EXCEEDING THE HIGHEST STANDARDS YOURS.

DePuy Synthes  
PART OF THE johnson&johnson FAMILY OF COMPANIES

Hip & Femur Fracture Solutions
We’re hip & femur fracture specialists - providing the broadest portfolio of best in class products and services, unparalleled expertise, and the most expansive resources in the industry. You never know what your next patient may require; that’s why you trust us to support everything you might need.
TFN-ADVANCED™ PROXIMAL FEMORAL NAILING SYSTEM (TFNA)

The TFNA system is designed to advance hip fracture treatment with surgical options to enhance implant stability in poor bone and improved fit and strength. It incorporates the best elements of our highly successful global hip nails, optimized through input from hundreds of surgeons around the world. The TFNA System truly is a global platform that delivers modern innovation.

**IMPROVED FIT AND STRENGTH**

**LATERAL RELIEF CUT™ & SMALL PROXIMAL DIAMETER**
Preserves bone in insertion area due to reduced critical width.

**TFNA Helical Blade**
**TFNA Screw**

**HELICAL BLADE TECHNOLOGY**
Designed to improve implant anchorage, provide greater rotational stability and provide greater resistance to superior load when compared to a screw.9

**PREASSEMBLED LOCKING MECHANISM**
Static or rotational locking options that can be selected intraoperatively.

**FATIGUE LIMIT STUDY**

![Fatigue Limit Study](image)

**24% DIFFERENCE**
**47% DIFFERENCE**

**TIMo TITANIUM ALLOY & BUMP CUT DESIGN**
Provides improved fatigue strength when compared with existing nails of similar size.2

**ANATOMIC 1.0M RADIUS OF CURVATURE**
Mean total surface area of nail protrusion is 29% less than Gamma3.3

**AUGMENTABLE HEAD ELEMENTS**
Through extensive bench testing, augmentation has demonstrated its ability to increase resistance to head element migration.4,5 Since 2010, three European multicenter trials with over 150 patients have published reporting no incidences of revision, unexpected head element migration or related complications.4,4

**UP TO 346% INCREASE IN CUT-OUT RESISTANCE**
Compared to constructs with non-augmented head elements.1

**UP TO 244% INCREASE IN RESISTANCE TO CUT-OUT**

See pages 14 & 15 for information on the Hip Fracture Program.
FEMORAL NECK SYSTEM (FNS)

The Femoral Neck System (FNS) is designed for improved angular stability\(^9\) and rotational stability\(^9\) with the intent to reduce reoperations related to fixation complications.

ENHANCED FIXATION IN A COMPACT DESIGN

ROTATIONAL CONTROL

The FNS has up to a 40% increase in rotational stability when compared to a Sliding Hip Screw system\(^14\).

GUIDED COLLAPSE

With a compact design, FNS is intended to minimize invasiveness on the patient including up to 20mm of guided collapse, without lateral protrusion of the bolt for the first 15mm.

ANGULAR STABILITY

A published biomechanical study shows that FNS offers 100% more resistance to varus collapse (leg/neck shortening) when compared to multiple cannulated screws\(^1\).

HIP REPLACEMENT OPTIONS

Hemi Hip Arthroplasty

CORAIL\(^\circledR\) Hip System\(^*\) with Self-Centering Endo Heads

The CORAIL\(^\circledR\) Cementless Hip System is part of the CORAIL family of products. In a publication by Kendrick et. al., using a modern uncemented hip implant in a hemi-arthroplasty for intracapsular hip fracture provided satisfactory results, with a good rate of return to pre-injury place of residence and an acceptable mortality rate.\(^1\).

Total Hip Arthroplasty

CORAIL\(^\circledR\) Hip System with PINNACLE\(^\circledR\) Acetabular Cup System

The CORAIL\(^\circledR\) Hip System with a PINNACLE\(^\circledR\) Cup is one of the most widely used total hip constructs in the world. In 2017, the CORAIL Stem achieved over 2 million unit sales worldwide and the PINNACLE Cup reached over 2.5 million unit sales worldwide since their introduction.\(^13,14\).

\(^*\)CAUTION: CORAIL Dysplasia Size 6 Stem and CORAIL Cemented Stems are contraindicated for hemiarthroplasty surgery.
FEMORAL RECON NAIL (FRN)

With the introduction of the Femoral Recon Nail, DePuy Synthes offers a portfolio with the choice of most used entry points. The FRN System offers the choice of Piriformis Fossa (PF) or Greater Trochanter (GT) entry points and extensive locking options to accommodate varying surgical preferences while enabling the treatment of a range of fracture complexity. FRN was designed for anatomical fit with a 1.0m radius of curvature and short proximal nail end to better fit patient anatomy.

ANATOMICAL FIT

LOWER PROXIMAL NAIL PROMINENCE
Short proximal nail end designed to reduce risk of nail prominence compared to nails with a longer nail end (i.e. Zimmer PF).

