

Response to “Assessment of Blood Pressure Dipping: Is the Evaluation Method Important?”

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To the Editor: We appreciate the interest of Dr Sobczewski and Dr Wirtwein in our study “Step Count is Associated With Lower Nighttime Systolic Blood Pressure and Increased Dipping.”¹ This study, which included patients referred for ambulatory blood pressure (ABP) monitoring, shows that step count is associated with lower nighttime systolic blood pressures (BP) and increased systolic and diastolic BP dipping. In a secondary analysis, we showed that the step count increases from reverse dippers to extreme dippers using mean BP to categorize the participants’ dipping status. It is true that most clinical trials on the prognostic value of BP dipping have focused on systolic BP rather than mean or diastolic BP because, with age, there is a gradual shift from diastolic BP to systolic BP as predictors of coronary heart disease.² In our study, which included young to elderly participants, replacing mean BP dipping by systolic or diastolic BP dipping to categorize dipping status did not change the association between step count and dipping categories (Table 1).

Table 1. Step count across different dipper categories for systolic and diastolic blood pressure dipping

Step count ^a	Reverse dippers	Nondippers	Dippers	Extreme dippers	P for trend
1	4,460 ± 1,960	6,760 ± 2,960	8,960 ± 3,540	7,910 ± 3,740	0.023
2	4,740 ± 1,880	6,350 ± 2,530	8,740 ± 3,880	8,250 ± 3,620	0.007

Data are presented as means ± standard deviation.

^a1: dipping categories based on systolic blood pressure dipping. 2: dipping categories based on diastolic pressure dipping.

It is true that ABP is not necessary to diagnose hypertension according to European Society of Hypertension guidelines. However, this is essentially for practical reasons: cost and availability. The prognosis value of ABP is undoubtedly more accurate than office BP,^{3,4} and some of the latest guidelines, such as those of the National Institute for Health and Clinical Excellence (NICE), have recommended a wider use of ABP.⁵ In this regard, we would like to emphasize that the prevalence of white coat hypertension and masked hypertension in our participants without antihypertensive treatment was 22% and 27%, respectively. Misclassifying patients may result in unnecessary treatments or failure to treat patients at risk.

Data about secondary hypertension or the timing of drug taking, which are known to affect BP dipping, were not recorded in this study. An influence of these variables on BP dipping can therefore not be excluded. Blockers of the renin angiotensin system, beta-blockers, calcium channel blockers, and diuretics were not associated with BP dipping. However, the study was not designed to answer this specific question and may therefore not be sufficiently powered to resolve this issue.

DISCLOSURE

The authors declared no conflict of interest.

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Initially submitted May 22, 2013; accepted for publication May 23, 2013.

doi:10.1093/ajh/hpt097

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