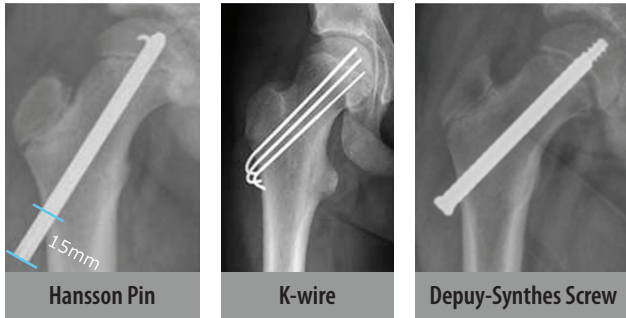




GROWTH & REMODELING POTENTIAL in a Non-Fusion Approach to SCFE

The current standard of care for the treatment of SCFE is in situ fixation with the aim of causing epiphysiodesis to prevent further slippage using partial or fully threaded screws across the physis. This approach has been shown to be reliable in long-term studies, however, stopping growth alters the biomechanics and increases the risk of abductor weakness as well as abnormal hip anatomy causing limb length discrepancy, femoral neck shortening, and femoroacetabular impingement (FAI)^{1,2}.



Surgical options that stabilize the SCFE and prevent further slippage while allowing continued growth are therefore preferable. In fact, this approach has been successful in Scandinavia using the Hansson Pin, in Germany using the K-wire technique and in North America using cannulated screws (Depuy-Synthes) left proud^{1,2,3}.

Results of a recent study^{2,4} a 3-year follow-up of 54 children treated with Hansson Pins, show SCFE stabilisation with no further slippage while allowing lengthening of the femoral neck up to 20mm, and remodeling with improvement of the alpha angle by a mean of 14.5°. Their results also show a positive correlation between the alpha angle and the growth of the femoral neck.

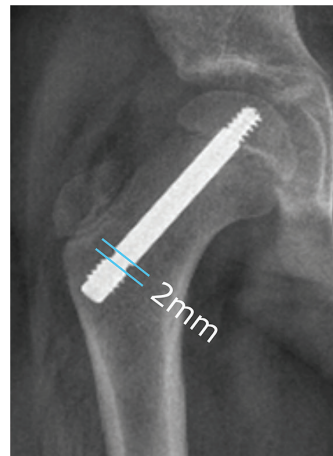
Disadvantages of current non-fusion techniques that allow further growth include the need to place implants proud of the cortex, and the need for revision surgeries to replace the implants once outgrown.

Pega Medical's innovative Free-Gliding (FG) SCFE Screw mitigates these limitations with a modular telescopic design. The two-part device consists of a female component with proximal threads wholly within the epiphysis and a male component that engages the lateral cortex.

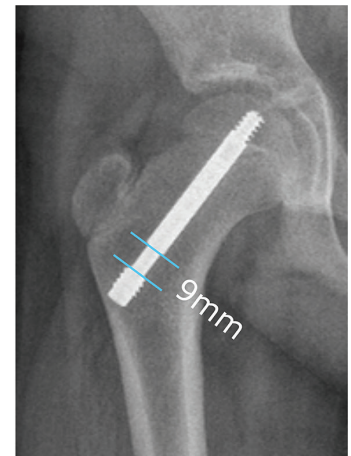
Radiographic analysis shows that the FG Screw prevents further slippage and avoids premature closure of the physal plate, thus allowing continued growth. More importantly, due to the modular telescoping design, the implant does not have to be left proud, or replaced as the child grows¹. Results of a recent study⁵, a 2-year follow-up of 58 hips treated with the FG SCFE Screw, show a mean length increase of 7.7mm and improvement of alpha angle by a mean of 6.9°. The results demonstrate that the remaining growth allows for femoral neck remodeling, near anatomical hip offset and decreased risk of FAI.

Pega Medical FG Screw is a novel non-fusion approach to SCFE that avoids the need for protruding implant placement. The FG screw has

been shown to prevent further slippage while allowing continued growth and remodeling, which is important to reduce the risk of limb-length discrepancy and femoroacetabular impingement, and prevent the development of early osteoarthritis.



FG Screw Postoperative



FG Screw 18 Month Follow-up

¹Leblanc E, et al. (2017). *Journal of Children's Orthopaedics*, 11:120-127.

⁴Örtegren J, et al. (2018) *Journal of Pediatric Orthopaedics*, 38(3) 170-175.

²Örtegren J, et al. (2016). *Journal of Pediatric Orthopaedics*, 36(5): 494-498.

³Dobbe A, et al. (2018) POSNA annual meeting, Austin, TX.

⁵Bittersoh B, et al. (2014). *Hip International*, 25 (2): 104-114.