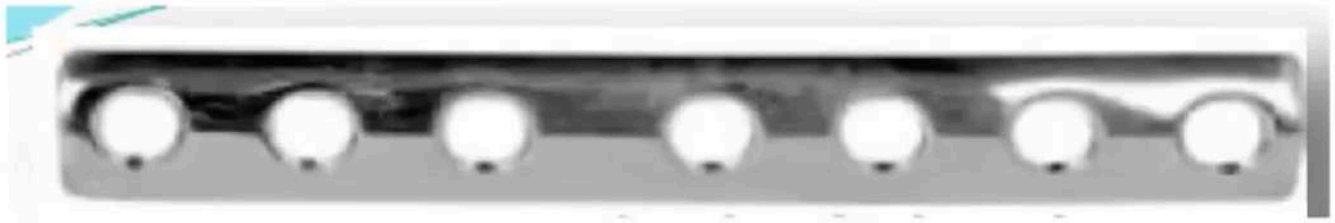
Identify the plate

1. 1/3 TUBULAR PLATE 3.5 MM
2. SEMI TUBULAR PLATE 3.5MM
3. RECON PLATE
4. DCP

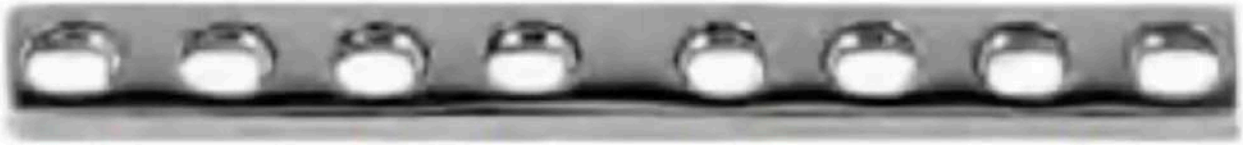


One third tubular plate

1. LCDCP
2. LCP
3. DCP
4. RECON PLATE

Small dcp

1.DCP
2.LCP
3.RECON PLATE
4.HOOK PLATE



Small LcDCP

1. LCDCP
2. LCP
3. DCP
4. RECON PLATE

3.5mm calcaneum plate

1. CALCANEUM PLATE
2. Y RECON PLATE
3. POST TIBIAL BUTRESS PLATE
4. ILIUM PLATE

Y recon plate

1.RECON PLATE
2. Y RECON PLATE
3. DISTAL HUMEROUS PLATE
4. ANTERIOR ANKLE PLATE

Lecestre plate

1. LECESTRE PLATE
2. ZICKLE NAIL PLATE
3. CLAVICLE PLATE
4. CLOVER LEAF PLATE

Cervical H plate

1. CERVICAL PLATE
2. MANDIBULAR PLATE
3. EPIPHYSIODESIS PLATE
4. HTO PLATE

Clavicle hook plate

1. CLAVICLE HOOK PLATE
2. MEDIAL MALLEOLUS PLATE
3. PROXIMAL HUMERUS PLATE
4. DISTAL RADIUS PLATE

Lateral tibia buttress plate

1. PTLCP
2. LATERAL TIBIA BUTTRESS PLATE
3. DISTAL HUMERUS PLATE
4. DISTAL TIBIA PLATE

Buttress T plate

1. DISTAL RADIUS PLATE
2. BUTTRESS T PLATE
3. CALCANEUM MINI PLATE
4. DISTAL FEMUR PLATE

Plate bending press

1. PLATE BENDING PRESS
2. ROD CUTTER
3. CEMENT PRESSURISER
4. BENDING IRON PAIR

1. DHS
2. DCS
3. JEWETT NAIL PLATE
4. ZICKEL NAIL

IM NAILING

THE JOURNEY SO FAR.....

- Evolved in the past 70 years
- Gold standard for fractures of the long bones.
- First written record dates back to 1500s – Aztecs used **wooden sticks** for treatment of non union.
- Gluck in 1890 – 1st description of interlocked intramedullary devices
  - **An ivory nail** with holes at the ends thru which ivory interlocking pins was passed
- S.P. nail in 1925 – first successful intramedullary fixation
- Gerhardt Kuntscher : "**father of intramedullary nailing**"
  - Developed principles of nailing
  - Foundation of "1st generation Nailing".
- March 12, 1945 – Time magazine wrote an article "AMAZING THIGH BONE". – which made the United States & the rest of the Europe aware of metallic nail being put in the medullary canal of fractured femur of American soldier.

1950s

- During the 1950s, two important techniques were developed and introduced.
- Fischer had reported, the use of **intramedullary reamers** to increase the contact area between the nail and host bone,
- Modny and Bambara introduced the **transfixion intramedullary nail** in 1953. This nail was cruciate-shaped, with multiple holes along the length of the nail to allow for placement of screws at 90° angles from each other.

1960s and 1970s

- Cephalomedullary nails were first introduced in the 1960s, highlighted by the development of the Zickel nail in 1967. The Zickel nail contained a hole in the proximal portion in order that a separate nail could be placed through the lateral cortex of the proximal femur into the neck and head.

1970s and 1980s

- The use of reamed nailing gained more attention , unreamed nailing became reserved for open fractures. Also during this time, a rapid gain in experience occurred using reamed nails for treating tibial shaft fractures. The dominant design during this time period was the **slotted cloverleaf-shaped interlocked nail,** e.g., the AO and Grosse-Kempf nails.

1990s and the 21st Century

- Design achievements of the 1990s included the introduction of **new titanium nails**, cephalomedullary devices such as the **Gamma nail, and retrograde supracondylar intramedullary nails** such as the GSH (Green-Seligson-Henry) nail. In addition, slotted cloverleaf cross-sectional designs were being replaced by **nonslotted designs** that provided greater torsional rigidity.

Evolution

1st generation

- Splints(1°)
- Rotational stability minimal
- Closed fit
- Longitudinal slot along entire length
- Eg –K nail , V nail

2nd generation

- Locking screw - improved rotational stability
- *Non- slotted.*
- Eg-russel taylor nail, delta nail

3rd generation

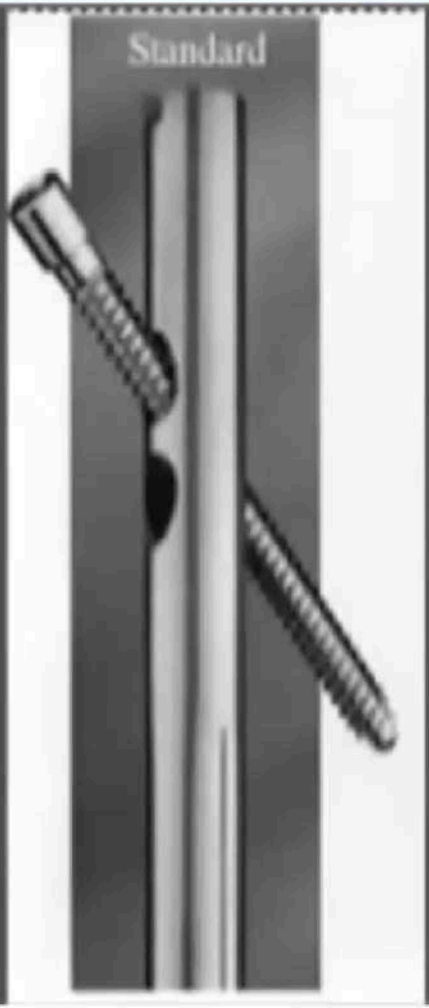
- Fit *anatomically as much as possible*
- Aid insertion and stability
- *Titanium alloy*
- Eg-trigen nail, universal femoral nail nails with multiple curves ,multiple fixation systems
- Tibial nail with malleolar fixation

Classification

- Entry Portals :
  - Centromedullary
    - K nail
  - Cephalomedullary
    - Gamma nail
    - Russell taylor nail
    - PFN
  - Condylocephalic nail
    - Ender nail
- Direction :
  - Antegrade
  - Retrograde

Centromedullary Nails

- First generation
- Contained within medullary canal
- Usually inserted from piriformis fossa
- Proximal locking bolts - transverse or oblique in pertrochanter
- Requires LT be attached to proximal fragment for adequate # stabilization



Cephalomedullary Nails

- second generation nails
- More efficient load transfer than SHS
- Shorter lever arm of IM device decreases tensile strain on implant - low risk of implant failure
- screws/blade inserted cephald into femoral head and neck.
  - Gamma nail
  - Recon nail

Condylocephalic Fixation

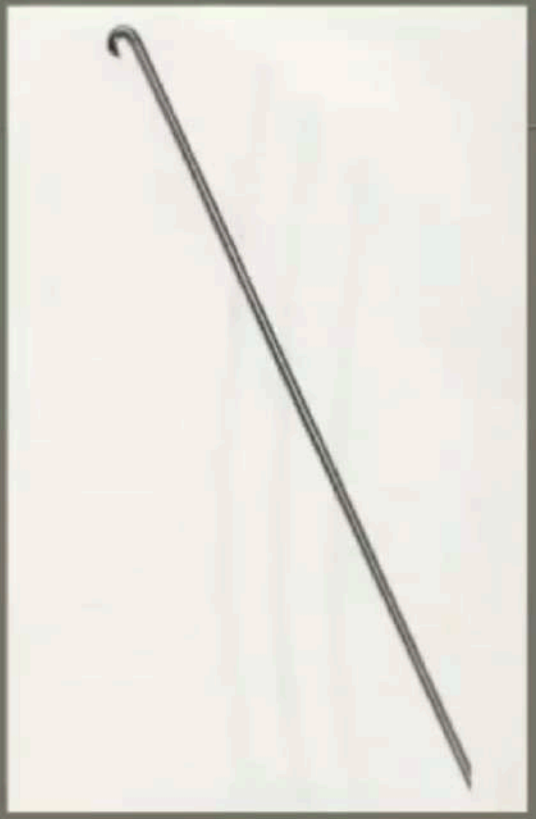
- Elastic stable intramedullary nailing (ESIN) - primary definitive paediatric fracture care .
- 3 – point fixation or bundle nailing.
- Elastic and small - micro-motion for rapid fracture healing.
- Flexible -insertion through a cortical window.
- Examples :
  - Lottes nails
  - Rush pins
  - Ender nails
  - Morote nails
  - Nancy nails
  - Prevot nails
  - Bundle nails

Intramedullary nails to be used as single without reaming.

