was slow. Patella Pro brought the breakthrough. "I had the feeling that my knee was stable and I didn't have to be afraid anymore," she describes her first impression. For the first time, she could walk again without pain.

She had to give up her big dream of roller figure skating competitions because of anterior knee pain. Thanks to Patella Pro, she can at least ride a bicycle and enjoy inline skating again. Pain-free.



Chances for a Comeback

"It all started about four years ago," remembers Tonda. At that time, the now 20-year-old played football very actively. "Especially when making sudden movements and passes and taking shots at the goal, I felt shooting pain below my kneecap."

And it lasted several days after training or sports, also restricting Tonda in his everyday activities. His physician diagnosed Osgood-Schlatter disease – an irritation of the patella tendon – and prescribed physical therapy and a support. There was no long-term improvement. "When I went back to training after a break of three to four weeks and intensified the workout, the pain came back immediately." These ups and downs went on for three and a half years – and considerably limited the passionate football player's quality of life.

Finally, Tonda found a way to break the vicious circle with the Patella Pro. In addition to the orthosis, he integrated the exercises from the specially developed Patella Move programme in his daily activities and thus strengthened his thigh muscles. The effect was positive. "After only a short time, I felt the first success and completed the first rounds of jogging without pain." Now he hopes that after the therapy with Patella Pro, his anterior knee pain will finally be a thing of the past and he can go back to shooting goals again.

Good Tracking

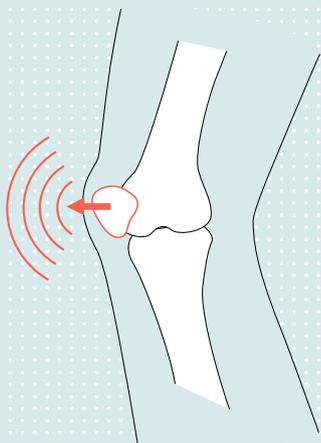
Dynamic Patella Re-alignment

Patella Pro tracks the patella in the relevant physiological flexion angles from 10°-30°. The frequently inflamed soft tissue is relieved and knee pain is alleviated by the functional relief of joint structures.

After reaching a flexion angle of 30°, when the patella is tracked firmly in the trochlea and supported by muscles, compression no longer increases with greater flexion. Patella Pro prevents overcorrection or even patella tilt.

Flexion 10°-30°

- ▶ **High risk** of patella maltracking (shifting outward)



