Total Cemented Hip

Charnley in the 21st Century
Modularity

Restoration of natural joint function
The Charnley®, Modular stem features a 9/10 taper which accepts 22.225 mm (-3, +0, +3), 26 mm (-3, +0, +3), 28 mm (-3, +0, +3, +6), 32 mm (-3, +0, +3) and 36 mm (-3, +0, +3) diameter femoral heads. This provides the surgeon with a wide range of head diameters and flexibility. The opportunity to select the most appropriate extramedullary geometry for each patient assures accurate restoration of natural joint function.

Reduced wear with ceramic heads
Wear debris represents one of the major causes of early implant failure. Adverse reactions to polyethylene wear particles generated at the bearing surface by scratched or worn metal heads, and which subsequently penetrate the tissues surrounding an implant, can lead to osteolysis, pain and loosening.

Ceramic offers a significantly harder surface that is less easily damaged in vivo, and which can be given a far smoother finish.

This improvement is retained for the life of the implant. Even when scratched, unlike metal heads, a ceramic head retains its smooth outer surface and causes less damage to the polyethylene socket.

Clinical Evidence

Low-friction arthroplasty of the hip using alumina ceramic and cross-linked polyethylene.

A Ten Year Follow-up Report
BM Wroblewski, PD Siney, PA Fleming.
From Wrightington Hospital, Wigan, England.

In this paper Professor Wroblewski reports the results of 14 hip arthroplasties from 12 patients using a ceramic head with cross-linked polyethylene.

RESULTS

- NO REVISION

- WEAR: Mean penetration rate (mm/year)
  First 2 years 0.22 mm/year
  Year 3 onwards 0.02 mm/year

“There is little doubt that reducing rates of wear by the use of a ceramic polyethylene combination is the next stage of evolution of the Charnley LFA.”
Total Hybrid Hip

Charnley in the 21st Century
Alternate Bearing Options

Reduced Wear with Advanced Bearing Technology

Ceramax™ Ceramic inserts are made of an innovative composite ceramic material, designed to combine superior wear properties with improved material strength and toughness.

Ultamet™ Metal-on-Metal Bearings offer excellent range of motion and are optimised to minimise the generation of wear debris.

Developed from long-term clinical experience using proven polymer technology, Marathon™ polyethylene has consistently shown to produce an 86% reduction in wear. This takes the rate of wear significantly below the threshold above which osteolysis is likely to occur.7

Large Diameter Heads

A wide range of heads from 22.225 mm, 28 mm, 32 mm and 36 mm in Biolox® Delta and 28 mm and 36 mm in Ultamet™ can be used with the Pinnacle™ Acetabular Cup System.

Minimal risk of dislocation

The thin high strength forged titanium Pinnacle™ cup design offers a large inner diameter, making it possible to insert large diameter heads of 36 mm with all bearing materials. This permits correct soft tissue tension to minimise the risk of dislocation.

Improving range of motion substantially

The use of a large diameter head with the Charnley® Modular neck increases the head to neck size ratio resulting in a significant improvement in the range of motion.