

# Taking blood pressure drugs at night slightly improves control

October 7 2011, By Milly Dawson

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Patients who take certain popular types of blood pressure medication once a day are able to achieve somewhat better control of their hypertension if they take their daily dose at bedtime, according to a new systematic review. This finding throws into question the usual way in which most people with hypertension take their blood pressure drugs, whether singly or in combination, first thing in the morning upon arising.

The researchers evaluated the results of 21 [randomized controlled trials](#) of at least three weeks duration that cumulatively involved 1,993 patients with primary [hypertension](#). This new review builds upon a well-recognized phenomenon: blood pressure fluctuates in a daily cycle or circadian rhythm. For a great many people who [sleep](#) at night and are active by day, blood pressure surges early in the morning.

“The morning surge in blood pressure is known to raise a person’s risk for adverse myocardial events, such as a heart attack or a stroke, in the first few hours after he or she awakens,” commented lead author Ping Zhao, Ph.D., a research librarian at Sichuan University in China.

High blood pressure, also called hypertension, is defined as resting levels of 140/90 millimeters of mercury or more, affects about 20 percent of adults worldwide. Hypertension is associated with an increased risk of cardiovascular disease and death.

“I think most doctors just write ‘daily’ on the prescriptions and don’t even think about the timing,” said Luci Belnick, MD, an internal medicine specialist, adding that for years she has insisted upon her patients taking their [blood pressure medication](#) at night, especially if they were taking only one drug for the condition.

She added that it makes no sense for people with hypertension to take their medications early in the morning, which is when many people take them. “That pretty much guarantees that the medicine is at its lowest level right when the patient needs it most,” Belnick said.

Zhao said evidence has been growing that morning consumption of blood pressure medications means that the full effects take hold during midday, with lesser effects at night and in the early morning, while [bedtime](#) consumption of the drugs leads to the greatest effects during the nighttime and the early morning. There had been, however, no systematic review of the evidence conducted to confirm these findings.

Both Belnick and Zhao emphasized that the finding may hold great importance for people who have hypertension, as well as for the physicians and allied health professionals who treat them. While the review found that taking some medications at night led to lower [blood pressure](#), a limitation of the review noted that none of the studies

reviewed included information about clinical outcomes such as stroke or heart attack. Whether nighttime dosing decreases the risk of early morning cardiovascular events remains unknown.

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