A. Schneider nail [solid, four flutedcross section and self broaching ends.

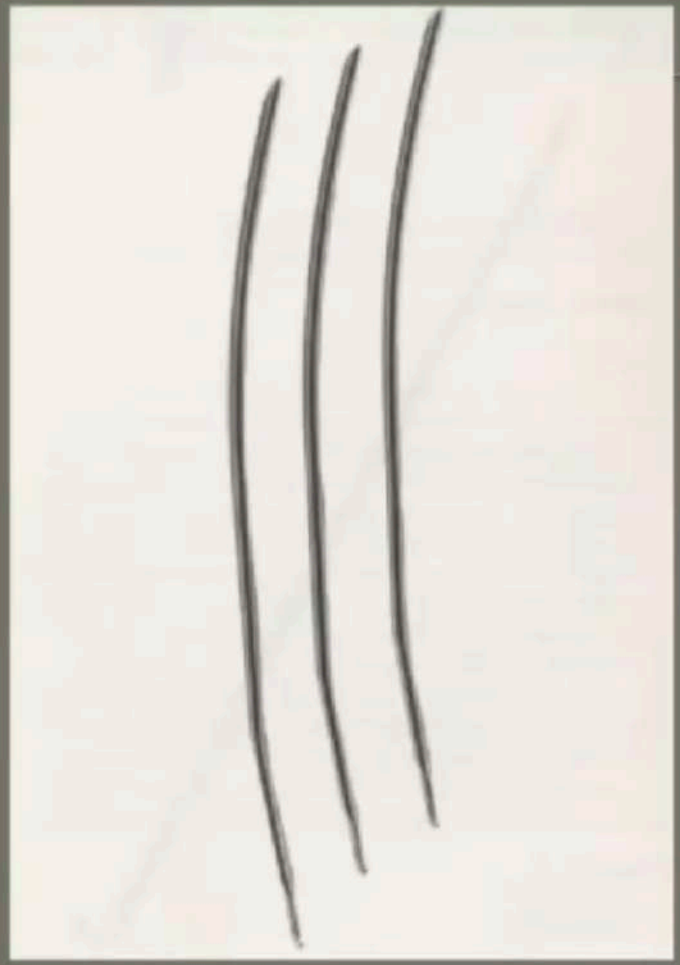
B. Harris condylocephalic nail [curved in two planes, and designed for percutaneous, retrograde fixation of extra capsular hip fractures.

C. Lottes tibial nail specially curved to fit the tibia, and has triflanged cross section.

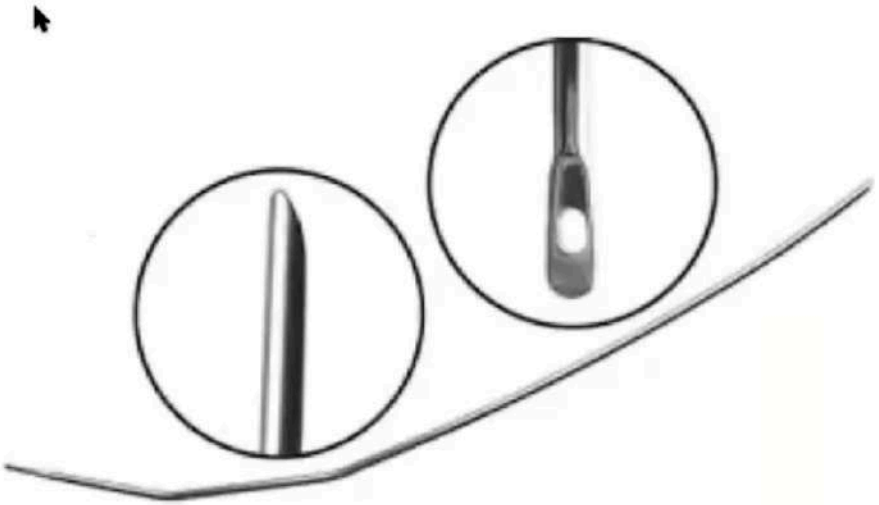


RUSH NAILS

SOLID, CIRCULAR IN CROSS SECTION, STRAIGHT,WITH A SHARP BEVELLED TIPS AND A HOOK AT THE DRIVING END.



Ender Nails, which are solid pins with an oblique tip and an eye in flange at the other end, were originally designed for percutaneous, closed treatment of extra capsular hip fractures



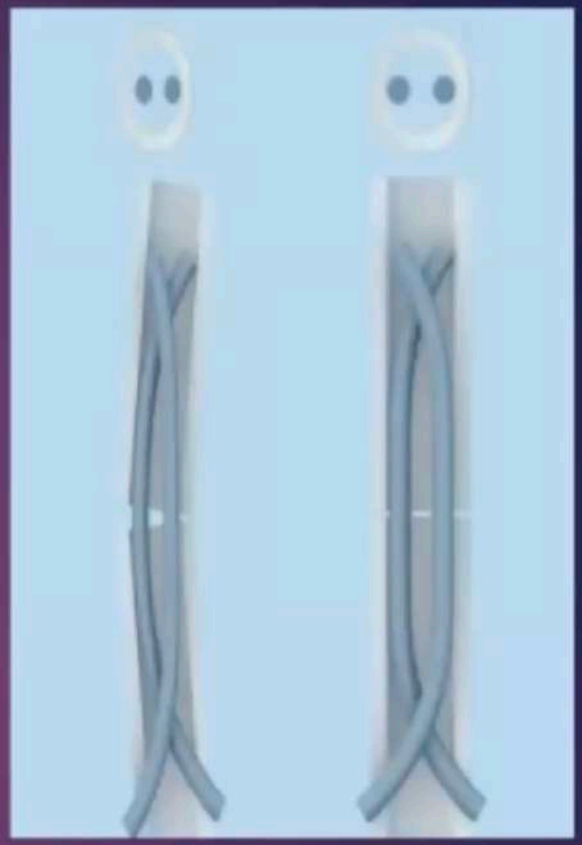
Elastic Nail System.

Indications in Pediatrics

- Diaphyseal and certain metaphyseal/-
- Pathological fractures
- Epiphyseal fractures (Salter Harris I and II), including radial neck,
- Subcapital humerus,
- Metatarsal and metacarpal fractures –
- Complex clavicular fractures
- **Indications in Adults**
- The osteosynthesis of clavicle
- Forearm and
- Humerus fractures.

The elastic flexible nails are bent and inserted into the medullary canal

It works on the principle of symmetric Bracing action of two elastic nails having same modulus of elasticity; which causes three point fixation & gives rotational, Axial, Translational and Bending Stability



Ideal Intramedullary Nail

- *Strong and stable* - maintain alignment and position
- *Prevent rotation* - interlocking transfixing screws
- *Promote union* - contact-compression forces at fracture surfaces
- *Accessible for easy removal*

