



THUASNE



Osteoarthritis **Bracing Solutions**

RebelReliever

Reduce pain and instability while improving walking capacity, muscle function and quality of life. The Rebel Reliever™ is giving patients the solutions they need when it comes to living with Osteoarthritis.

BMI
BERRETTA MEDICAL INC.



Matte Color Options



Black



Grey



White



Red



Atlantic Blue

Satin Color Options



Lemon



Orange



Lime



Fuchsia



Pacific Blue

Rebel Reliever™

PDAC APPROVED L1845/L1852

Reduce pain and instability while improving walking capacity, muscle function and quality of life. The Rebel Reliever's™ custom, custom fit, and OTS sizing, patented LoadShifter mechanism and tool-less SnapLock is giving patients the solutions they need when it comes to living with Osteoarthritis.

Recommended for: *Moderate to severe medial or lateral osteoarthritis / as well as patients who have OA in combination with ligament instability.*

Features

- Rigid aircraft grade aluminum frame
- Patented adjustable dual Loadshifters
- Townsend Motion TM5+ Hinges
- Exclusive Synergistic Suspension Strap
- Rotation control tibial shell contour

Ordering Methods

- OTS sizing
- Custom fit from 3 leg measurements
- Custom from a cast or digital leg scan

Options

- Tibial shell length 6", 7" or 8"
- Compression/Suspension anti-migration package
- Anti-migration strap padding
- PCL strap
- Flexion stop kit (extension stop kit included)
- Powdercoat finish in a variety of colors

Size	M-L Knee Width	6" Above Knee	6" Below Knee	Circumference
SM	3 ½ – 4"	15 ½ – 18 ½"	12 ¼ – 13 ¾"	
MD	4 – 4 ½"	18 ½ – 21"	13 ¼ – 15"	
LG	4 ½ – 5"	21 – 23 ½"	14 ¼ – 15 ¾"	
XL	5 – 5 ½"	23 ½ – 25"	15 – 17"	
2XL	5 ½ – 6"	25 – 28"	17 – 19"	





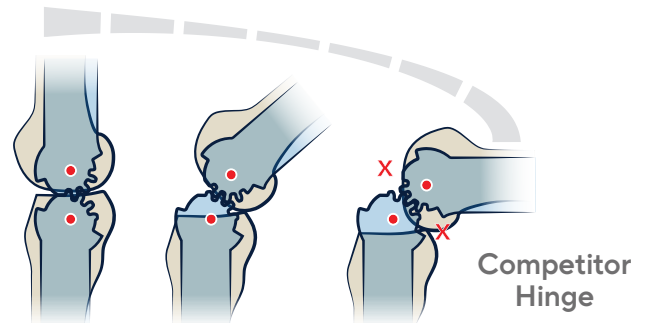
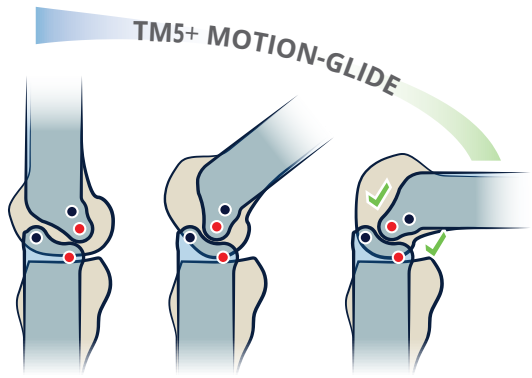
Proven off-loading capacity

Rebel Reliever™ off-loading capacity relies on three factors:

- A simple yet extremely efficient off-loading mechanism that is adjustable to the patient's needs.
- A combination of anti-migration and anti-rotation technologies to provide reliable off-loading, all-day-long.
- Three-measurement fabrication ensures three-point system effectiveness.

Townsend Motion Hinge

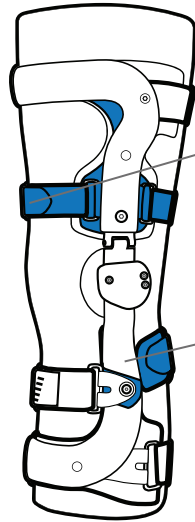
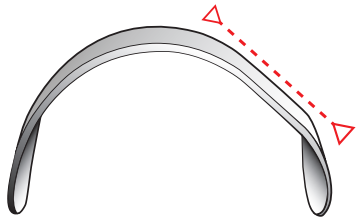
Hinge motion is important: the Townsend Motion Hinge tracks with the anatomical roll-and-glide motion of the knee to keep the brace properly positioned on the leg.





