

Surgical Dislocation of the Hip (SDH)  
Periacetabular Osteotomy (PAO) and  
Surgical Instruments

According to the technique of Reinhold Ganz



The following technique guide was prepared under the guidance of Professor Reinhold Ganz, MD under close collaboration with this physician. It contains a summary of medical techniques and opinions based upon their training and expertise in the field, along with their knowledge of Smith+Nephew products. It is provided for educational and informational purposes only. Smith+Nephew does not provide medical advice and it is not intended to serve as such. It is the responsibility of the treating physician to determine and utilize the appropriate products and techniques according to their own clinical judgment for each of their patients. For more information on the products in this surgical technique, including indications for use, contraindications, effects, precautions and warnings, please consult the products' Instructions for Use (IFU).

# Table of contents

## Surgical Dislocation of the Hip (SDH) Periacetabular Osteotomy (PAO) and Surgical Instruments

Surgical Dislocation of the Hip (SDH) .....	2
Periacetabular Osteotomy (PAO).....	3
SDH Instrumentation.....	4
PAO Instrumentation.....	5

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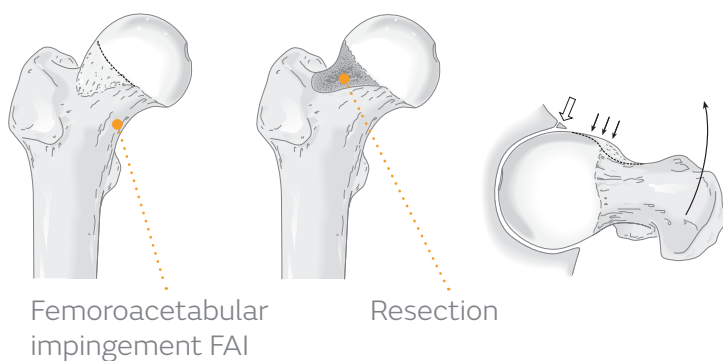
The technique description herein is made available to the health care professional to illustrate the authors' suggested treatment for the uncomplicated procedure. In the final analysis, the preferred treatment is that which addresses the needs of the patient.

# Surgical Dislocation of the Hip (SDH)

Surgical dislocation of the adult hip was long time considered as an operation with unpredictable risks for avascular necrosis of the femoral head.<sup>1</sup> Detailed studies of the vascular anatomy of the proximal femur, however, helped to design a safe approach. It consists of a trochanteric flip osteotomy after a fascial incision anterior to the gluteus maximus muscle (Gibson). The joint capsule is exposed between piriformis and gluteus minimus muscles. A Z-shaped capsulotomy (right side) allows a complete anterior dislocation after transection of the round ligament. With fully preserved external rotators there is optimal protection of the blood supply of the femoral head via the medial femoral circumflex artery. This approach allows a 360° view of the acetabulum and a nearly 360° view of the femoral head. It is versatile and can be used for acetabular fractures, periacetabular tumor resection, difficult primary THR, revision surgery and for the treatment of any intra- and periarticular pathology. It is the standard approach for open treatment of femoroacetabular impingement (FAI), where it has proven its safety regarding the femoral head perfusion.<sup>2</sup>

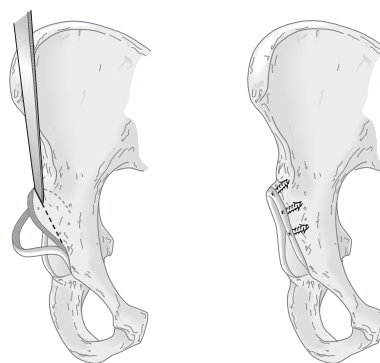


Subtilis Chisels are handmade from extra-high quality steel; Subtilis Retractors are specially designed for high soft-tissue protection and have an antiglare surface treatment.



