

The Benefits of Polypill: Adherence and Chronotherapy [Response to Letter]

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Dear editor

We would like to acknowledge the interest of Zhu and Zhou¹ in our article² showing the beneficial effect of polypill on medical adherence and on the improvement of cardiovascular outcomes. In his letter, the above authors discuss the eventual role of the time of the oral administration of polypill, suggesting that bedtime could be more appropriate as demonstrated by the only work that has investigated the circadian effect of polypill administration.³ In our metaanalysis, except for the refereed article of Lafeber et al,³ most of the other articles reported that the polypill was administered once a day with the timing suggested by the physician and others not reported the time of administration. We agree that circadian rhythms are crucial for maintaining vascular function and that disruption of these rhythms are associated with cardiovascular disease, atherosclerosis, and hypertension.^{4,5} Moreover, as cited by the Zhu and Zhou exit evidence about the optimal time to administer once-daily oral cardiovascular drugs. However, in our view, we will need more studies confirming the advantage of administering the polypill it in the evening or at bedtime. By now the important news is that polypill has been included in the World Health Organization Model List of Essential Medicines.

Disclosure

The authors report no conflicts of interest in this communication.

References

1. Ling-Ling Z, Zhou Q. Polypill brings benefits to patients with cardiovascular disease, both improving medication adherence and demonstrating the concept of chronotherapy [Letter]. *Vasc Health Risk Manag.* 2023;19:659–660. doi:10.2147/VHRM.S440353
2. Lopez-Lopez JP, Gonzalez AM, Lanza P, Lopez-Jaramillo P. Benefits of the polypill on medication adherence in the primary and secondary prevention of cardiovascular disease: a systematic review. *Vasc Health Risk Manag.* 2023;19:605–615. doi:10.2147/VHRM.S421024
3. Lafeber M, Grobbee DE, Schrover IM, et al. Comparison of a morning polypill, evening polypill and individual pills on LDL-cholesterol, ambulatory blood pressure and adherence in high-risk patients; a randomized crossover trial. *Int J Cardiol.* 2015;181:193–199. doi:10.1016/j.ijcard.2014.11.176
4. Csoma B, Bikov A. The role of the circadian rhythm in dyslipidemia and vascular inflammation leading to atherosclerosis. *Int J Mol Sci.* 2023;24(18):14145. doi:10.3390/ijms241814145
5. Park S, Ihm SH, Cho JJ, et al. Statement on chronotherapy for the treatment of hypertension: consensus document from the Korean society of hypertension. *Clin Hypertens.* 2023;29(1):25. doi:10.1186/s40885-023-00249-2

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