Pre Operative Planning

Biplaner Radiographic Images

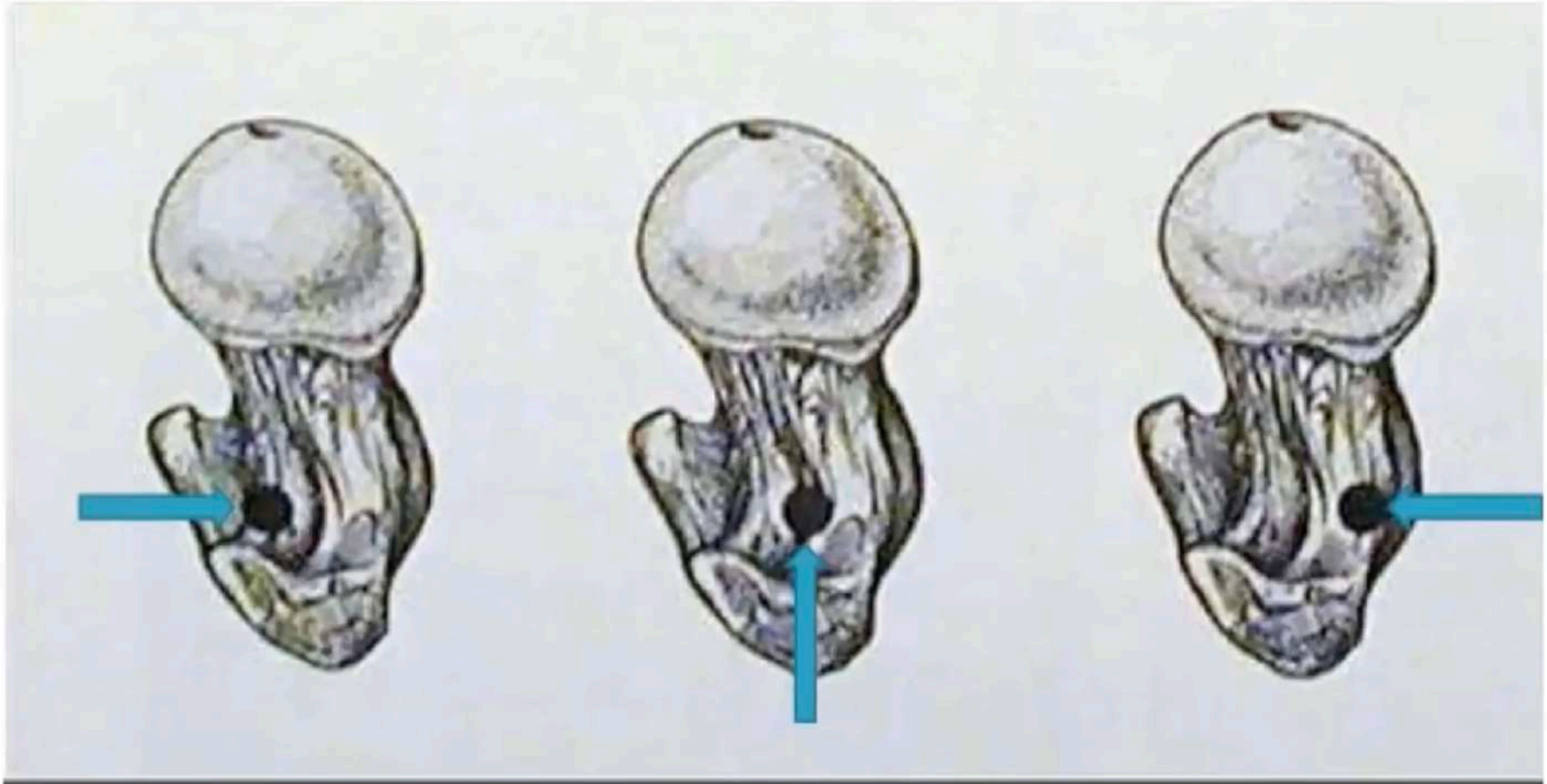
- Bone Morphology
- Canal Dimensions
- Fracture Personality
- Comminution
- Fracture Extensions

Length Of Nail

- Radiographs of contra lateral femur (magnified)
- Traction radiographs (comminuted #)
- Palpable greater trochanter to lateral epicondyle.
- TMD (tibial tubercle–medial malleolar distance) for tibial nail

Diameter Of Nail

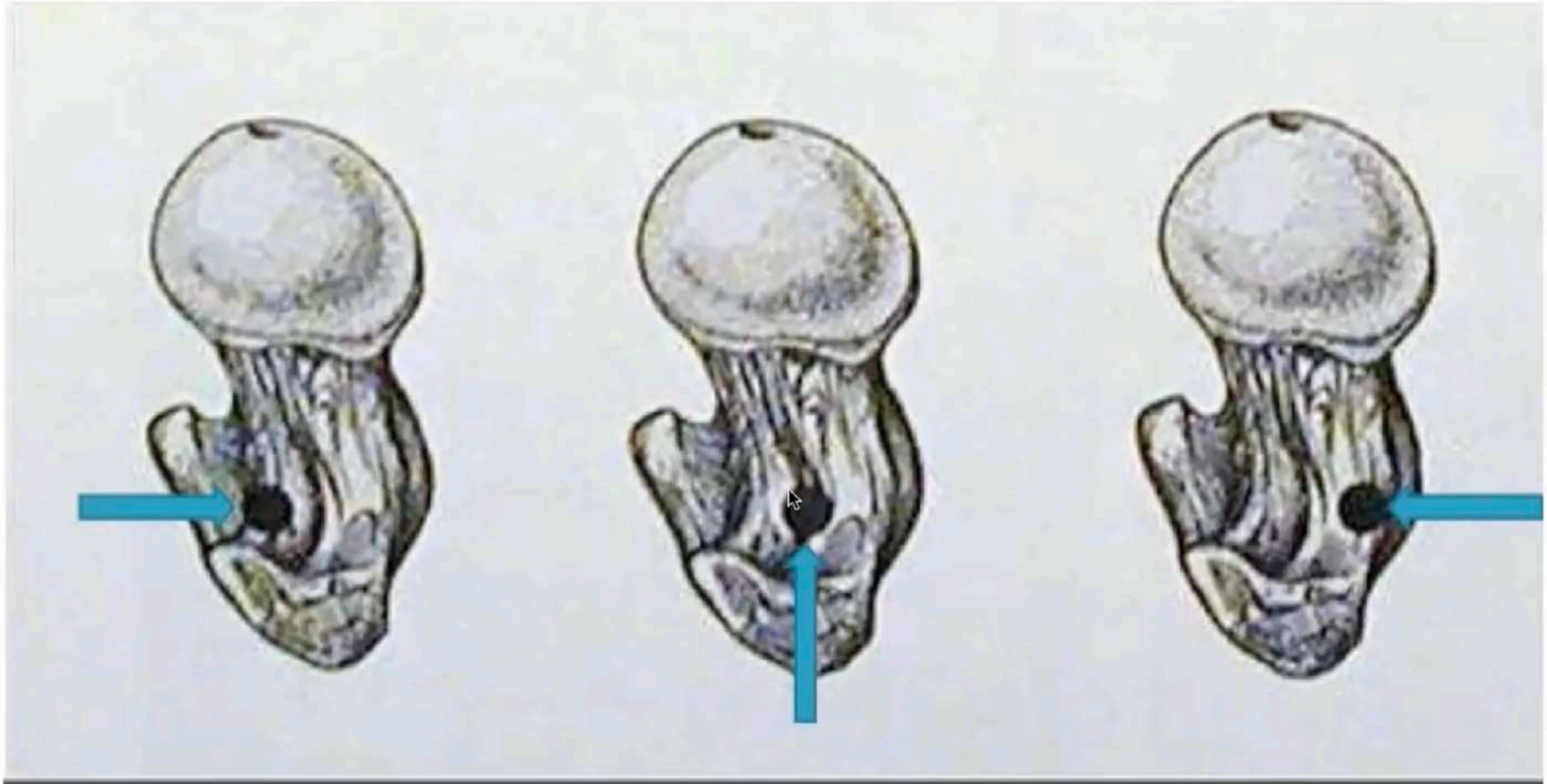
- Narrowest portion of femoral canal at femoral isthmus – lateral radiograph
- 1.0 to 1.5 mm greater in diameter than anticipated nail diameter.



Posterior - loss of proximal fixation

Ideal - posterior portion of piriformis fossa

Anterior - generates huge forces, can lead to bursting of proximal



Posterior - loss of proximal fixation

Ideal - posterior portion of piriformis fossa

Anterior - generates huge forces, can lead to bursting of proximal

Mechanics (K Nail)

- Elastic deformation or "elastic locking" of nail within medullary canal
- Adequate friction of nail in both fracture fragments
- To achieve elastic impingement-
  - "V" profile or even better "clover-leaf" design.

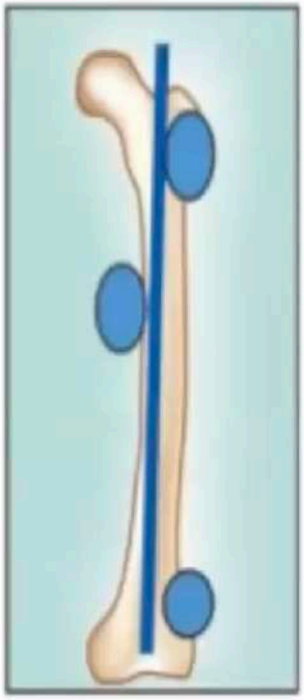


Figure 18.13

Showing the three point fixation of the Kuntscher intramedullary nail. *Gerhardt Kuntscher knew that the nail did not give much rotational stability and came out with Detensor nails with perforated ends for locking bolts. This became the precursor of all the interlocking nails of today.*

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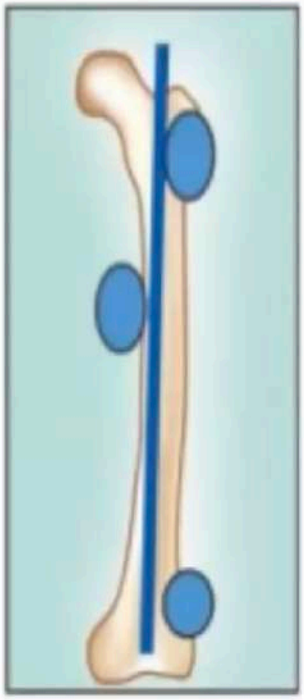