Rotation Control

Rotation control: the Rebel Reliever™ lower shell is contoured to fit intimately along the flatter medial side and rounded lateral side of the shin bone.



Suspension Technology

The C/S package is a pairing of semi-rigid sub-shells that compress into the femoral tissue above the bony condyles.

The Synergistic Suspension Strap nestles into the flexion fold behind the knee, and uses the top of the calf muscles as an anatomical shelf.



Adjustable Correction for OA Braces: LoadShifter

The patented LoadShifter mechanism and tool-less SnapLock are innovative features incorporated into the femoral section of Townsend's Rebel Reliever™, Premier Reliever and Reliever Air rigid OA knee braces. By releasing the SnapLock, the fitter can utilize the LoadShifter to adjust the angle of the thigh shell. Increasing corrective pressure at the top of the leg amplifies the three-point counterforce at the knee and distal end of the brace – improving leg alignment and reducing compressive load on the damaged side of the knee.

Lift



Slide



Lock



Stony Brook University Study

Improved function and strength

Using an off-loading orthosis on the osteoarthritic knee

Improvements in Function and Strength with Decompressive Bracing of the Osteoarthritic Knee. E. Lamberg et al. Journal of Prosthetics and Orthotics. 28(4):173-179, Oct 2016.

Objective

Evaluate, when using Rebel Reliever™ brace, the change of the biomechanics of the knee, its clinical effect and its effect on the function

Scientific Proof It Works

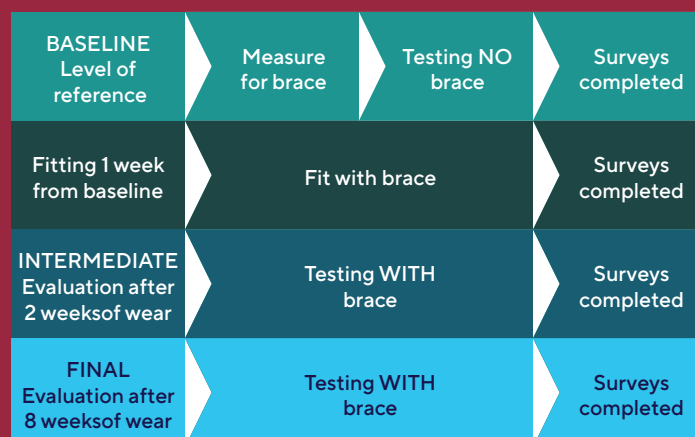
We believe in science, and a recent study by Stony Brook University proves what medical professionals and patients have been telling us for more than a decade. The Rebel Reliever™ is a highly effective OA knee brace – among the most effective ever designed, achieving an amazing average of 36% reduction in loading forces!

It also demonstrated a variety of additional benefits that occur when patients feel better and become more active.

Conclusion

- ↓ Reduced forces on the knee joint
- ↓ Reduced pain
- ↓ Reduced symptoms
- ↑ Improved balance confidence
- ↑ Improved quality of life
- ↑ Improved ADL participation
- ↑ Improved walking capacity
- ↑ Improved muscle function

Study Design



Surveys

- Knee injury and OA Outcome Score (KOOS)
- Activity Balance Confidence Scale (ABC)

Population		n = 15
Mean age (years)		55 (39 - 70)
Gender		12 men/3 women
Mean BMI (kg/m ²)		35 (24 - 49)
Kellgren-Laurence grade (%)	Grade II	20 %
	Grade III	67 %
	Grade IV	13 %

