Methods. Fifty-one patients (37M:14F; mean±SD age: 58.5±9.9y; body mass index: 27.9±3.9kg/m²) with hypertension arrived at our clinic between 8 and 10 am after a 12 hour fast, without taking antihypertensive agents that morning. Upon arrival, patients sat in a quiet room and had their office BP measured with a mercury sphygmomanometer and appropriately sized cuff (1) once after 5-min and (2) multiple times (at 2 to 3 min intervals) after 15-min, until two consecutive readings were obtained that differed less than 5 mm Hg for both systolic and diastolic BP. Immediately following, patients were fitted with a SpaceLabs 90207 ambulatory blood pressure monitor which was worn for a complete 24 hours; all monitors were programmed to measure BP at 15-min intervals from 7am-10pm and at 20-min intervals from 12am-7am.

Results. After 5 min of sitting, mean±SD of systolic/diastolic BP was 137.5±14.6/89.0±10.4 mm Hg. The first BP measurement after 15-min of sitting was significantly lower for both systolic and diastolic BP, equaling 131.5±13.6 and 86.5±10.5 mm Hg, respectively (p<0.001 each). The average of two consecutive measures after 15-min of sitting was lower for both systolic and diastolic BP, equaling 129.0±12.6 mm Hg (p<0.001 vs 5-min and first measure at 15-min) and 85.9±10.2mm Hg (p<0.001 vs. 5-min), respectively. 24-hr ambulatory systolic/diastolic BP was 131.7±11.3/81.3±8.3 mm Hg. Multiple regression showed that the readings after 15-min of sitting compared to the reading after 5-min of sitting, for systolic and diastolic BP, better predicted 24-hr systolic and diastolic ambulatory BP, respectively. Office systolic and diastolic BP readings after 15-min of sitting as compared to after 5 min of sitting accounted for 10% and 7% more of the variation in 24-hr systolic and diastolic BP, respectively. In addition, of the 30 patients who had an office systolic BP >140 mm Hg or diastolic BP >90 mm Hg after 5-min of sitting, 13 of them had both systolic and diastolic BP <140/90 on two consecutive readings after 15-min.

Conclusions. Extending the sitting time before office BP measurements in individuals with hypertension yields a reading that is significantly lower, and better predictive of 24-hr ambulatory BP.

Key Words: Sitting Time, Office Blood Pressure, 24-Hour Ambulatory Blood Pressure

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REPRODUCIBILITY OF HOME AND AMBULATORY BLOOD PRESSURE IN CHILDREN AND ADOLESCENTS
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To evaluate the reproducibility of home blood pressure (HBP) in comparison to ambulatory (ABP) and clinic blood pressure (CBP) in children and adolescents.

Fourteen subjects referred for elevated CBP were included (mean age 13.1±2.8 [SD] years, range 8 to 17, 8 boys). According to Task Force CBP criteria, 6 subjects were classified as hypertensives, 3 as borderline hypertensives and 5 as normotensives. CBP was measured in 2 visits, HBP on 5 days and ABP for 24 hours. A second session including all the above CBP, HBP and ABP measurements was performed after 8 weeks. The reproducibility of the CBP (average of 2nd visit of each session), HBP (average of days 2–5 of each session) and ABP (average 24-hour, awake and asleep) was quantified using test-retest correlations coefficients and the standard deviation of differences between repeated measurements.

The reproducibility of HBP was superior to that of CBP. ABP appeared to provide the most reproducible values whereas aspects of the diurnal BP variation were poorly reproducible (Table).

These data suggest that home BP measurements are more reproducible than clinic BPs. However, ambulatory BP monitoring appears to provide the most reproducible blood pressure values. The nocturnal decline in ambulatory BP is poorly reproducible.

Key Words: Home Blood Pressure, Ambulatory Blood Pressure, Children Reproducibility

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THE EFFECTS OF EXTENDED DUTY HOURS ON AMBULATORY BLOOD PRESSURES IN INTERNAL MEDICINE, PEDIATRIC, AND MED-PEDS RESIDENTS
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This study is designed to evaluate the cardiovascular effects of extended duty hours on physicians-in-training, with particular attention to blood pressure. Much attention has been placed on extended resident duty hours and their effects on residency training. Recent duty hour limitations have been implemented to protect the safety of both the residents and the patients in their care. In addition to observational evidence of the negative effects of sleep deprivation on patient care, several studies have documented reduced response times, increased medical mistakes, and cognitive slowing during extended duty hours. Although other markers of fatigue have been studied, no study has focused on the individual effects of extended duty hours on blood pressure. We studied blood pressure responses in categorical internal medicine, categorical pediatric, and combined medicine and pediatrics residents during typical on-call, post-call, and off-call days. Using sequential ambulatory blood pressure monitoring and the off-call period as the individual resident’s control, results indicate rises in all components of blood pressure while on-call. A respective 17.5% and 22% increase in the nighttime mean arterial and diastolic pressures while on-call was observed. These elevations may represent a surrogate marker for resident fatigue as well as cumulative health risk for individual residents while in training during extended duty hours.

Key Words: Ambulatory Blood Pressure Monitor, Medicine and Pediatric Residents, Duty Hours

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BLOOD PRESSURE AND PULSE DYNAMICS QUANTIFY EVERYDAY LIFE’S EMOTIONS — IF EXCESSIVE BY CIRCADIAN OVERSWINGING, CHAT
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Objective: To assess the incidence and duration of changes in circadian amplitude and acrophase as a gauge of emotional or other load.

Subjects and Methods: Clinically healthy individuals 18 years of age or older used ambulatory blood pressure and heart rate monitors (A D TM 2421) recording half-hourly around the clock for at least 7 days, in some cases for months or years. The monitor operates with an automa-