

Blood Press Monit. 2014 Jun;19(3):176-9. doi: 10.1097/MBP.0000000000000030.

Validation of the Thermor BIOS BD215 device for home blood pressure measurement according to the European Society of Hypertension International Protocol revision 2010.

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The objective of this study was to determine the accuracy of the Thermor BIOS BD215 device for home blood pressure (BP) measurement according to the International Protocol of the European Society of Hypertension (ESH). Device evaluation was carried out in 33 patients. The mean age of the patients was 57.0 ± 15.0 years, the mean systolic BP was 142.0 ± 20.3 mmHg (range 100-177 mmHg), the mean diastolic BP was 88.0 ± 14.6 mmHg (range 48-123 mmHg), and the mean arm circumference was 28.0 ± 3.0 cm (range 24-33 cm). The protocol requirements were followed precisely. The device passed all requirements, fulfilling the standards of the protocol. On average, the device overestimated the systolic BP by 0.6 ± 4.2 mmHg and underestimated diastolic BP by -0.5 ± 3.2 mmHg. The device-observer discrepancies were unrelated to patients' clinical characteristics. These data show that the Thermor BIOS BD215 device fulfilled the requirements for validation by the International Protocol and can be recommended for clinical use in the adult population.

PMID: 24589529 [PubMed - indexed for MEDLINE]