smith&nephew

Leading orthopaedics through innovation

A new generation

As the hip osteoarthritis patient base reflects a younger and more active individual, treatment options are needed for this more demanding patient. Traditional Total hip arthroplasty has resulted in reduced success rates for patients under the age of 55 (Swedish hip study, 2000). The BIRMINGHAM HIP® Resurfacing System is a bone-conserving, clinically proven option. With its innovative design, the largest hip resurfacing patient population and a success rate that is second to none, the BIRMINGHAM HIP Resurfacing System is the solution for the new generation of hip patients.

The case for hip resurfacing

- Minimized bone resection
- Restores preoperative anatomy
  - Offset
  - Leg length
  - Version
- Near normal femoral loading
- Minimized risk of dislocation
- If required, ease of revision

BIRMINGHAM HIP Resurfacing System statistics

- 98.4% survival rate[5]
- 8+ years of clinical history
- 50,000+ implants sold
- Used in 26 countries

Design advantages of the BIRMINGHAM HIP Resurfacing System

The BIRMINGHAM HIP Resurfacing System now has over eight years of clinical history and utilizes an as-cast cobalt chrome metal on metal bearing with a highly polished finish designed with an optimal clearance and greater wear resistance. This as-cast manufacturing technique eliminates the carbide depletion caused by Hot Isostatic Pressing (HIP) and Solution Heat Treatment (SHT) commonly employed by other manufacturers.

Survivorship data

Author	Site	n	Survival	Follow Up (months)
Shimmin *et al* [1]	Melbourne	231	99.14%	33 (25–52)
Ebied *et al* [2]	Liverpool	100	99.00%	17 (mean)
De Smet *et al* [3]	Ghent	200	99.50%	6–42
Treacy *et al* [4]	Birmingham	144	98.00%	60 (minimum)
McMinn *et al* [5]	Birmingham	1,626	98.40%	60 (minimum)

1. Back DL, Dalziel R, Young D, Shimmin A. Early results of primary Birmingham hip resurfacings. An independent prospective study of the first 230 hips. J Bone Joint Surg BR (2005 Mar) 87(3):324-9.
2. Ebied A, Journeaux SF, Popee JA. Hip Resurfacing Arthroplasty: The Liverpool Experience. International Conference Engineers & Surgeons - Joined at the Hip. (Jun 2002) 1.
3. De Smet KA, Pattyn C, Verdonk R. Early results of primary Birmingham hip resurfacing using a hybrid metal-on-metal couple. Hip International (2002)12:2:158-162.
4. Treacy RB, McBryde CW, Pynsent PB. Birmingham hip resurfacing arthroplasty. A minimum follow-up of five years. J Bone Joint Surg Br (2005 Feb) 87(2):167-70.
5. FDA Review Memo, Page 59.

The BIRMINGHAM HIP◇ Resurfacing System gives a new generation of hip patients the chance to return to an active lifestyle. This system is just one of the hundreds of innovative products from Smith & Nephew that have helped surgeons meet the changing needs of their patients.

OXINIUM®
Oxidized Zirconium

OXINIUM Oxidized Zirconium is a proprietary material developed by Smith & Nephew. A metallic alloy with a ceramic surface, OXINIUM material, in combination with REFLECTION® XLPE liners, provides the superior wear performance of a hard on hard articulation (metal on metal or ceramic on ceramic) with the reconstruction options usually associated only with standard bearings.* With an average of 60 combinations for every cup size, OXINIUM technology and XLPE liners limit wear, not options. The diverse range of neck length, liner and sizing options available in OXINIUM femoral heads aids surgeons in minimizing leg length discrepancies and dislocations.

Less wear.
More options.

*In lab testing

History of innovation

1956	1983	1986
RICHARDS® Adjustable Hip Screw	SPECTRON® Hip System	ILIZAROV™ External Fixator and RUSSELL-TAYLOR® Nail
First compression hip screw.	Superior range of motion through circulotrapezoidal neck design.	External fixation system and nail introduced.

JOURNEY°

Bi-Cruciate Stabilized
Knee System

The JOURNEY Bi-Cruciate Stabilized Knee System is the first knee system designed to restore normal knee kinematics. Based on optimized anatomic shapes, the JOURNEY knee system offers surgeons a system that addresses paradoxical motion, lateral pivot and anterior instability in early gait. For patients, it offers a knee that really can feel 'normal' again.

Designed by nature.
Shaped by technology.

1987	1992	1994
GENESIS° Knee System	REFLECTION° Acetabular Cup	OXINIUM° Oxidized Zirconium
First comprehensive modular knee system.	First highly polished acetabular shell designed to reduce backside wear.	First advanced bearing material designed specifically to address the needs of high-demand patients.

AchieveCAS®

Computer Assisted Surgery

The AchieveCAS system provides precise, real-time navigation information on knee and hip arthroplasty. Streamlined in look and function, the AchieveCAS system sets a new standard for simplicity and power in orthopaedic navigation.

Turn it on.

	1997	1997	2001
	BIRMINGHAM HIP® Resurfacing System	SYNERGY® Primary Hip System	REFLECTION® XLPE Liners
	World leader in hip resurfacing.	Efficient, reproducible system approach.	First highly cross-linked polyethylene specifically engineered to reduce the number of polyethylene particles.

Minimally Invasive Innovations Surgical Approach

Achieve simple, successful surgery and reproducible results with the Minimally Invasive Innovations program from Smith & Nephew. With advanced implants, easy-to-use instrumentation and exclusive materials, Smith & Nephew continues to revolutionize the orthopaedic industry. Together with ongoing advanced training for surgeons, Smith & Nephew leads the way in orthopaedics.

Advanced surgical simplicity

	2005	2006	
	AchieveCAS® Computer Assissted Surgery First company to offer a complete CAS solution (hip and knee).	JOURNEY® Bi-Cruciate Stabilized Knee System First knee system to restore normal knee kinematics.	www.smith-nephewinnovations.com

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