

Corporate Ergonomics

Neutral Joint Positions – Hands / Arms / Shoulders

Evaluation of Joint Positions

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Positions: Hands / Arms / Shoulders



Ergonomics
Corporate Safety & Health

CBS
Continental Business System





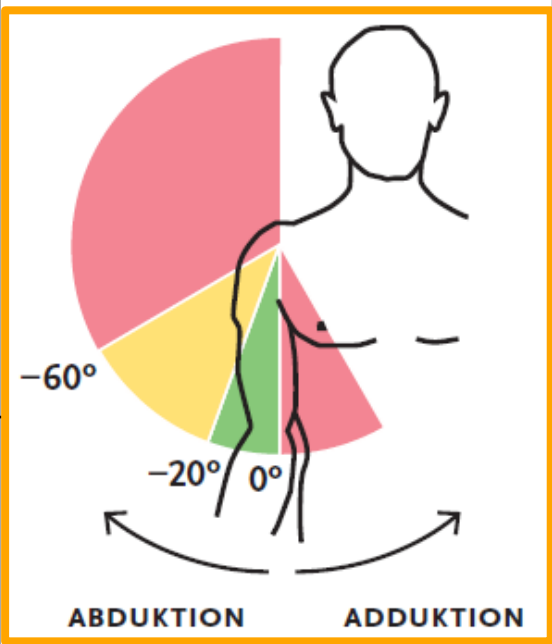
Definition of colors:

Green: Optimal. This posture is allowed to be adopted **for a long time.**

Yellow: Still acceptable body posture. This posture is only allowed to be adopted for a **short period of time** or to perform work-tasks with **low frequencies.**

Red: Extremely awkward body posture. **Has to be avoided!**

Shoulder Joint Adduction / Abduction

Shoulder Joint			Neutral (natural) Body Posture	Awkward Body Posture	
Source: German BGIA-Report 2/2007 Acc. To DIN EN 1005-4; German A 55			Optimal	Still acceptable posture	Extremely awkward posture
	To the body = Adduction	+	0°		> 0°
	From the body = Abduction	-	0° to -20°	-20° to -60°	< -60°

Shoulder Joint Flexion / Extension



Shoulder Joint		Neutral (natural) Body Posture	Awkward Body Posture	
Source: German BGIA-Report 2/2007 Acc. To DIN EN 1005-4; German A 55		Optimal	Still acceptable posture	Extremely awkward posture
	Forwards (Flexion) +	0°-20°	20°-60°	> 60°
	Backwards (Extension) -			< 0°

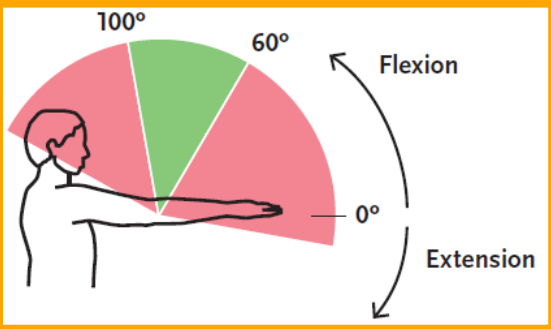
Shoulder Joint Pronation / Supination



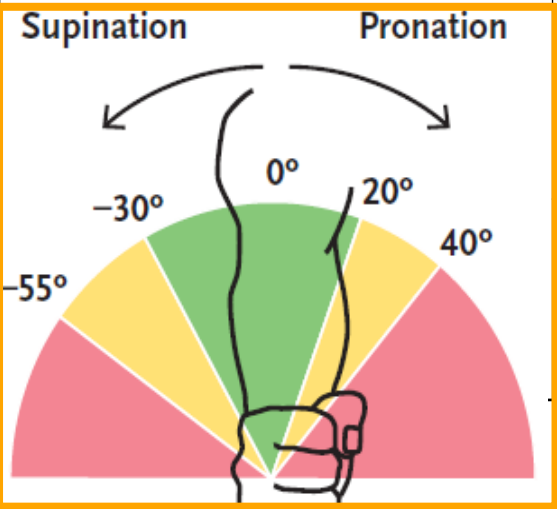
Shoulder Joint		Neutral (natural) Body Posture	Awkward Body Posture	
Source: German BGIA-Report 2/2007 German A 55		Optimal	Still acceptable posture	Extremely awkward posture
	Pronation (to the body) +	0°-30°	30°-60°	> 60°
	Supination (from the body) -	0° to -15°	-15° to -30°	> -30°