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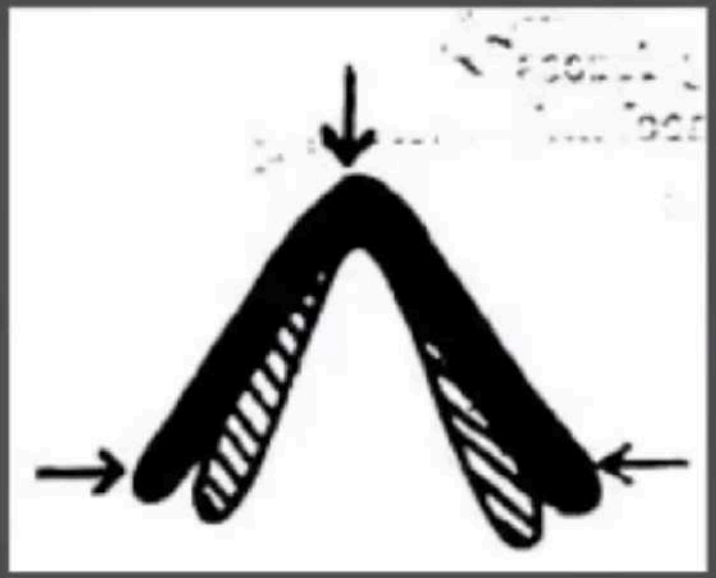
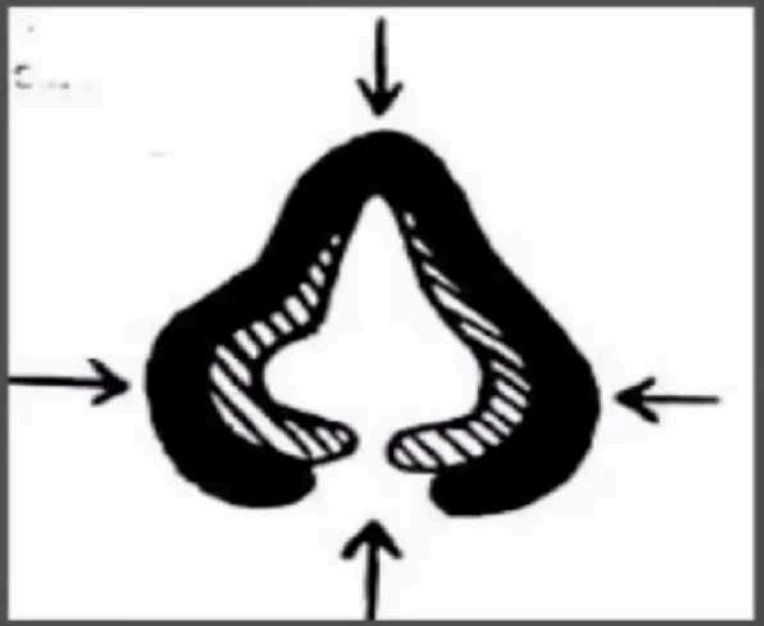
V Nail



- Compressible in only one direction

Clover Leaf Nail



- Compressible in two directions
- Directions right angles to each other

Elastic Compressibility Of Clover – Leaf Nail

FIG. 2-B

FIG. 2-C

Elastic Compressibility Of Clover – Leaf Nail

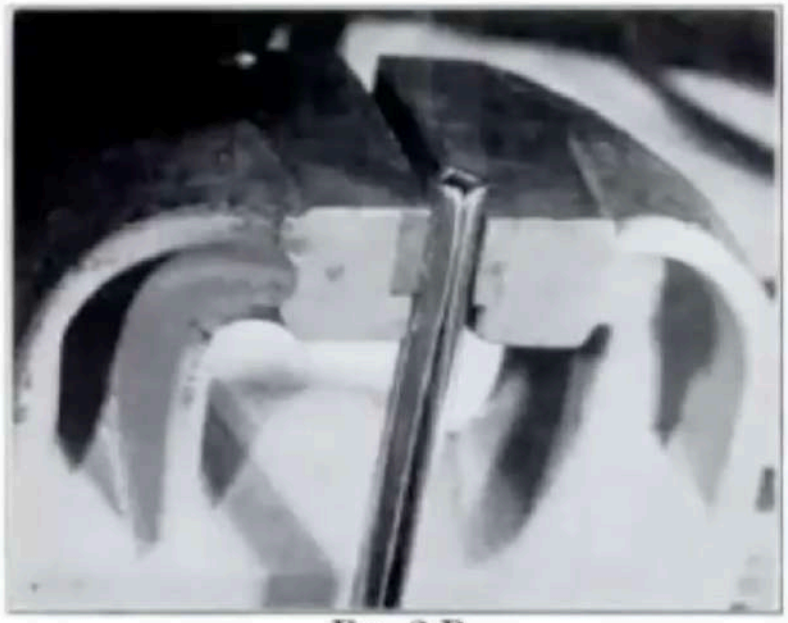


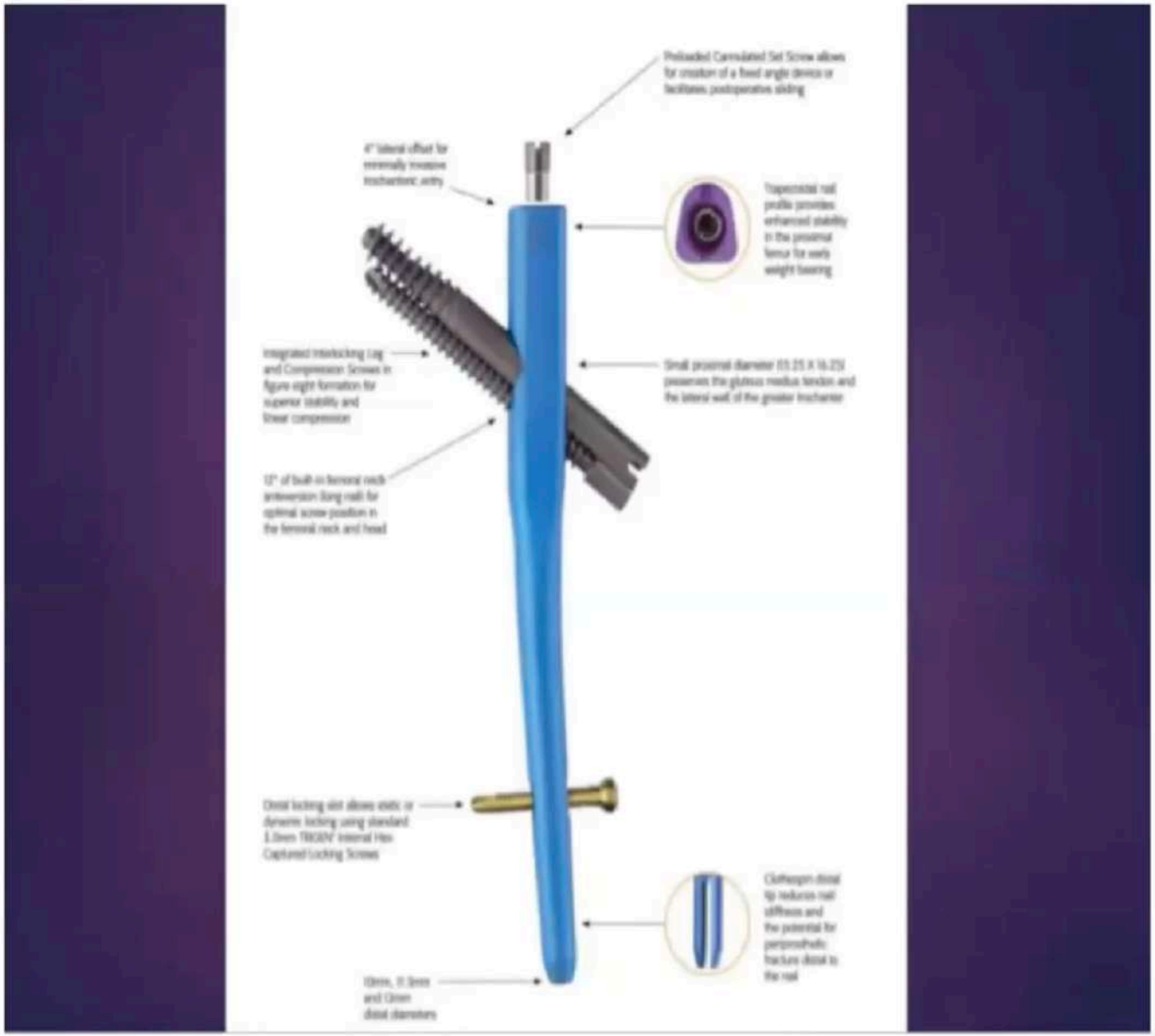
FIG. 2-B

FIG. 2-C

PROXIMAL FEMORAL NAIL

- Intramedullary nails with two lag screws were designed to improve rotational control and bony purchase within the femoral head, thus resisting cutout and subsequent fixation failure.

The two lag screw design led to the recognition of a new failure pattern—the **Z-effect**



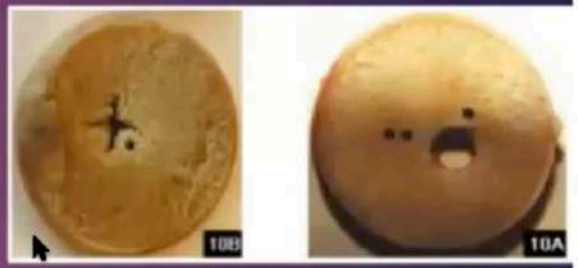
TRIGEN INTERTAN

- Low risk of implant failure and non union.
- Faster time to union
- Eliminates Z effect
- Intertrochanteric rotational stability.
- Eliminates medial migration
- Prevents periprosthetic fracture.