Femoroacetabular impingement FAI

Resection

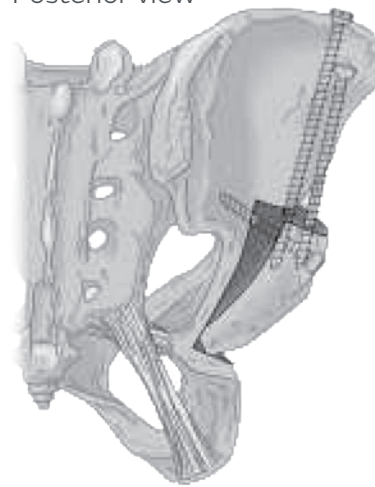


# Periacetabular Osteotomy (PAO)

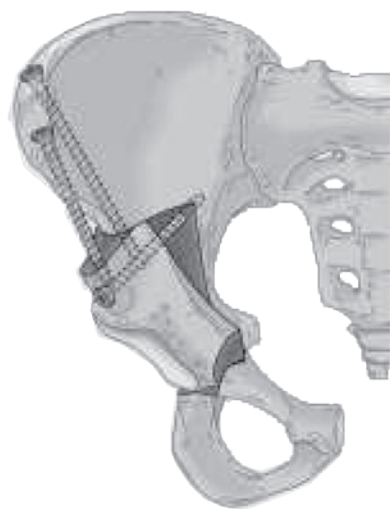
Acetabular dysplasia is a significant cause of osteoarthritis of the hip in young people. Patients will have pain and a limp reducing the activity substantially. Early corrective attempts of acetabular dysplasia have been augmentation procedures (Shelf, Chiari). More recent approaches deal with realignment of the acetabulum over the femoral head. One of the most powerful osteotomies for realignment is the Bernese Periacetabular Osteotomy (PAO)<sup>3</sup>. It aims for restoring a normal hip anatomy, allowing more physiological load distribution in the acetabular cartilage followed by decreased pain and increased activity. The Bernese Periacetabular Osteotomy has become one of the most successful joint-preserving procedures of the hip.<sup>3</sup>



Posterior view



Anterior view



# SDH Instrumentation

Set No. 75210458 SDH

Complete tray according to Professor Ganz technique



SAP no.	Art no.	Description
55600052	AC 24.51.46-S*	Subtilis Retractor Hosel 100X30mm/250mm
55600051	AC 24.04.52-S*	2X Subtilis Retractor Kocher 70X25mm/240mm
55600055	AC 24.10.56-S*	Subtilis Retractor Dockhorn 80X14mm/220mm
55600054	AC 24.10.51-S*	Subtilis Retractor Dockhorn 55 X14mm/220mm
55600056	AC 24.51.36*	2X Subtilis Bone Lever Hohmann 8mm/220mm
55600058	AC 24.51.38*	2X Subtilis Bone Lever Hohmann 18mm/370, 240mm
55600060	AC 24.51.40*	2X Subtilis Hip Lever 24mm blunt/270mm
55600091	AC 35.57.61*	Subtilis Osteotome Lambotte curved 10mm/250mm
55600092	AC 35.57.66*	Subtilis Osteotome Lambotte curved 15mm/250mm
55600093	AC 35.57.71*	Subtilis Osteotome Lambotte curved 20mm/250mm
55600050	AC 22.00.97*	Subtilis Nerve Root Retractor Cushing 10mm/280mm
75103480	AC BC552*	Durotip HM-Scissor, blade strongly curved 250mm
55600049	AC 16.20.74*	Chisel Extractor Smith-Petersen strongly curved 240mm
55600048	AC 16 .10.11*	Bone Rongeur Stellbrink curved 2mm/170mm
55600065	AC 24.51.48*	Subtilis Bone Lever double angled 15X44mm/280mm
55600067	AC 24.51.52*	Subtilis Bone Lever deep 22/290mm
75007656	990014	EasyTray 76mm
75007661	990019	Easy Tray Lid Plastic
75007679	999997	Silicon Mat 8mm