Tests



6 minute walk test



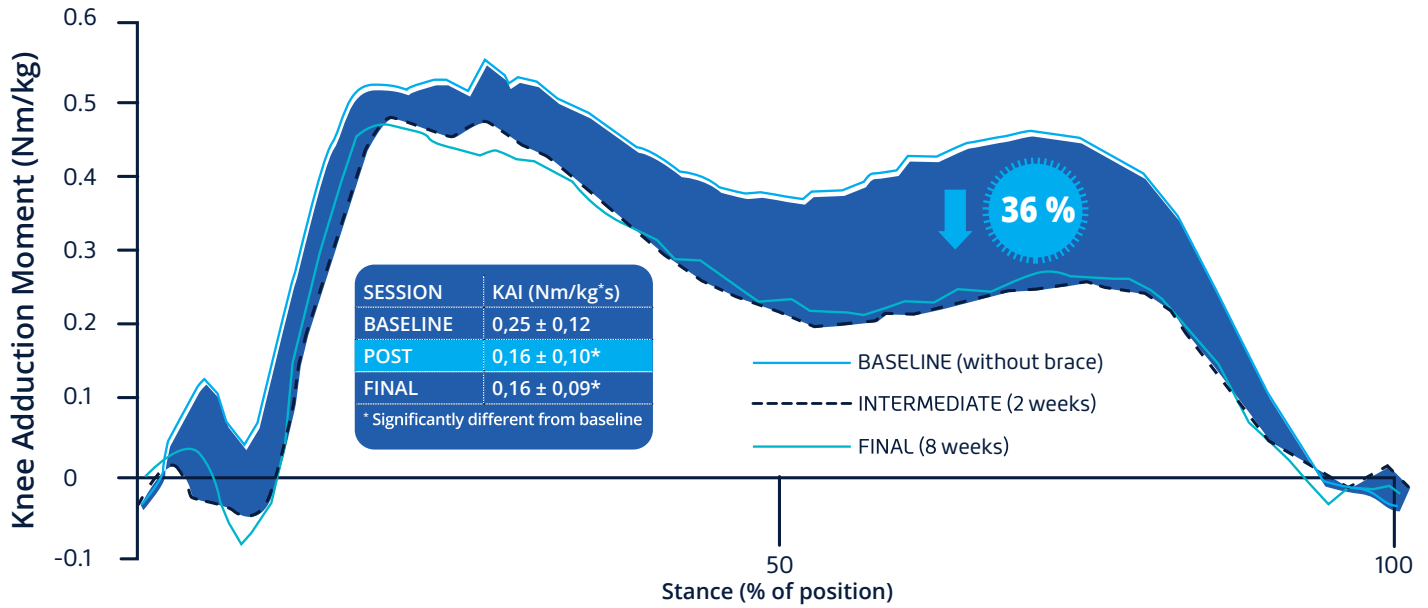
Instrumented gait analysis



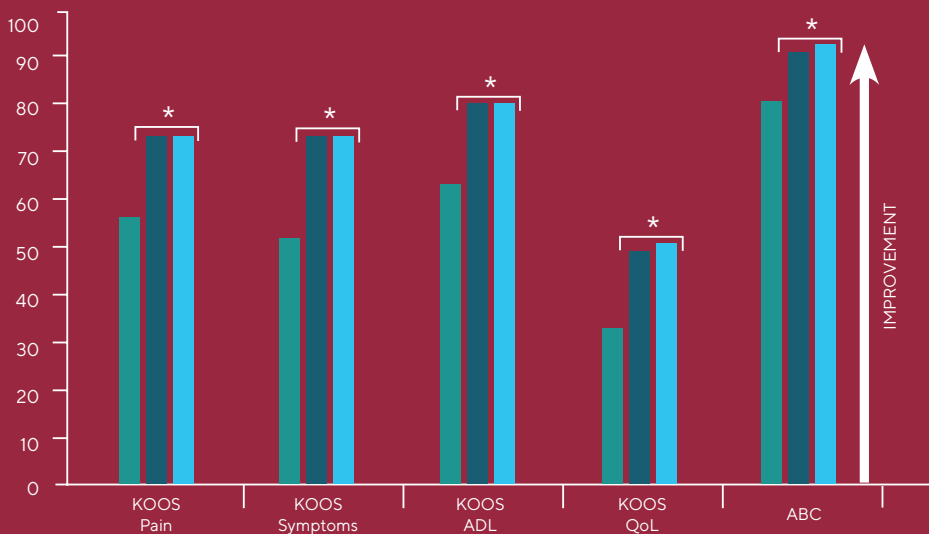
Isokinetic strength test

Moment of adduction of the knee (Nm/kg)

Patients averaged 36% reduction of force through the knee with every step



Survey results



Reduced pain and symptoms; quality of life and balance improved

Legend:
 ■ BASELINE (without brace)
 ■ INTERMEDIATE (2 weeks)
 ■ FINAL (8 weeks)

* Significantly different from baseline

ROTOR Randomize Clinical Trial

Efficiency and safety of the Rebel Reliever™

In patients with knee osteoarthritis

Effect of unloading brace treatment on pain and function in patients with symptomatic knee osteoarthritis: the ROTOR randomized clinical trial. Thoumie P, et al, Scientific Report (2018) 8:10519.

