

Detection and Management High Blood Pressure



Common Errors of BP Measurement

Error	Effect Systolic/Diastolic	What to do to correct error
Sitting with back unsupported	+6-10/ unknown	Support back (Sit in chair . Do not take on exam table)
Full bladder	+ \geq 10-15 / +10	Empty bladder before measurement
Tobacco/caffeine use and Exercise	+6-20 / unknown	Advise patient to avoid for 30 minutes before measurement
“White Coat” effect	+11-30	Have someone else take measurement Use home measurements
Talking, hand gestures or active listening	+7-10 / +10	No talking during measurement
Cuff to long or wide	False low	Choose correct size cuff—Bladder length at least 80% and width at least 40% of arm circumference. When in doubt use larger cuff.
Cuff to short or narrow	+ \geq 10 / +2-8	
Cuff not centered over brachial artery	+4	Center bladder over brachial artery
Cuff applied over clothing	+5-50/ unknown	Apply cuff to a bare arm
Arm not at heart level . BP taken .. Above heart level Below heart level Parallel to body	False low False high +9-13/unknown	Adjust table or chair so arm rests on firm surface at heart level For every 1” above or below heart level, the reading may be off by 2mm Hg
Arm not supported on firm surface	+1-10 / +5-11	Rest arm on firm surface. Do not hold patient’s arm
Not resting 5 minutes before taking the measurement	+	Take measurement after 5 minute rest or at end of visit
Feet not flat on floor or legs crossed	+ 2-8/	Have patient sit with feet flat on the floor
Deflation rate faster than 2-3 mm Hg	Underestimates/ overestimates	Train examiners to deflate cuff at a rate of 2-3 mm Hg
Not determining the maximum inflation level	Underestimate systolic or miss auscultatory gap	Train examiners to estimate systolic, then add 20-30 mm Hg to the pulse obliteration point
Heavy pressure on the stethoscope	Pulse may be heard below systolic or to zero	Use light pressure to hold stethoscope in place
Failure to detect auscultatory gap	Record a falsely lower systolic	Train examiners to estimate systolic & determine the maximum inflation level

Source: (Pickering et al., 2005; Perry & Potter, 2006; Handler, 2009)