# PAO Instrumentation

Set No. 75210459 PAO

Complete tray according to Professor Ganz technique



SAP no.	Art no.	Description
55600052	AC 24.04.62-S*	Subtilis Retractor Hosel 100X30mm/250mm
55600051	AC 24.04.52-S*	2X Subtilis Retractor Kocher 70X25mm/240mm
55600054	AC 24.10.51-S*	Subtilis Retractor Dockhorn 55X14mm/220mm
55600053	AC 24.10.50-S*	Subtilis Retractor Dockhorn 40X12mm/220mm
55600056	AC 24.51.36*	2X Subtilis Bone Lever Hohmann 8mm/220mm No. 20
55600058	AC 24.51.38*	2X Subtilis Bone Lever Hohmann 18X37mm/240mm No. 22
55600060	AC 24.51.40*	2X Subtilis Hip Lever 24 mm blunt/270mm No. 24
55600062	AC 24.51.42*	2X Subtilis Bone Lever Ganz, 24mm/270 mm No. 26
55600063	AC 24.51.45*	Subtilis Pubis Lever Ganz, with long beak-shaped 22/260mm No. 27
55600064	AC 24.51.46*	Subtilis Pubis Retractor Ganz, with short beak 22/260mm No. 28
55600081	AC 29.20.20*	Raspatory Wagner with blue Plastic-Handle 8 mm 330 mm
55600086	AC 35.14.15*	PAO-Chisel Ganz, with plastic handle curved blade 15mm/300mm
55600087	AC 35.14.20*	PAO-Chisel Ganz, with plastic handle curved blade 20mm/300mm
55600047	AC 13.33.12*	Bone Spread Forceps Subtilis curved jaw width 12mm, 280mm long
55600046	AC 13.33.08*	Bone Spread Forceps Subtilis curved jaw width 8mm, 280mm long
75103481	AC 09.00.43*	Capsule Clamp
55600044	AC 04.71.15*	Dissecting Scissors Walden-Marshall curved 23 cm 1 blade serrated
55600045	AC 07.20.15*	Tissue Forceps Adson fine, 1x2 teeth, 1.2 mm, 15 cm

# PAO Instrumentation continued

Set No. 75210459 PAO

Complete tray according to Professor Ganz technique



SAP no.	Art no.	Description
55600049	AC 16.20.74*	Chisel Extractor Smith-Petersen strongly curved 240mm
55600085	AC 35.12.20*	Subtilis Chisel Lexer straight long blade plastic handle with Impact plate 20mm/230mm
55600084	AC 35.12.15*	Subtilis Chisel Lexer straight long blade plastic handle with Impact plate 15mm/230mm
55600083	AC 35.12.10*	Subtilis Chisel Lexer straight long blade plastic handle with Impact plate 10mm/230mm
55600090	AC 35.54.71*	Subtilis Osteotome Lambotte straight 20mm/250mm
55600089	AC 35.54.66*	Subtilis Osteotome Lambotte straight 15mm/250mm
55600088	AC 35.54.61*	Subtilis Osteotome Lambotte straight 10mm/250mm
55600079	AC 29.09.14-S*	Subtilis Raspatory w. blue plastic handle curved 14mm round blade 185mm
55600078	AC 29.04.06-S*	Raspatory blue plastic handle slightly curved round blade 6mm/185mm
55600093	AC 35.57.71*	Subtilis Osteotome Lambotte curved 20mm/250mm
55600092	AC 35.57.66*	Subtilis Osteotome Lambotte curved 15mm/250mm
55600091	AC 35.57.61*	Subtilis Osteotome Lambotte curved 10mm/250mm
55600080	AC 29.11.22*	Raspatory straight with conical lap and round blade 20mm/240mm
55600082	AC 29.51.48*	Elevator Langenbeck 10mm/200mm
SM122713	122713	4 Hex Fix Titanium Pin Ø 5X50 (190mm)
55600094	AC 36.51.00*	4-Edge Awl with Plastic-Handle 200mm
75007656	990014	EasyTray 76mm
75007661	990019	Easy Tray Lid Plastic
75007679	999997	Silicon Mat 8mm





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#### References

1. Ganz R, Gill TJ, Gautier E, Ganz K, Krügel N, Berlemann U, Surgical dislocation of the adult hip - a technique with full access to the femoral head and acetabulum without risk of avascular necrosis. JBJs Br. 2001;83-B(8):1119-24 2. Nötzli HP, Siebenrock KA, Hempfing A, Ramseier LE, Ganz R. Perfusion of the femoral head during surgical dislocation of the hip, Monitoring by Laser Doppler Flowmetry. JBJs Br. 2002;84-B(2):300-4 3. Leunig M, Ganz R. Bernese periacetabular osteotomy. Current Orthopaedics. 2007;21(2):100-108

