What is Possible if one understands the circulation of blood to the femoral head.

- Surgical Dislocation of the hip
- Neck Lengthening
- Neck Osteotomy
- Acetabuloplasty
- Neck Plasty
Bioregenerative Surgery = Applied Biomechanics

Letournel*
Pauwels
Maquet*
Mueller*
Marti*

Schneider*
Bombelli*
Wagner
Weber*
Ganz**
Fig. 337
Gluteal region.
A: The gluteus maximus m. is cut near the trochanter and reflected, bringing into view the points of exit of vessels and nerves.

Fig. 338
Gluteal region.
4: Cutting the gluteus medius m. affords a view of the deep branches of the superior gluteal artery and nerve. The capsule of the hip joint is seen after cutting the internal obturator m.
Anatomical considerations I

Blood supply to the femoral head sufficient by the medial femoral circumflex artery

Truetta and Harrison, JBJS, 35-B:442, 1953; Sevitt and Thompson, JBJS, 47-B:560, 1965.
Assessment of blood flow by LDF

Push against pars reflecta
Actual and Relative Femoral Neck Lengthening

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Mammoth Lakes, California
Absolute and Relative Neck Lengthening of The Hip

- Perthes and Perthes like conditions
- Old femoral neck fractures
- Proximal femoral focal deficiency
Relative femoral neck lengthening
Relative femoral neck lengthening

H. Wagner

The Intertrochanteric Osteotomy

Edit. Schatzker
Absolute Femoral neck lengthening
Absolute femoral neck lengthening

Morscher, E. Basle, Switz.
“double inter Trochanteric osteotomy

TYPE A

TYPE B
Relative Neck Lengthening

• 18 year old footballer
• Fastest man on the team.
• Right hip pain progressive, activity related!
• Father is an orthopedic surgeon.
28 year old female with 5 year history of left > Right hip pain
Absolute Femoral neck Lengthening

• 19 year old girl
• Proximal Focal Femoral deficiency
• Right hip pain
• Previous epiphysiodesis of contralateral distal femoral physis to decrease leg length discrepancy
The neck is very short. There is a superior position of the fovea capitis. There is a break in Shenton's line, indicating subluxation. There is an oblique orientation of the acetabular roof. Even with the high trochanter, decreasing the abductor muscle force, the relative absence of a neck causes this force to have too much of a vertical direction resulting in acetabular rim pressurization.
Absolute Neck Lengthening

- 15 year old female
- PFFD right hip
- Painful and becoming progressively so
QuickTime™ and a YUV420 codec decompressor are needed to see this picture.
Orthopedic Circumscision

Trimming of delaminated superior margin of the Acetabulum and reattachment of the torn Labrum
Epiphysiolysis

Possibilities of treatment
Knowing the “safe route” to the Femoral Head and Neck
Anatomical considerations I

Blood supply to the femoral head sufficient by the medial femoral circumflex artery

Truetta and Harrison, JBJS, 35-B:442, 1953; Sevitt and Thompson, JBJS, 47-B:560, 1965.
Imhaeuser-Weber

Flexion, abduction, internal rotation intertrochanteric Osteotomy
With Surgical dislocation

- It is possible, due to the work of Ganz and his associates on the blood supply to the femoral epiphysis to:
- Relook at the “callous resection” repositioning osteotomy of the femoral epiphysis in chronic “slips”
- Safely accomplish a femoral neck osteotomy to reposition the femoral head in old residuals from slips.
Going to the site of the deformity

Femoral neck osteotomy
The same operation

In the mature hip
I took him back at 5 days
Because of a hematoma.
I used this opportunity To insert the doppler probe you see.
14 year old 6'-1" feet, 220 lbs.  
1 year post-SCFE
Conclusions

• The femoral neck can be safely approached as long as the vascular anatomy is understood.

• Osteotomy of the femoral neck is possible and safe

• The difficulties I have had has been with Maintaince of reduction until healing has Occurred.

• One has to be careful as to not create a future femoral-acetabular impingement.
Conclusions

• There are many possible indications for surgical dislocation of the hip and neck Osteotomy in the young patient.
• In over 300 cases of surgical dislocation, neck lengthening, and neck osteotomy there has been no avascular necrosis of the femoral head!

THANK YOU!
Epiphyseolysis

- 17 year old
- 6 feet 3 inches tall, 247 lbs
- 2 years post slip
- Pain and Deformity