Objective

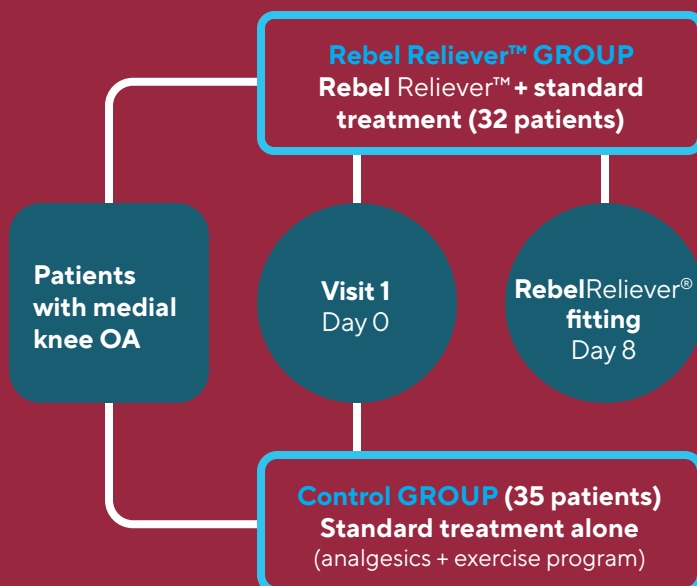
Evaluate the efficacy of the Rebel Reliever™ knee brace in combination with standard treatment after a 6-week treatment period, in patients with symptomatic medial knee osteoarthritis

Population	RebelReliever® (n = 32)	Control (n = 35)
Mean age (years)	64.8 ± 11.7	66.6 ± 7.2
Female (%)	75	57.1
Mean BMI (kg/m ²)	29.2 ± 4.4	28.1 ± 5.1
Mean OA Duration (years)	8.4 ± 6.8	8.9 ± 7.4
Kellgren-Laurence Grade (%)		
Grade II	31.2	20.0
Grade III	46.9	62.9
Grade IV	21.9	17.1

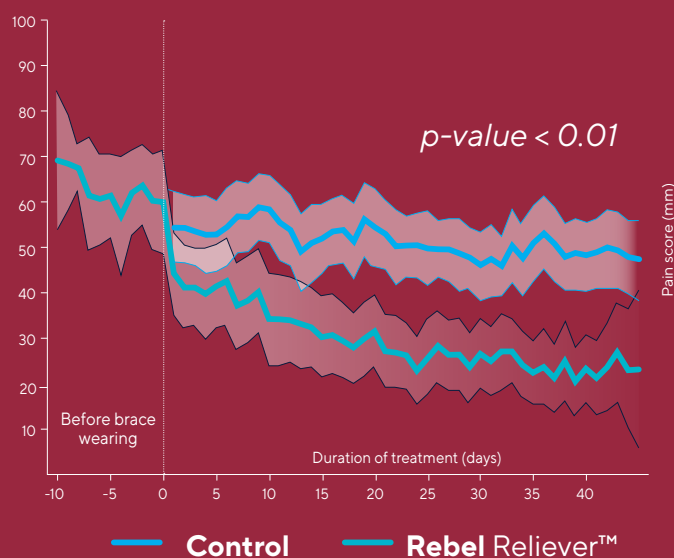
Conclusion

Superiority of Rebel Reliever™ knee brace plus standard treatment vs standard treatment alone was demonstrated. Combining Rebel Reliever™ knee brace with standard treatment procures a significant advantage to patients and constitutes a powerful non-pharmacological therapeutic strategy to handle knee osteoarthritis.