- ▶ **Precise tracking** of the patella by Patella Pro

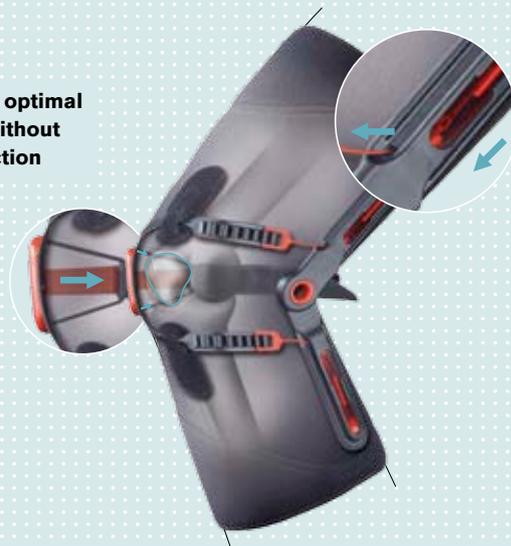


Flexion >30°

- ▶ **Lower risk** of patella maltracking



- ▶ **Continued optimal tracking** without overcorrection



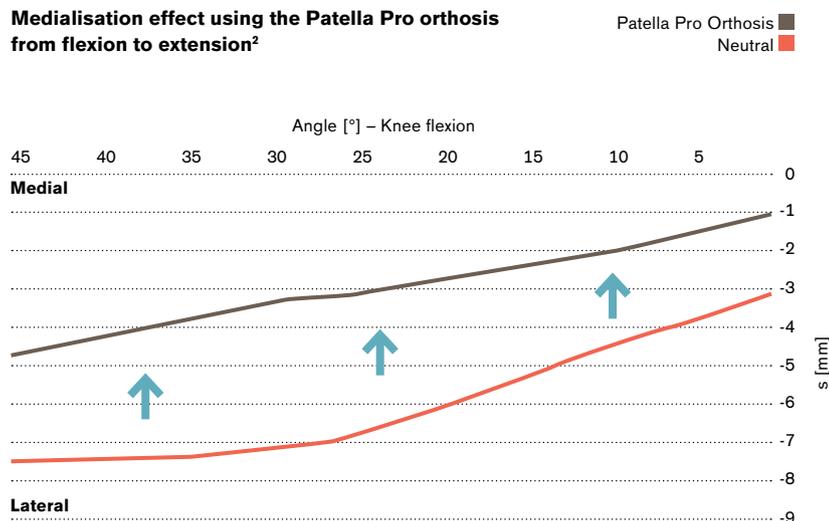
Study Confirms Effect Patella is Medialised

All studies so far have confirmed the effectiveness of Patella Pro. A cadaver study at the German Sports University in Cologne proved the biomechanical function of patella re-alignment¹: It showed "medialisation of the patella during the entire extension movement of the knee."

A study on seven patients also showed pronounced improvement of medialisation compared with the comparison groups with no orthosis and with a different orthosis.

Medialisation effect	Patella Pro (orthosis)	Competitor A (orthosis)	Competitor B (support)
Standing	■	■	
Going into flexion	■		■
Coming out of flexion	■	■	

Medialisation effect using the Patella Pro orthosis from flexion to extension²



"The use of the Patella Pro orthosis for patients with unstable patella and PFPS showed significant ($p < 0.05$) medialisation of the patella in comparison with neutral and control conditions."

Prof. G.P. Brüggemann, Cologne

Tested

Institute for Biomechanics and Orthopaedics/
Cologne, Germany

Biomechanical Efficacy and Effectiveness

¹ G.P. Brüggemann et al: Patella-Re-Zentrierungs-Orthese Patella Pro. [Patella Pro: Patella Re-alignment Orthosis] Biomechanical Evaluation: ex vivo and in vivo; in: Orthetik-Spezial Knie, otto boeck, Duderstadt, 2011.

² Source: ISPO World Congress/Orthopädie + Reha-Technik 2010 · Speaker: Prof. Gert Peter Brüggemann, Institute of Biomechanics and Orthopaedics, German Sports University · Patella kinematics controlled by a new knee orthosis – in vivo study of the Patella Pro orthosis

Good News for Medical Suppliers, Therapists and Patients

Very comfortable and easy to use

Individually adjustable

With hook and loop points and incremental settings, Patella Pro can be adjusted precisely to the patient's individual requirements.

Provides relief

Precise patella tracking in the patellofemoral groove relieves cartilage.

Very comfortable

The material of the Patella Pro is lightweight and breathable. The vector grip effect keeps it in place. This results in a truly comfortable orthosis for the user.



In the past, therapists and medical supply stores had to urge patients with anterior knee pain to be patient and could not offer them much help. Now they can offer patients fast, effective support: Patella Pro allows them to move more safely and without pain. Patients quickly regain a better quality of life.

Dynamic re-alignment

Patella Pro always provides the proper amount of tracking.

Easy to use

At the first use, the orthosis can be adjusted individually in just six steps. Easy to put on thanks to quick fasteners and donning aids.

Thin and nearly invisible

Patella Pro is an extremely thin, light-weight orthosis that is not bulky and hardly visible underneath clothing.

Advantages for the supplier

- Innovative, state-of-the-art product
- Little effort
- Easy to adjust
- Rapid effect
- Satisfied patients

Ordering information

	Article number	Side	Size	Circumference	
				A (cm)	B (cm)
	8320=	L/R	-XS	32-35	40-44
	8320=	L/R	-S	35-38	44-48
	8320=	L/R	-M	38-41	48-52
	8320=	L/R	-L	41-44	52-56
	8320=	L/R	-XL	44-48	56-61

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