PFNA – 2

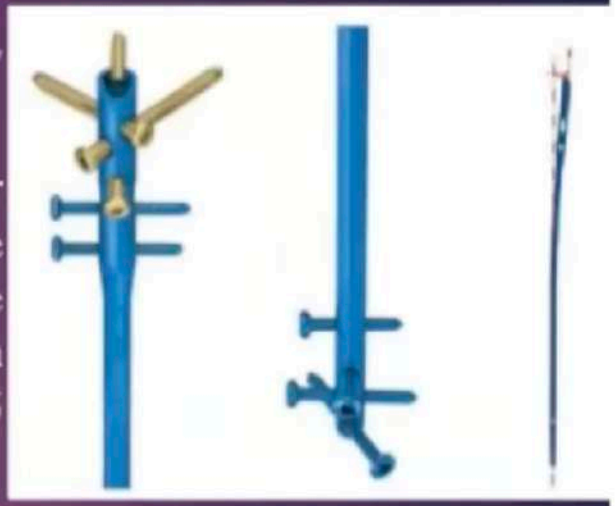
- **Indications**
- Pertrochanteric fractures (31-A1 and 31-A2)
- Intertrochanteric fractures (31-A3)
- High subtrochanteric fractures (32-A1)
- **Contraindications**
- Low subtrochanteric fractures
- Femoral shaft fractures
- Isolated or combined medial femoral neck fractures

- **Large surface and increasing core diameter guarantee maximum compaction and optimal hold in osteoporotic bone .**
- Inserting the PFNA-II blade compacts the cancellous bone providing additional anchoring and rotational stability.
- **Higher cut out resistance.**



EXPERT TIBIAL NAIL

- The Expert Tibial Nail is an intramedullary implant
- Made of titanium alloy (TAN) for improved mechanical and fatigue resistance properties Depending on the anatomical situation, nail lengths between 255 mm and 465 mm are available in 15 mm steps



- Multidirectional interlocking screws ensure that alignment can be well maintained and stability preserved in short proximal or distal tibial segments
- The end cap achieves angular stability between the proximal oblique screw and the nail.

MULTILOC NAILING SYSTEM:

- Modular implant system for the treatment of humeral fracture.
- Short and long nail, multiple locking options.
- Can be used in both simple & complex fractures.
- Nail design:
  - Straight nail for central insertion point.
  - Improved anchorage in strong subchondral bone.
  - Perservation of hypovascular supraspinatus foot print.
  - Multiplanar distal locking reduces implant taggling
- Multiloc Screws:
  - Blunt screw tip to reduce the risk of secondary perforation
  - Suture holes to enable reliable attachment of the rotator cuff.
  - Counter sunk screw heads to reduce the risk of impingement.
  - Optional secondary 3.5 mm locking screw (Screw in screw) for improved fixation in osteporotic bone.
  - Ascending screw provides medial support.

ACUMED FIBULAR ROD SYSTEM

ORIF of ankle fractures

- Deep wound infection (elderly, diabetics)
- Hardware discomfort & irriation.
- Often the skin / soft tissue. Envelop may be compromised.

ACUMED fibular rod system:

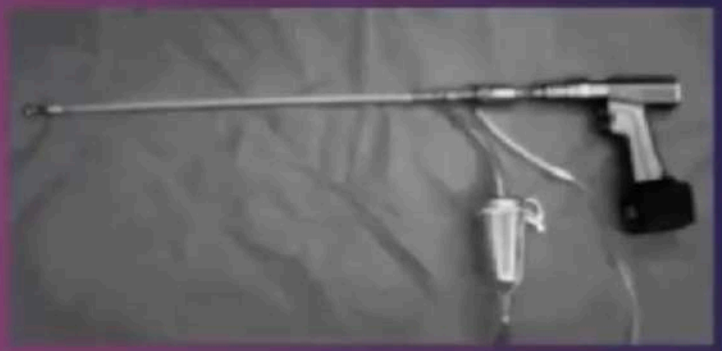
- Excellent fracture stability
- Minimally invasive

Indications:

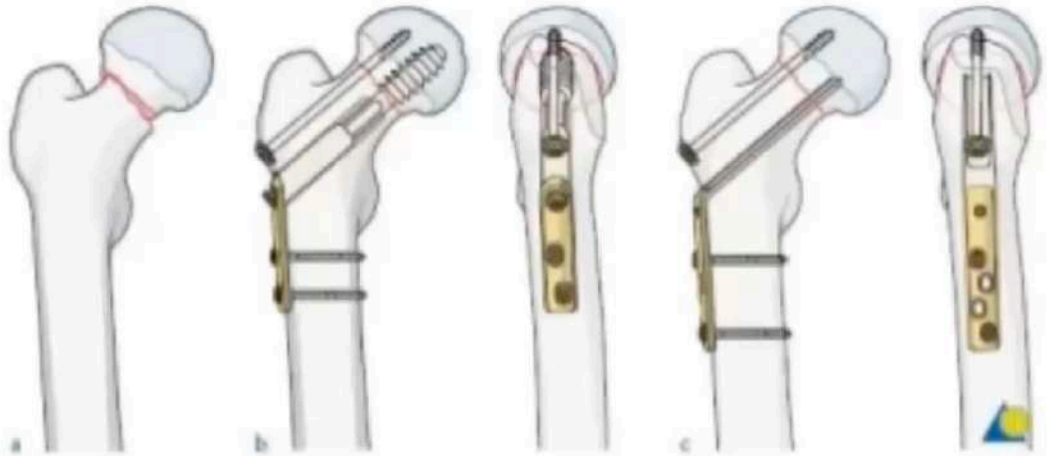
- Lateral mallelor fracture
- Unstable ankle fractures with talar subluxation.

REAMER IRRIGATOR ASPIRATION

- Novel reaming system
- Provides continuous irrigation & suction during reaming.
- Was developed to reduce the incidence of fat embolism & thermal necrosis.
- How it works:
  - Reduces the intramedullary pressure
  - Reduces potential for fat embolism
  - Reduces heat generation
  - Removal of infected tissue.
- Indications:
  - To clear the medullary canal of bone marrow & debris.
  - To effectively size the medullary canal for the acceptance of an intramedullary implant.
- To harvest finely morselised autogenous bone graft.
- To remove infected & necrotic bone & tissue from the medullary canal in osteomyelitis.



DHS

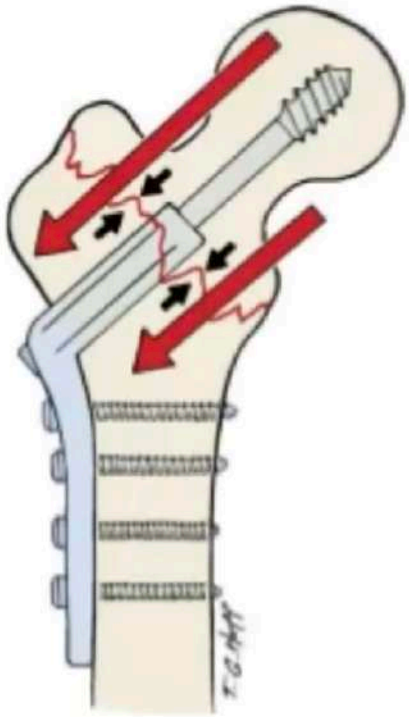


Indications

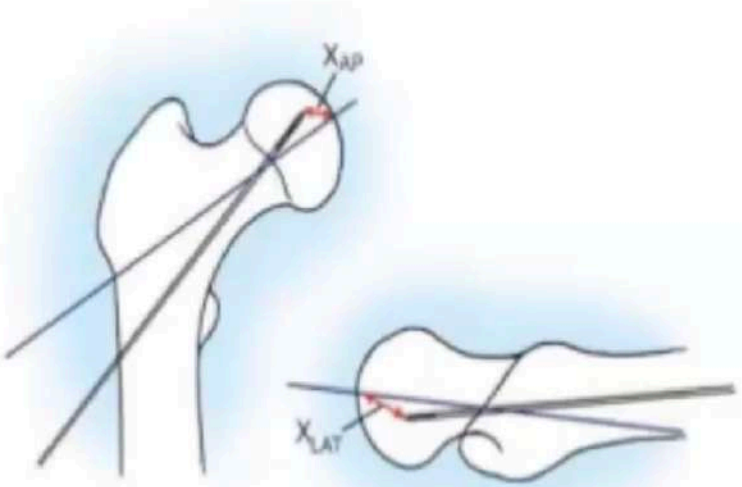
- Pertrochanteric fractures of type 31A1 and 31A2
- Intertrochanteric fractures of type 31A3 with ULTSP
- Basilar neck fractures of type 31B1 (DHS screw in conjunction with antirotation screw)

Principle

- Controlled collapse
- Dynamic action reduces incidence of screw cut out and penetration of screw into hip joint



TIP APEX DISTANCE



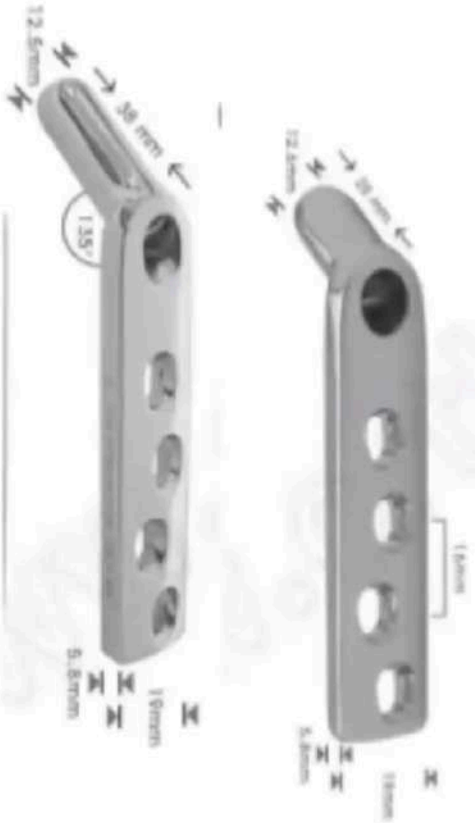
- Should be <25mm
- Tip of screw should lie under 10 mm of subchondral bone
- Screw should ideally lie in centre on ap and lateral views
- Superior and anterior location avoided-cut out

