

Levitation^{®2}

TRI-COMPARTMENT UNLOADER™

Many patients with knee osteoarthritis (OA) experience increased pain during activities where the knee is bent and bearing weight, such as climbing or descending stairs, rising from a seated position, walking uphill, squatting, and many sports. During these activities, the compressive forces in the knee can increase up to sevenfold. The Levitation^{®2} Tri-Compartment Unloader is a unique solution for such patients. By absorbing bodyweight into a patented spring-loaded hinge during weight-bearing knee flexion, Levitation can reduce the total load placed on the knee joint by up to 46%.¹ During leg extension, the spring-loaded hinge provides dynamic extension assistance (or “knee extension assist”) enhancing mobility, muscle strength and neuromuscular retraining.²

INDICATIONS

- Patellofemoral knee osteoarthritis
- Multi-compartment knee osteoarthritis
- Joint pain that increases with knee flexion while weight bearing

KEY BENEFITS

- Combined tibiofemoral and patellofemoral unloading¹
- Powerful, customizable knee extension assist^{1,2}
- Promotes increased activity and muscle strengthening^{1,2}

95%

of users report reduced pain³

46%

joint load reduction¹

85%

of users report improved function and mobility³



Embedded spring-loaded hinge

Adjustable force-output

COMPARISON: LEVITATION VS. UNI-COMPARTMENT OFFLOADER

	Functional Stabilization	Joint Alignment	Patellofemoral Unloading	Tri-Compartment Unloading	Knee Extension Assistance	Immediate Pain Reduction	Rapid Functional Improvement
Levitation ^{®2}	✓	✓	✓	✓	✓	✓	✓
Uni-Compartment Offloader	✓	✓	✗	✗	✗	✗	✗

THE WORLD'S FIRST TRI-COMPARTMENT UNLOADER™

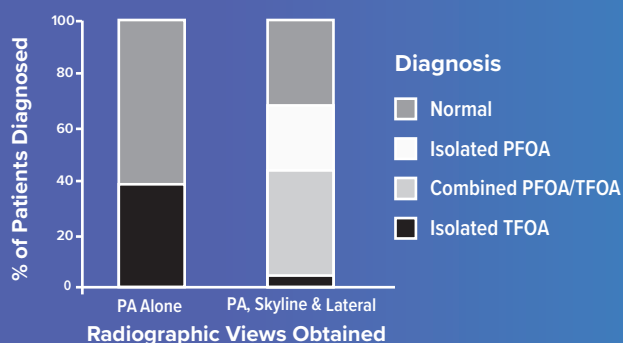
Levitation provides powerful, customizable knee extension assistance and flexion support to unload all three knee compartments simultaneously.

TRI-COMPARTMENT UNLOADING

Weight-loss and joint load reduction are considered best practices in the non-surgical management of knee OA.⁴ Levitation's powerful, customizable knee extension assist provides immediate tri-compartment unloading by reducing the tensile forces placed on the knee joint by the quadriceps.¹ This offers rapid pain reduction and enhanced strength, improving patients' mobility so they can pursue an active lifestyle and rebuild their unassisted natural strength.^{1,2}

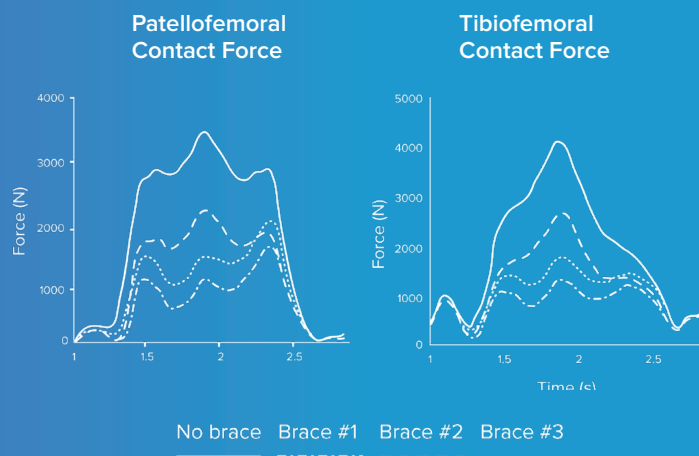
PREVALENCE OF PATELLOFEMORAL OA

Patellofemoral OA (PFOA) is thought to occur at significantly higher rates than previously accepted, having been underdiagnosed due to prevailing radiographic techniques that favor a posterioranterior (PA) view capable of detecting tibiofemoral OA (TFOA), but not PFOA. Research now suggests that isolated unicompartmental TFOA, for which the majority of offloader knee braces are designed, comprises just 3%-20% of knee OA cases.^{6,7} For example, one study examined the diagnostic prevalence and compartmental distribution of radiographic osteoarthritis in adults (>50y) with knee pain when different radiographic views were provided to investigators.⁶ It found that using a combination of skyline, lateral and PA views significantly changes the diagnosed prevalence of knee OA across the patellofemoral and tibiofemoral joints.⁶



LEVITATION JOINT LOAD STUDY

A recent independent study investigated the effect of Levitation during a deep knee bend. It showed a joint load reduction of up to 46%.¹ Braces 1 to 3 represent different force outputs of Levitation. All reductions were statistically significant ($p < .05$).¹ Time is from the start to the end of a deep knee bend.



References

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