

The Material Difference

OPTETRAK[®]
LOGIC

Net Compression
Molded Polyethylene





Total knee replacement longevity is a function of excellent design and proven materials. The Optetrak[®] knee systems' articular geometry design and proprietary net compression molded (NCM) polyethylene inserts are designed to minimize surface damage and wear, ultimately improving the longevity of the knee prosthesis. Exactech's unique approach to polyethylene has proven success in balancing the insert's properties to achieve optimized kinematics and wear characteristics with a long lineage of superior clinical results¹ – all without the need for post-consolidation treatments.

KEY FEATURES

- Net compression molding process is designed to yield the most consistent consolidation resulting in uniform material properties and oxidation resistance.
- Articular surface of the insert is never machined, creating a smooth finish free of articular surface machine lines.¹
- NCM inserts demonstrate excellent wear characteristics through *in vivo* studies² without requiring the need for post-consolidation treatments.
- Maintain fracture toughness by sterilizing in a vacuum package with gamma irradiation at 2.5-4 Mrad.³
- Femoral/tibial congruency reduces contact stress and topside polyethylene wear.⁴
- Three-part tibial locking mechanism reduces insert motion and disassociation, eliminating backside wear.⁵⁻⁶

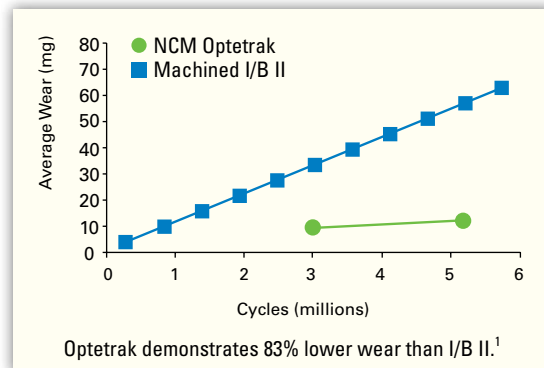


Figure 1: Low Wear Rates

Extensive testing and clinical results demonstrate Optetrak's continued success in balancing the design and material properties to achieve superior results. Optetrak has documented volumetric wear of 1.46 mg/MC.¹ This is approximately six times less wear achieved without manipulating the properties of the clinically proven NCM polyethylene (*Figure 1*).¹

REFERENCES

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