



Restoring Balance in Motion Preservation

Synergy Disc™ - Restoring Balance in Motion Preservation

Alignment Matters

The Synergy Disc is the first artificial disc that has been designed to restore physiological motion and correct sagittal balance. Innovations such as a unique lordotic core geometry, acute fixation methods, safety stops, and improved multi-level implant stability offer benefits over existing disc replacements. The robust implant design and simple surgical steps allow for predictable and reliable results. Synergy Disc is the first to provide a physiological center of rotation (COR) in flexion and extension, as well as lateral bending and axial rotation.

The Synergy disc is differentiated by its 6° preferred lordotic orientation, designed specifically for its unique ability to correct preoperative deformity and/or maintain cervical lordosis.¹

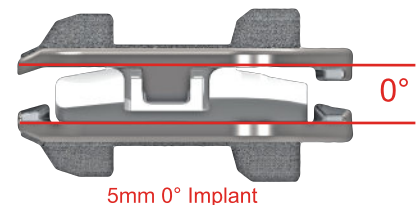


3 key features

- Prevent Postoperative Kyphosis with 6° Implant Design
- Corrects (6° per level) reducible focal kyphosis
- Optimized for multilevel stability

Endplate Design²

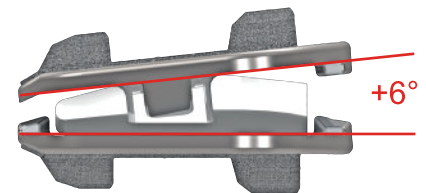
Material: Titanium Plasma Spray
Fixation: Hybrid of teeth and keels
Technique: Keel cuts optional



5mm 0° Implant

Core Design²

Material: UHMWPE
Angle: 0° or 6°
Heights: Variable

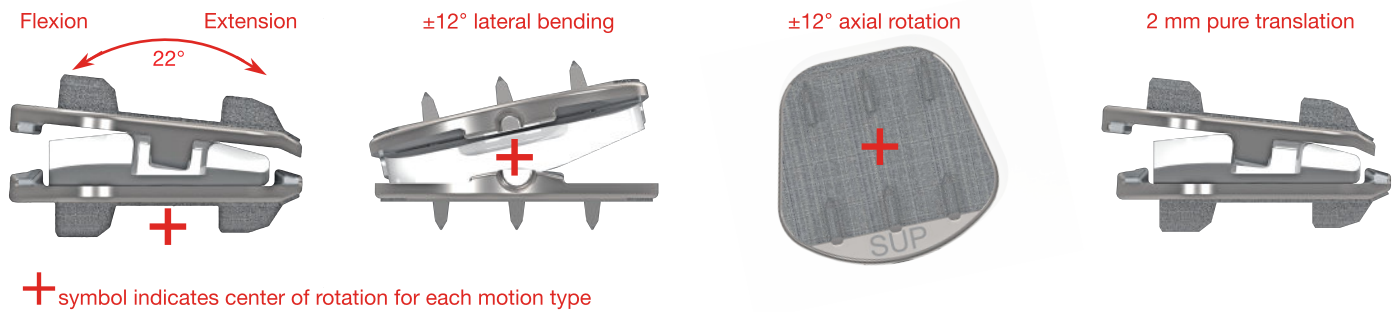


5mm 6° Implant

The Synergy Disc introduces deformity correction while maintaining a full range of motion (ROM). The polyethylene core incorporates varying degrees of lordotic correction.

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Motion Preservation



Neutral

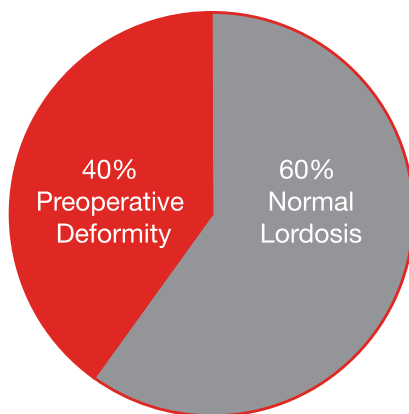


Extension



Flexion

24 month Results: ROM = 13.1°, Neutral Angle = 6.7°
Motion + Alignment = Great Outcomes



Address 100% of the Patients

The Synergy Disc™ is the first disc address 100% of patients - patients with normal lordosis **AND** preoperative deformity.

