

## Pelvic Osteotomies

Classification		
Redirectional	Shape-changing	Augmentation
Reorient the existing acetabulum Do not change its shape	Changes the shape of the acetabulum by ‘folding down’ the roof Makes it smaller	Adds weight-bearing surface to the existing acetabulum

Osteotomies					
Redirectional		Shape-changing		Augmentation	
<b>Salter</b>	1 cut	<b>Dega</b>	Hinge in roof	<b>Chiari</b>	Shift ilium
<b>Sutherland*</b>	2 cuts	<b>Albee</b>	Hinge in roof	<b>Staheli</b>	Add graft
<b>Steel</b>	3 cuts	<b>San Diego</b>	Hinge in roof		
<b>Eppright*</b>	<i>Cylindrical</i>	<b>Pemberton</b>	Hinge in triradiate cartilage, bigger fold		
<b>Wagner*</b>	<i>Spherical</i>				
<b>Carljos*</b>	3 cuts close				
<b>Tonnis</b>	3 cuts even closer				
<b>Ganz</b>	Periacetabular				

\* = Historical interest

Effects		
Redirectional	Shape-changing	Augmentation
Bearing surface is articular cartilage Immediate congruency Shown in order of increasing versatility and increasing technical difficulty Salter limited to 13° additional coverage Ganz & Tonnis unlimited	Bearing surface is articular cartilage Hinge produces a ‘corner’ that must be remodeled into round, requiring future remodeling potential	Bearing surface is capsule Chiari provides immediate bony stability Staheli can be made as large and as round as desired

Prerequisites		
Redirectional	Shape-changing	Augmentation
Congruent (spherical ) hip Adequately large weight-bearing surface Salter requires CE angle > 5° pre-op	Saucer-shaped acetabulum Arthrogram to demonstrate space for the ‘fold’ Age 6 or younger	Chiari requires sufficient thickness of ilium at level of cut, therefore minimal proximal migration Staheli requires stable position while healing

Preference		
Redirectional	Shape-changing	Augmentation
First choice	Second choice	Third choice (‘salvage’)

Minimal pediatric orthopaedic armamentarium		
Redirectional	Shape-changing	Augmentation
Salter – the easy one Ganz or Tonnis – the versatile ones	Pemberton – for severe dysplasia Another one – for less severe dysplasia	Staheli – for almost all cases Chiari – femoral head cannot be held in stable position

Bottom line: Know 6 of the 14