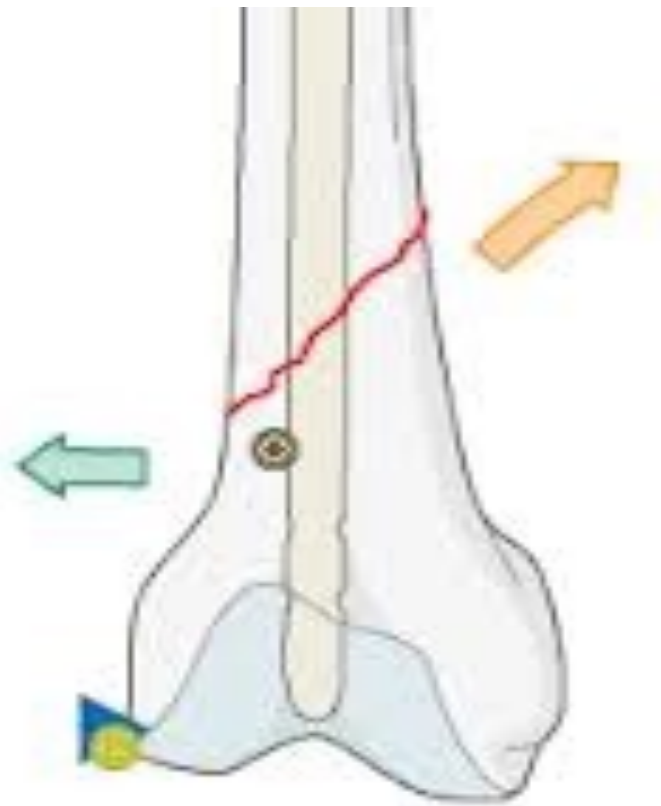


# Blocking Bolts (aka poller screws)

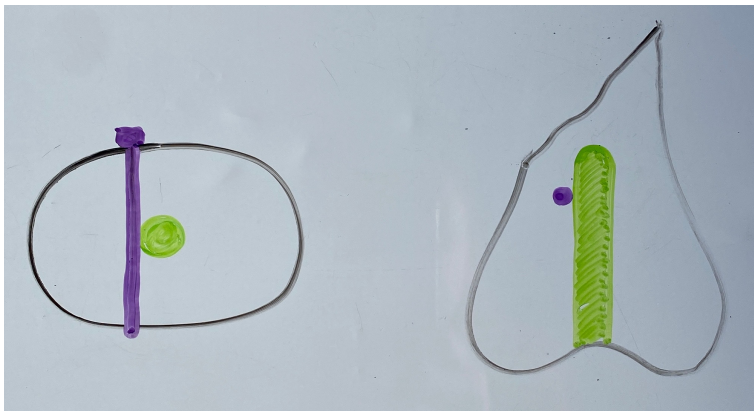
- This concept was first popularized by Krettek et al in 1999.
- They called the screws “poller screws” because the screws guided the nail like the “poller” traffic control devices guide traffic in Europe.





# Blocking Bolt Tips

- “Nails are like teenagers, they like to get out early and stay out late” Dr Toney Russell
- You cannot reduce a fracture with a nail unless the fracture is diaphyseal or you can create a ‘diaphysis’
- 1 cm away from the fracture line
- Use the locking bolts from the IM nail system you are using.
- Retrograde nailing of distal femur fractures is the ideal place to try it out

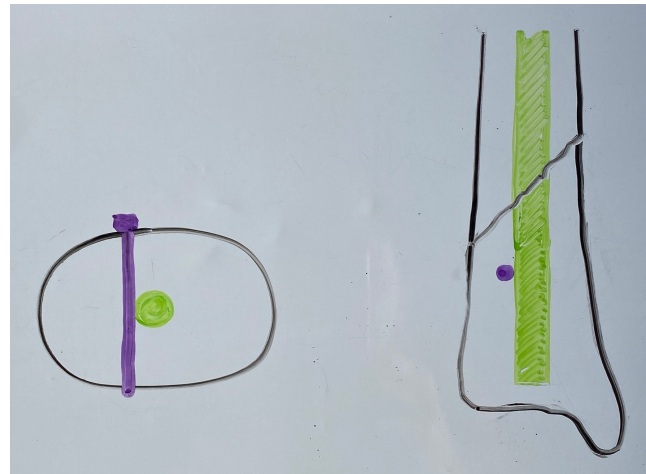


# Technique #1

- Judge position of blocking bolt in advance. This can be hard! Particularly when the nail in this position is not straight eg Herzog curve

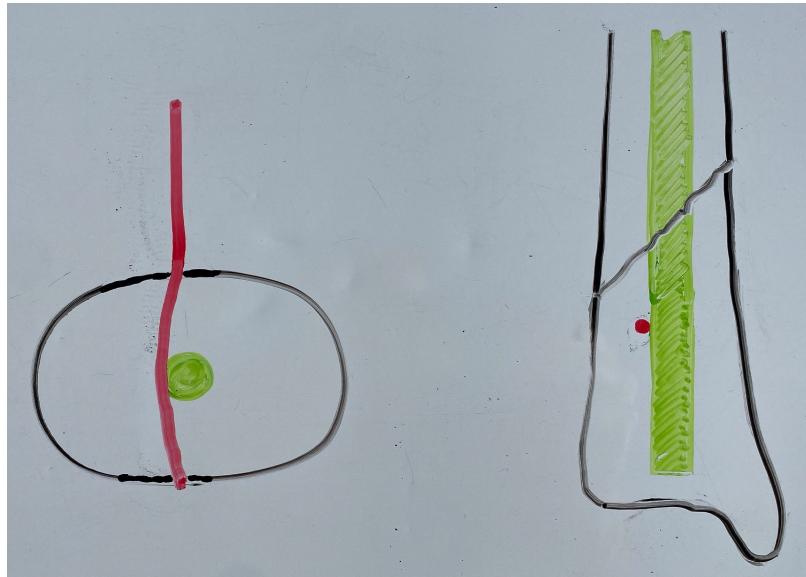


- Tip - Insert nail into a position where it becomes easier to judge position. If using a blocking bolt in the coronal plane of the proximal tibia.
  - Insert the nail fully.
  - Assess residual malalignment.
  - Drill proximal cortex.
  - Remove nail.
  - Insert blocking bolt.



# Technique #2 – Blocking Wire

- Using a blocking wire (2.5 / 3.2mm) is more forgiving if you have not judged the position perfectly. The wire will bend and allow the IM nail to advance.
- The wire can then be removed once the locking bolts have been inserted.



# Technique #3 – Smooth Pin

- Use II to position tip of 4.2mm drill bit over sub-optimally positioned IM nail tip.
- Place 4mm smooth pin (on T handle chuck) in hole and direct down the side of the IM nail
- Sweep the nail into the correct position
- Advance to engage 2<sup>nd</sup> cortex
- Leave in position until locking bolts inserted
- Remove smooth pin and replace with 5mm bolt. This will add to construct stability.

