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Validation of the A&D BP UB-542 wrist device for home blood pressure measurement according to the European Society of Hypertension International Protocol revision 2010.

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OBJECTIVE: The objective of this study was to determine the accuracy of the A&D BP UB-542 wrist device for home blood pressure (BP) measurement according to the International Protocol of the European Society of Hypertension (ESH). METHODS: Device evaluation was carried out in 33 patients. The mean age was 50.9 ± 10.1 years, the mean systolic BP was 141.6 ± 22.8 mmHg (range 92:189), the mean diastolic BP was 89.2 ± 11.4 mmHg (range 62:120), the mean arm circumference was 28.8 ± 3.2 cm (range 23-35), and the mean wrist circumference was 17.1 ± 1.4 cm (range 14-19.5). The protocol requirements were followed precisely. RESULTS: The device passed all requirements, fulfilling the standards of the protocol. On average, the device overestimated the systolic BP by 1.8 ± 7.2 mmHg and diastolic BP by 1.6 ± 5.7 mmHg.

CONCLUSION: These data show that the A&D BP UB-542 wrist device met the requirements for validation by the International Protocol and can be recommended for clinical use in the adult population.

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