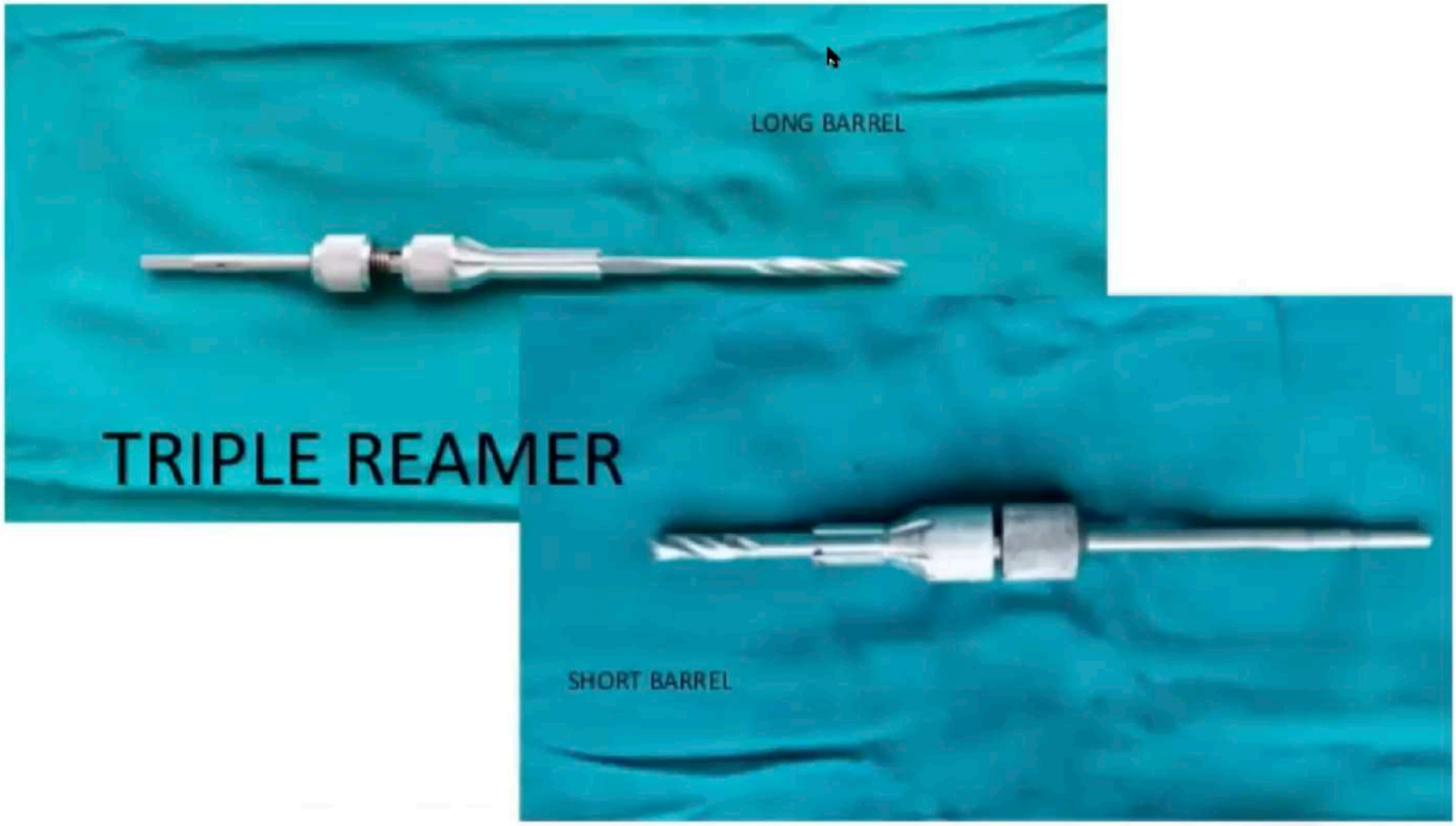
Lag screw length

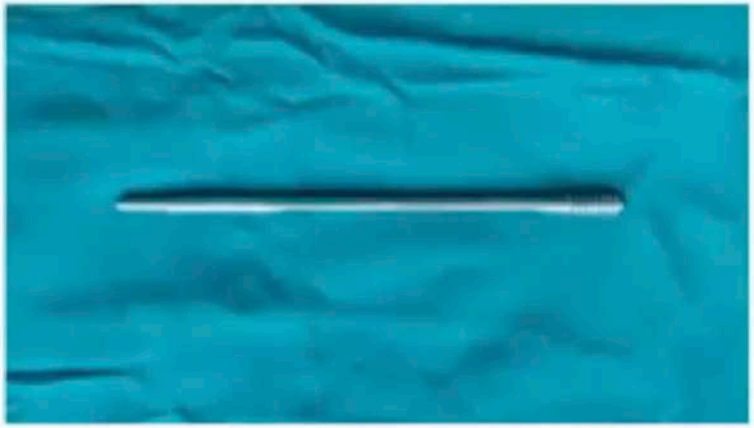
- Measuring guide used
- Tip extension and immediate telescoping must be taken into account

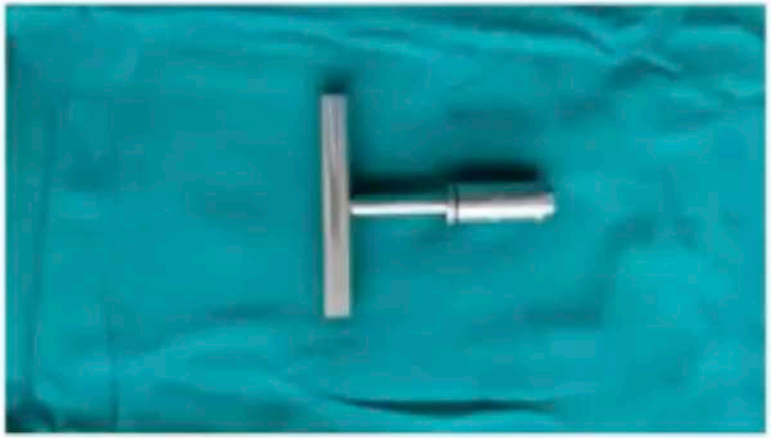
Short vs long barrel

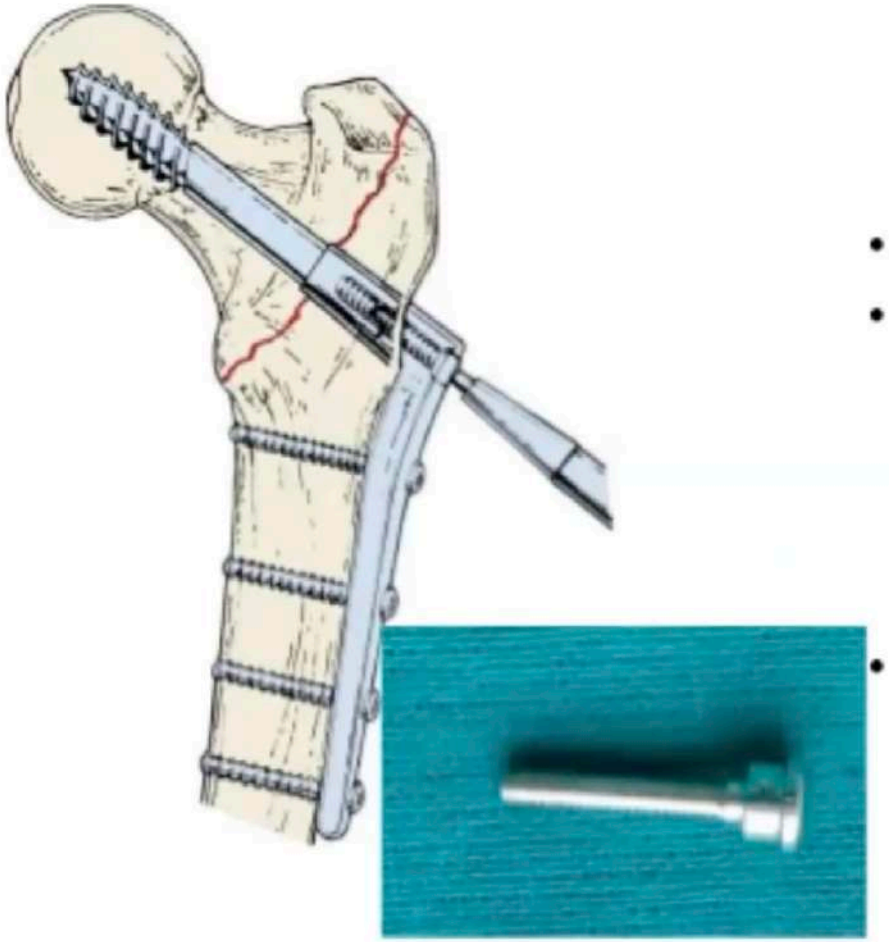
- <85 mm—short barrel
- >=85 mm—standard barrel
- WHY??
  - Thread length-22mm
  - Recommended sliding -25 mm(min 10 mm)
  - Standard barrel length-38 mm(short-25 mm)
  - So 22+25+38=85mm