Study Design



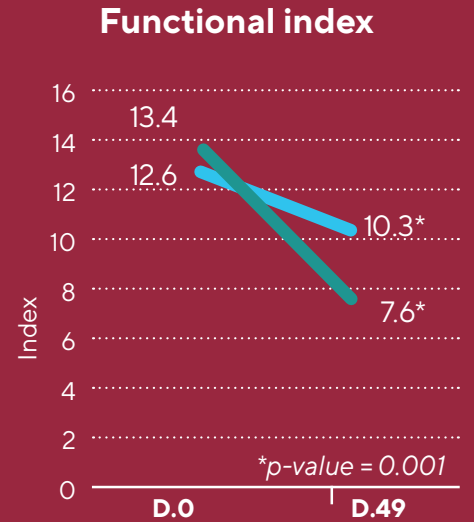
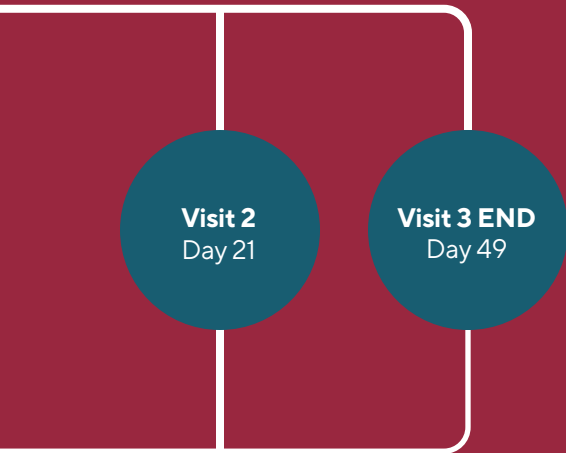
Results



The Rebel Reliever™ knee brace significantly reduces pain immediately and for a sustainable time

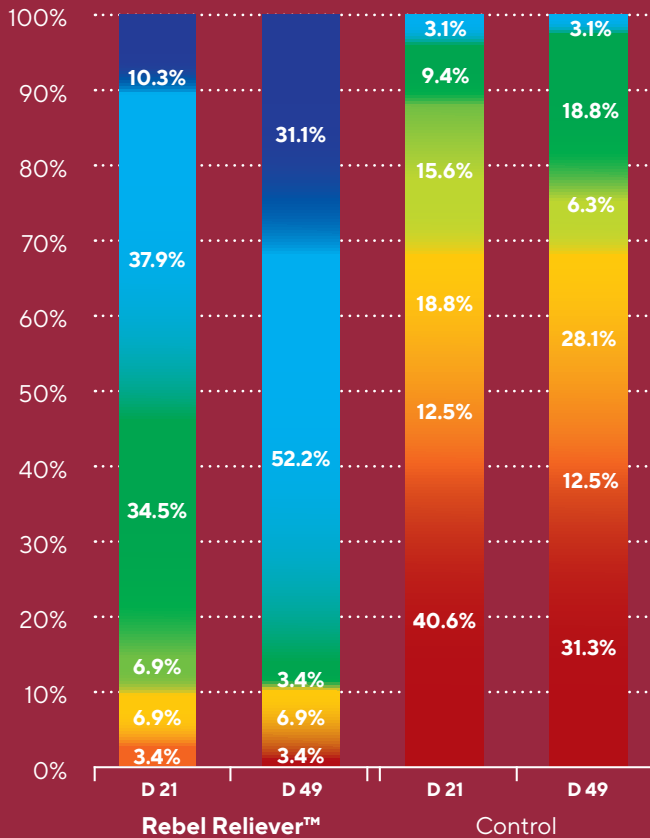
Rebel Reliever™ knee brace improves function

Rebel Reliever™ brace also reduces pain when in movement



Control Rebel Reliever™

Patient clinical global impression of change



More than 80% of patients feel a **definite and considerable improvement** of their condition with **Rebel Reliever™** brace by the end of the trial

- A great deal better and a considerable improvement that has made all the difference
- Better and a definite improvement that has made a real and worthwhile difference
- Moderately better, and a slight but noticeable change
- Somewhat better, but the change has not made any real difference
- A little better, but no noticeable change
- Almost the same, hardly any change at all
- No change (or condition has gotten worse)