ANATOMIC 1.0M RADIUS OF CURVATURE (ROC)
1.0m anatomic bow designed to help avoid impinging anterior cortex compared to nails with larger radius of curvature.

EXTENSIVE LOCKING OPTIONS

PROXIMAL LOCKING
Choice of standard locking, reconstruction locking or combined with proximal dynamization option.

DISTAL LOCKING
Four locking options including:
- An A/P hole
- Distal dynamization option
- An oblique distal locking hole offset 10 degrees

CHOICE OF ENTRY POINTS

GREATER TROCHANTER OR PIRIFORMIS FOSSA
Accommodates surgeon preference.

Simulated competitor nail with 1.5m ROC
FRN with 1.0m ROC
Simulated Zimmer PF
DePuy Synthes PF Femoral Recon Nail
3.5MM LOCKING ATTACHMENT PLATE

As an alternative to cerclage cables, the 3.5mm Locking Attachment Plate (LAP) preserves the periosteal blood supply and bypasses a prosthesis stem with an angular stable solution.\(^\text{18,19}\)

**PROVIDES STIFF, BICORTICAL FIXATION FOR INCREASED ROTATIONAL STABILITY**
- LAP provides a stronger, stiffer construct than an orthopedic cable\(^\text{20}\)
- Locking capability advantageous in osteopenic bone where screw purchase is compromised
- Contourable to accommodate patient’s anatomy

**COMPATIBLE WITH EXISTING DEPUY SYNTHESES 4.5MM LCP PLATES INCLUDING VA-LCP PLATES**
- Attaches to plate via a dedicated connection screw at the locking hole of the plate
- Available in 4-hole and 8-hole, in stainless steel and titanium

ORTHOPAEDIC CABLE SOLUTIONS

Comprehensive surgical options for cerclage fixation in joint reconstruction and trauma procedures

**CABLES FEATURE A UNIQUE WEAVE DESIGN TO ALLOW FOR GREATER FLEXIBILITY AND CONTROL**
1.7 mm diameter, available in 316L stainless steel with stainless steel crimp and L605 cobalt chromium alloy with titanium crimp

**TROCHANTERIC REATTACHMENT DEVICE OPTION**
For reattachment of the greater trochanter following osteotomy in total hip arthroplasty or fracture
- Large proximal hooks grip the greater trochanter, securing its location while resisting superiorly directed forces
- Preassembled with 1.7 mm CoCr cables and titanium crimps
- Crimps reside in plate for easy access, handling, and cable alignment
- Available in TAN and in two lengths

Cable Positioning Pins
secures cable to the plate and prevents cable migration
REAMER IRRIGATOR ASPIRATOR (RIA)

RIA is a proprietary single-pass reaming and a bone harvesting system designed to reduce fat embolism and thermal necrosis that can occur during reaming/nailing of long-bone fractures.

LOW PAIN SCORE

- Reduced complication rates compared to iliac crest bone graft (ICBG) harvesting\(^1\)
- Reported lower mean pain scores for RIA donor sites when compared to ICBG donor sites across 60 weeks\(^2\)\(^3\)

IMPROVED SAFETY

- Demonstrated to reduce heterotopic ossification, fat embolization, pulmonary insult and thermal necrosis compared to standard reaming\(^2\)\(^3\)\(^4\)\(^5\)

CLEARS CANAL

Removes infected and necrotic bone tissue.

FAST, EFFICIENT REAMING

- Time saving, one-step procedure\(^2\)
- Sharp reamer heads for optimized cutting

AUTOGRAFT RECOVERY

- Provide an efficient method for obtaining large volumes of autologous bone graft\(^6\)
- Produce bone graft with high concentration of viable cells and growth factors\(^2\)\(^7\)\(^8\)
CareAdvantage

Our approach to partnering with hospitals and healthcare providers in order to achieve the Triple Aim of enhancing patient experiences and improving outcomes, while reducing costs.

Solving starts with listening.

Our Patient Pathway capabilities are built with the patient at the centre to help ensure patients receive consistent, coordinated care, whilst supporting patients to take control of their own treatment and recovery.

Care4Today® Hip Fracture Program

An evidence-based care improvement program for the elderly fragility fracture patient population that facilitates interdisciplinary care coordination and clinical standarization to reduce variation and costs, improve outcomes and optimize care.33,34

Program Components

- Implementation Support & Facilitation by clinical subject matter experts
- Implementation Toolbox includes best practice materials to guide through implementation
- On-site opportunity assessment includes interviews with multi-disciplinary key stakeholders
- Performance Dashboard and Diagnostic Health Check to track data, visualize progress and benchmark

Delivering Results

Demonstrated measurable results at the OLVG Hospital in Amsterdam

Optimization of processes for fragility hip fractures that supports a coordinated interdisciplinary care pathway, potentially resulting in enhanced clinical outcomes and patient experiences, while reducing costs.

Length of stay reduced from 9 to 7 days35

Significant reduction in costs for the hospital of €252,000/year35

Geriatrician support for elderly patients increased from 44% to 92%35