- Traction released
- Angled plate acts as an aid to reduction
  - Intraop prox displacement of femoral shaft along the plate before screw insertion
  - Post op as lag screw collapses into the barrel by impaction
- Compression screw-also prevents postop hip screw barrel disengagement

MINI FRAGMENT IMPLANTS

GWS

GET WELL SOON

2.7 mm Cortical Screw

Mini 'L' Plate for 2.0 mm Screw

Mini 'T' Plate for 2.0 mm Screws

1.5 mm Cortical Screws, Mini

Mini Straight Plate for 2.0 mm Screws

Dynamic Compression Plate for 2.7 mm Screws

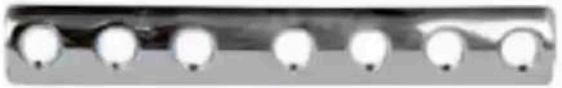
2.7 mm Cortical Screws, Self Tapping

'L' Plate for 2.7 mm Screws

DCP Plates for 2.0 mm Screws

2.0 mm Cortical Screws, Mini

'T' Plate for 2.7 mm Screws



Quarter Tubular Plate for 2.7 mm Screws

Reconstruction Plate, Straight for 2.7 mm Screws

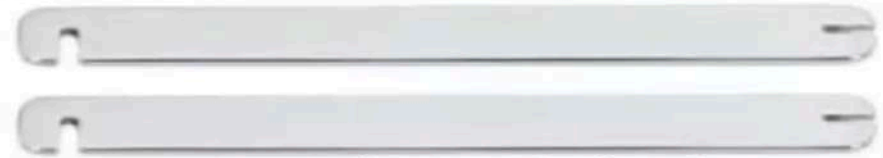
INSTRUMENTS FOR MINI FRAGMENT IMPLANTS

GWS
GET WELL SOON


Drill Bit - Quick Coupling End


Screw Driver with Holding Sleeve


Depth Gauge


Mini Plate Bender (Pair)


Mini Reduction Forcep (Serrated)


Double Drill Guide


Mini Neutral and Loaded Drill Guide


Tap


Counter Sink


T-Handle with Quick Coupling

SMALL FRAGMENT IMPLANTS

3.5 mm One-Third Tubular Plate

3.5 mm Small Dyanamic Compresson Plate

3.5 mm Small Limited Contract Dynamic Compression Plate

3.5 mm One-Third Tubular Plate with Collar

3.5mm Hook Plate

3.5mm Small T-Plate
Right Angled with 3 Head Holes

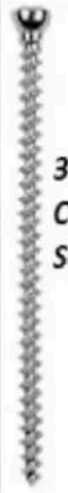
3.5mm Pelvic Reconstruction Plates, Straight

3.5mm Small T-Plate Right Angled with 4 Head Holes

3.5mm
Pelvic Reconstruction Plates, Curved

3.5mm Semi Tubular Plate

3.5mm Cortical Screws



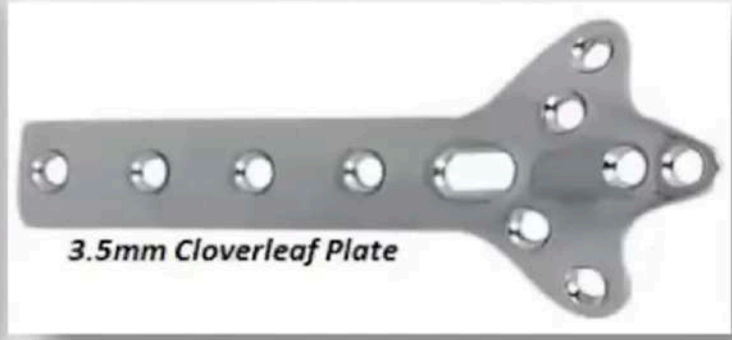
3.5mm Cancellous Screws

GWS

GET WELL SOON

SMALL FRAGMENT IMPLANTS


3.5mm Calcaneal Plate


3.5mm Cloverleaf Plate


Cervical Spine H-Plate


3.5mm Clavicle Hook Plate


3.5mm Y-Reconstruction Plate


Lecestre Plate


Lecestre Plate - Modified


4.0mm Cancellous Screw, Short Thread


4.0mm Cancellous Screw, Full Thread

GWS

GET WELL SOON

INSTRUMENTS FOR SMALL FRAGMENT IMPLANTS

GWS

GET WELL SOON

Hexagonal Screws Driver with Holding Sleeve 2.5mm Tip

T-Handle Quick Coupling

Self Centering Bone Holding Forcep Speed Lock, 190 mm

Bending Iron (Pair)

Periosteal Elevator, Round Edge - 6mm

Hahmann Retractor, 8mm wide Short Point, L-160mm

Periosteal Elevator, Straight Edge 12mm

LARGE FRAGMENT IMPLANTS
Bone Screws

GWS

GET WELL SOON

4.5mm Cortical Screws, Self Tapping

4.5mm Cortical Screw

6.5mm Cancellous Screws, 32mm Thread

6.5mm Cancellous Screws, 16mm Thread

4.5mm Malleolar Screws

Washers for 4.5mm to 7mm Screws

6.5mm Cancellous Screws, Full Thread

LARGE FRAGMENT IMPLANTS
Bone Plates

GWS

GET WELL SOON

4.5mm Broad Limited Contact Dynamic Compression Plate

4.5mm Narrow Limited Contact Dynamic Compression Plate

4.5mm Broad Dynamic Compression Plate

4.5mm Narrow Dynamic Compression Plate

4.5mm Lateral Tibial Head Buttress Plate for Right Leg

4.5mm Condylar Buttress Plate, Left

4.5mm Lateral Tibial Head Buttress Plate for Left Leg

4.5mm Condylar Buttress Plate, Right

LARGE FRAGMENT IMPLANTS
Bone Plates

GWS

GET WELL SOON

4.5mm L-Plate Buttress, Left Angled (for Right Leg)

4.5 mm L-Plate Buttress, Right Angled (for Left Leg)

4.5mm T-Plate Buttress

4.5mm T-Plate

4.5mm Reconstruction Plate, Straight

4.5mm Spoon Plate

Roy Camille Plate

4.5mm Cobra Head Plate

4.5mm Hook Plate

LARGE FRAGMENT IMPLANTS
Bone Plates

GWS

GET WELL SOON

Sherman Plate

4.5mm Proximal Plate Lateral Side

4.5mm Proximal Plate Medial Side

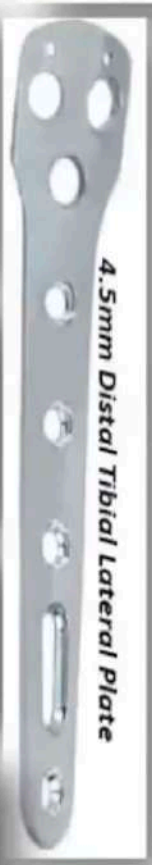
4.5mm Proximal Lateral Tibial Plate

4.5mm Proximal Tibia Plate with Round Holes

4.5mm Proximal Tibia Medial Plate

4.5mm Proximal Femur Plate

4.5mm Lateral Tibia Plate with Round Holes



4.5mm Distal Tibial Lateral Plate

4.5mm Distal Tibial Plate

INSTRUMENTS FOR LARGE FRAGMENT IMPLANTS

GWS

GET WELL SOON

Depth Gauge, Measuring upto 110mm

Bending Iron (Pair)

Plate Bending Press

T-Handle Quick Coupling

Hexagonal Screw Driver with Holding Sleeve - 3.5mm Tip

Sharp Hook

Insert Drill Sleeve 4.5/3.2

DHS/DCS PLATES

GWS

GET WELL SOON

Dynamic Hip Screw Plate with Self Compression Holes (DHS)

Dynamic Hip Screw Plate with Self Compression Holes Short Barrel : 25mm

Dynamic Hip Screw Plate with Self Compression Holes Short Barrel : 25mm

Compression Screw

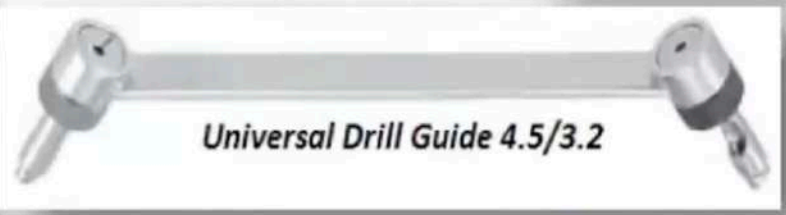
DHS/DCS Screw (with Compression Screw)

Instrumentations

GWS

GET WELL SOON

DCS Angle Guide 95 Degree



Universal Drill Guide 4.5/3.2

DHS Angle Guide 135 Degree

DHS-DCS Centering Sleeve, Long

Varibale Angle Guide

DHS-DCS Wrench

DCS Tripple Reamer

DHS - DCS Impactor

DHS Tripple Reamer

Angle Blade Plates

GWS

GET WELL SOON

95 Degree Condylar Plates
(with Dynamic Compression Holes)

Angle Blade Plates for Intertrochanteric Femoral Osteotomies in Adults (with Dynamic Compression Holes)

130 Degree Angle Blade Plate (with Dynamic Compression Holes)

Angle Blade Plates for Intertrochanteric Femoral Osteotomies in Adults (with Dynamic Compression Holes - Displacement