Benefits of the Synergy Disc™

Clinical:

- Prevents Neck Pain
- Corrects Deformity
- Provides Multi-Level Stability

Surgical:

- Simplified Technique
- Flexible Positioning
- Prevents Postoperative Complications

Design:

- Novel Geometry
- Industry Leading Wear
- Physiological Motion

Safety:

- Semi-constrained design
- Proven materials
- Controlled motion stops

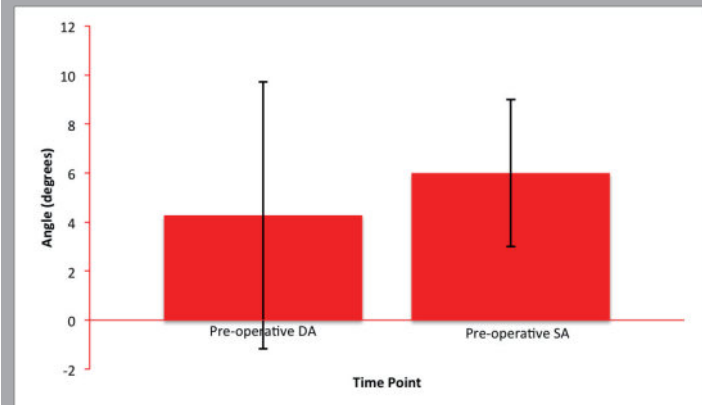
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Implant Catalog

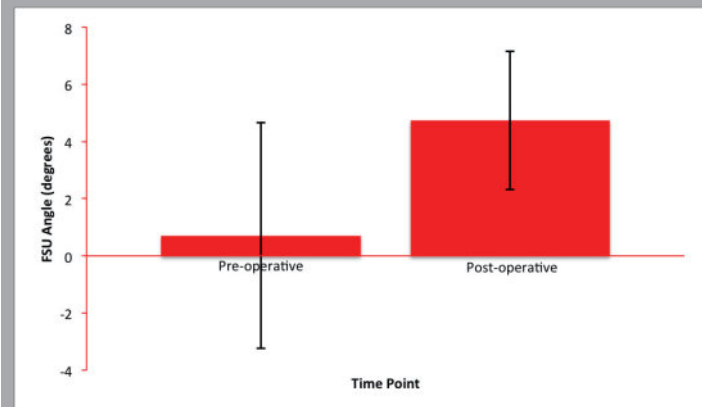
The Synergy Disc™ implant is offered in three footprint sizes, two heights, and two corrective lordotic angles to accommodate varying patient needs and maintain postural stability.

Footprint	Height (center of implant)	Lordotic correction angle
Small AP: 14 mm Lateral: 15 mm	5 mm	0°
		6°
	6 mm	0°
		6°
Medium AP: 16 mm Lateral: 17 mm	5 mm	0°
		6°
	6 mm	0°
		6°
Large AP: 18 mm Lateral: 19 mm	5 mm	0°
		6°
	6 mm	0°
		6°

Comparison of Lordotic Correction between Synergy Disc™ and Cervical Fusion



The mean pre-operative disc angle (DA) was $4.28 \pm 5.45^\circ$. At mean of 18 months with all Synergy patients having a minimum of one year follow-up, the average shell angle (SA) of the Synergy Disc was maintained at $6 \pm 3^\circ$ of lordosis. The lordosis at the index level increased significantly $p=0.007$. Pre-operative range of motion (ROM), translation and center of rotation (COR) X did not change significantly following surgery. There was a significant superior shift in the COR Y. Error bars represent standard deviation³.



In the anterior cervical discectomy and fusion group, the pre-operative functional spinal unit (FSU) angle measurement at the index level was $0.71 \pm 3.95^\circ$. Following surgery, the FSU angle increased to $4.74 \pm 2.42^\circ$, representing a significant increase in lordosis at the surgical level, $p<0.05$. Error bars represent standard deviation³.



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- 1 Bruno Lazaro et al.: Effect of arthroplasty design on cervical spine kinematics: analysis of the Bryan Disc, ProDisc-C, and Synergy Disc; In: Neurosurg Focus 28 (6):E6, 2010; DOI: 10.3171/2010.3.FOCUS 1058
- 2 Neil R. Crawford et al.: Biomechanics of a posture-controlling cervical artificial disc: mechanical, in vitro, and finite-element analysis; In: Neurosurg Focus 28 (6):E11, 2010; DOI: 10.3171/2010.3.FOCUS 1063
- 3 Yucesoy et al.: Early outcomes with the Deformity Correcting Synergy Disc Replacement; Poster: 340 at ISASS 2013

This product is not cleared by the FDA for distribution in the United States.

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