

GRAF'S METHOD

PREVENTION PROGRAMME – DEVELOPMENTAL DYSPLASIA AND LUXATION OF THE HIP

Classification according to Graf	Bony Acetabulum Alpha Bony Angle	Acetabulum Rim	Cartilaginous Acetabulum Beta Cartilaginous Angle	Age	Therapy
TYPE I normal hip	good $\alpha \geq 60^\circ$	la angular lb smoothed	covering la $\beta < 55^\circ$ (thin, well-covering) la $\beta > 55^\circ$ (large base, thin covering)	any age	Prevention (from birth to ultrasound scanning)
TYPE IIa (+) developmentally immatur, adequate to age	sufficient with respect to age $\alpha = 50-59^\circ$ (sufficiently well-developed – see scanmeter)	rounded	covering	0-12 weeks	orthopaedic examination
TYPE IIa (-) developmentally immature, maturity deficiency	abnormal $\alpha = 50-59^\circ$ (insufficiently well-developed – see scanmeter)	rounded	covering	> 6-12 weeks	orthopaedic examination
TYPE IIb late ossification	normal $\alpha = 50-59^\circ$	rounded	covering	> 12 weeks	orthopaedic examination
Exception: TYPE II in case of late ossification	abnormal	angular	covering (exogenous because of late ossification)	any age	orthopaedic examination
TYPE IIc (decentring hip) IIc stable/IIc unstable	severely abnormal $\alpha = 43-49^\circ$	rounded/ flat	slightly covering $\beta < 77^\circ$	any age	orthopaedic examination
TYPE D hip about to decentring $\beta > 77^\circ$	severely abnormal $\alpha = 43-49^\circ$	rounded/ flat	compressed $\beta > 77^\circ$	any age	orthopaedic examination
TYPE IIIa decentred hip $\alpha < 43^\circ$	insufficient $\alpha < 43^\circ$	flat	cranially compressed, without alteration of the cartilaginous roof (absence of echogenicity)	any age	orthopaedic examination
TYPE IIIb decentred hip $\alpha < 43^\circ$	insufficient $\alpha < 43^\circ$	flat	cranially compressed, without alteration of the cartilaginous roof (absence of echogenicity)	any age	orthopaedic examination
TYPE IV decentred hip $\alpha < 43^\circ$	insufficient $\alpha < 43^\circ$	flat	caudally compressed, proximal perichondrium with horizontal or lowering course	any age	orthopaedic examination