Instrumentations

GWS

GET WELL SOON

Triple Drill Guide

Slotted Hammer

Impactor

Seating Chisel

Chisel Guide, with adjustable Angle

Condylar Plate Guide

Inserter - Extractor

Angle Blade Plates

GWS

GET WELL SOON

95 Degree Condylar Plates
(with Dynamic Compression Holes)

Angle Blade Plates for Intertrochanteric Femoral Osteotomies in Adults (with Dynamic Compression Holes)

Angle Blade Plates for Intertrochanteric Femoral Osteotomies in Adults (with Dynamic Compression Holes - Displacement

130 Degree Angle Blade Plate (with Dynamic Compression Holes)

Jewett Nail Plates & Instrumentations

GWS

GET WELL SOON

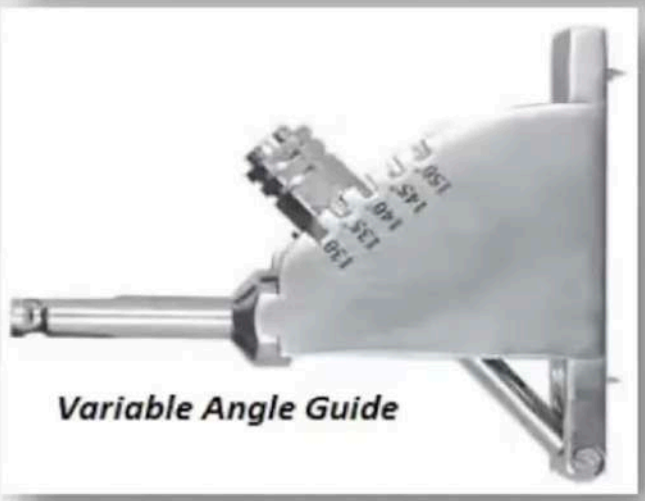
130 Degree Jewett Nail Plates

Nail Starter

Impactor - Extractor

135 Degree Jewett Nail Plates

Driver Handle



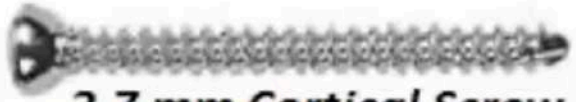
Variable Angle Guide

Locking Bone Screws

GWS

GET WELL SOON

2.4mm Fix-Lock Screw,
Self Tapping



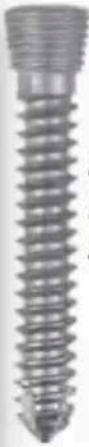
2.7 mm Cortical Screw,
Self Tapping

2.4mm Cortical Screw,
Self Tapping

5.0mm Cannulated Conical Screw,
Self Tapping, Partial Thread

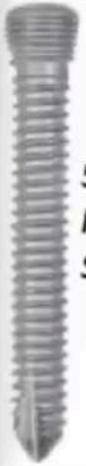
4.0mm
Fix Lock
Cannulated Screw,
Self Tapping

3.5mm
Fix Lock Screw,
Self Drilling



2.7mm
Fix-Lock Screw,
Self Tapping

5.0mm
Fix Lock
Cannulated Screw
Self Tapping, Full Thread



5.0mm
Fix Lock Screw,
Self Tapping

3.5mm
Fix Lock Screw,
Self Tapping

Locking Bone Plates

GWS

GET WELL SOON

2.7/3.5mm Fix Lock Dorsolateral Distal Humerus Plate

3.5mm Fix Lock Olecranon Plate

2.7/3.5mm Fix Lock Medial Distal Tibia Plate

2.7/3.5mm Fix Lock Medial Distal Humerus Plate

2.7/3.5mm Fix Lock Dorsolateral Distal Humerus Plate, with Lateral Support

PHEELOS - 3.5mm Fix Lock Proximal Humerus Plate

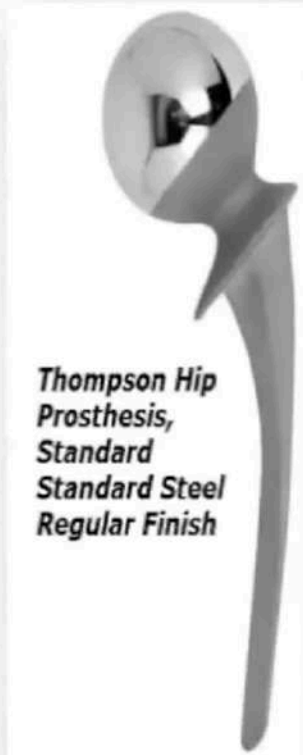
3.5mm Fix Lock Proximal Humerus Plate

3.5mm Fix Lock Small 'T' Plate Right Angled

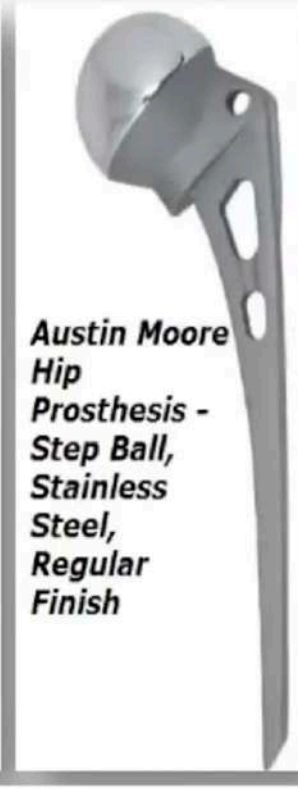
HIP PROSTHESIS & Instrumentations

GWS

GET WELL SOON



Thompson Hip Prosthesis, Standard Standard Steel Regular Finish



Austin Moore Hip Prosthesis - Step Ball, Stainless Steel, Regular Finish

Bipolar Hip Prosthesis- Non Perforated, Stainless Steel

Rasp for Thompson

Moore Hollow Chisel

Impactor - Nylon Faced

Murphy Lane Bone Skid

Rasp for Austin Moore

Measuring Gauge for Prosthesis

Murphy Lane Bone Skid

ACL/PCL RECONSTRUCTION SYSTEM

GWS

GET WELL SOON

PCL Femoral Aimer

ACL Elbow Aimer

PCL Tibial Aimer

Anchor Screw

Suture Washers

Flower Tip Reamer - S.S

Sizing Tubes - S.S

Spike Washers

Femoral Offset

Bone Tunnel Plugs - Polyacetal

ACL Button
4mm x 12mm

Endoscopic Drill - S.S.

ACL Screw

Cannulated Screws

GWS

GET WELL SOON

3.0mm Cancellous Cannulated Screws, Short Thread

3.0mm Cancellous Cannulated Screws, Long Thread

3.5mm Cortical Cannulated Screws, Short Thread Self Tapping

4.0mm Cannulated Cancellous Screws, Short Thread

7.0mm Large Cannulated Cancellous Screw, 16mm Thread

Self Drilling

Drill Bit Cannulated, Quick Coupling

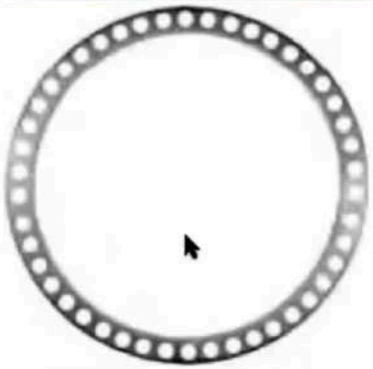
Hexagonal Screw Driver, Cannulated - 3.5mm Tip

Screw Holding Forcep

External Fixators

GWS

GET WELL SOON



ILIZAROV - FULL RING

Carbon Fiber Ring

Italian Femoral Arche 90 Degree

ILIZAROV - 5/8 Ring

Italian Femoral Arche 120 Degree

ILIZAROV - 1/2 Ring

Twisted Plate

Omega Ring

Dynamic External Fixator

Trocar

Drill Guide

T-End Clamp

External Fixators

GWS

GET WELL SOON

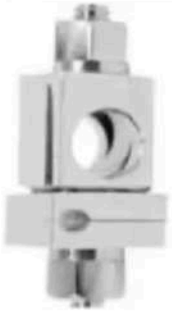
Small Single Pin Clamp
4.0 x 2.5mm

Open Single Pin Clamp

Twin Adjustable Clamp Straight

Twin Adjustable Clamp Curved

Spanner



Single Pin Clamp – Deluxe

Self Holding Clamp

Double Pin Clamp

Compression Distraction Device

Transverse Clamp

Spanner 11mm

Connecting Rod 5.0mm

Interlocking Nails

GWS

GET WELL SOON

For Ø 6.4mm Lag Bolts Prox.

For Ø 5.0mm Locking Screws Distal

Multifunctional Femoral Nail MFN (Short) Proximal Shaft Dia 15.0mm

Screws Plug for Femoral Nails Threaded 3/8" / Head Dia 15mm

For Ø 5.0mm Lag Screws Prox.

For Ø 5.0mm Locking Screws Distal

U/R MFN/DNS Femoral Interlocking Nail (Reaming of Bone not Required) Dia 13mm

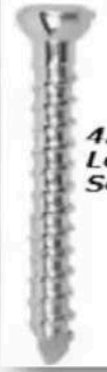
3.9mm Locking Bolt, Self Tapping

For Ø 5.0mm Locking Screws Distal

For Ø 5.0mm Locking Screws Prox.

Tibia Interlocking Nails

Universal Femoral Nail - Cannulated, Standard Holes



4.9mm Locking Bolt, Self Tapping

Rush Nails