Cubital Joint Flexion / Extension



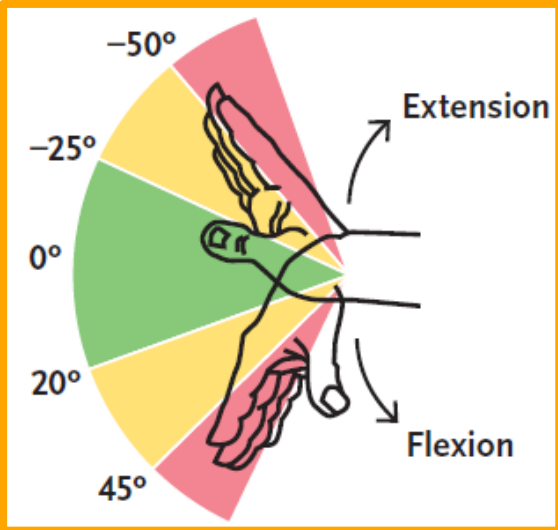
Cubital Joint			Neutral (natural) Body Posture	Awkward Body Posture	
Source: German BGIA-Report 2/2007 Acc. To DIN EN 1005-4; German A 55			Optimal	Still acceptable posture	Extremely awkward posture
	Flexion	+	60°-100°		> 100°
	Extension	-	60°-100°		< 60°

Lower Arm Pronation / Supination

Lower Arm			Neutral (natural) Body Posture	Awkward Body Posture	
Source: German BGIA-Report 2/2007 German A 55			Optimal	Still acceptable posture	Extremely awkward posture
	Pronation	+	0° to 20°	20° to 40°	> 40°
	Supination	-	0° to -30°	-30° to -55°	> -55°

Wrist Flexion / Extension

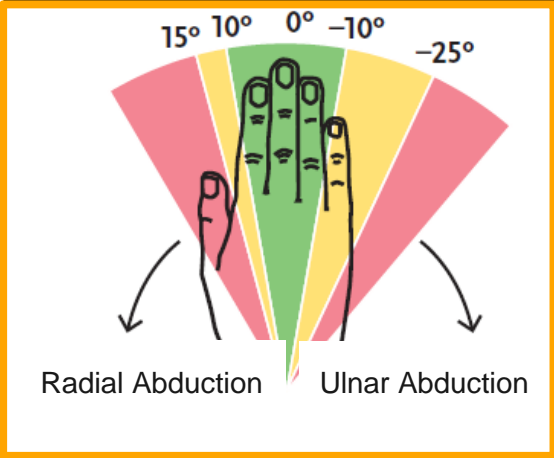


Wrist			Neutral (natural) Body Posture	Awkward Body Posture	
Source: German BGIA-Report 2/2007 / German A 55			Optimal	Still acceptable posture	Extremely awkward posture
	Extension	-	0° to -25°	-25° to -50°	> -50°
	Flexion	+	0° - 20°	20° - 45°	> 45°

Wrist

Radial Abduction / Ulnar Abduction



Wrist			Neutral (natural) Body Posture	Awkward Body Posture	
Source: German BGIA-Report 2/2007 German A 55			Optimal	Still acceptable posture	Extremely awkward posture
	Radial Abduction	+	0°-10°	10°-15°	> 15°
	Ulnar Abduction	-	0° to -10°	-10° to -25°	< -25°