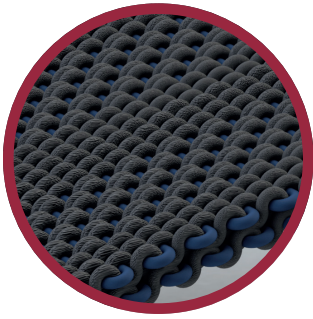
ActionReliever

PDAC APPROVED L1843/ L1851

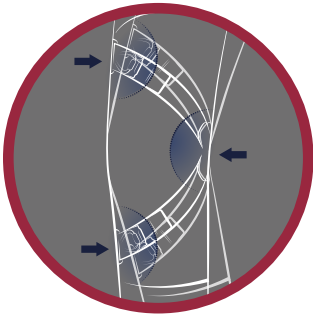


Magnetic buckles for easy self-connect

Features



Inflammation-reducing
compression



Three-point strapping system
relieves pain and increases
mobility.



Semi-rigid distal and proximal
shells that can be formed or
trimmed to match anatomy
**Removeable*

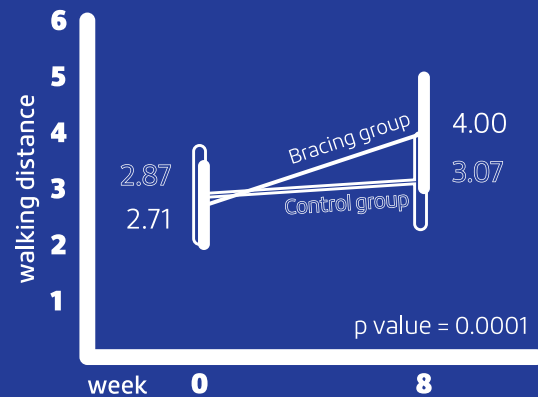
Sizes

Size	6" Above Knee	6" Below Knee	Circumference
1	15 — 16 ¼"	11 — 12 ¼"	
2	16 ¼ — 17 ¾"	12 ¼ — 13 ¾"	
3	17 ¾ — 19"	13 ¾ — 15"	
4	19 — 20 ½"	15 — 16 ½"	
5	20 — 21 ½"	16 ½ — 17 ½"	
6	21 — 22 ½"	17 ½ — 18 ½"	
7	22 — 24"	18 ½ — 20"	
8	24 — 26 ½"	20 — 21 ¼"	

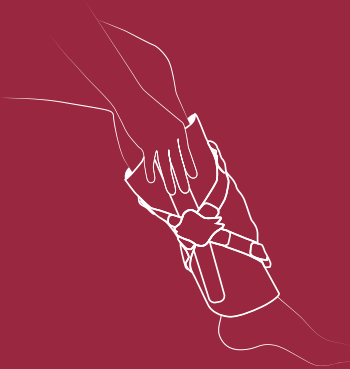
Clinically Proven Pain Reduction

By wearing the brace, the pain on exertion was
reduced and the pain-free distance extended.

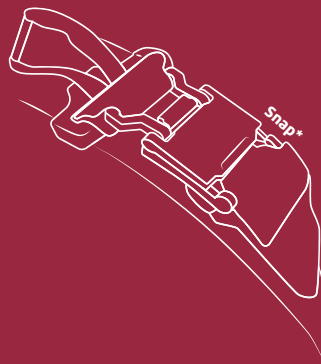
*Dr M. Benning, CTR, Version 1 ; 31-03-2017. Prospective randomized comparative
study to demonstrate the medical benefits and ease of use during practical
application of: Thuasne Action Reliever.*



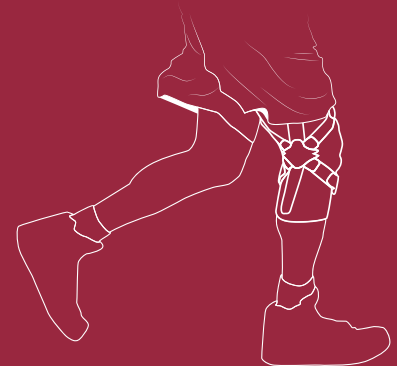
Magnetic buckles for an easy apply and go.



Slide



Snap



Go

Additional Osteoarthritis Solutions From Thuasne USA



Rebel Reliever
L1845/L1852



RelieverOne
L1843/1851



UniReliever
L1843/185



Reliever
L1846



Reliever Air
L1846



Reliever Air Lite
L1846



Premier Reliever
L1846



PR1
L1844



Dynamic Reliever
L1843/1851



Action Reliever
L1843/1851