

Midday naps associated with reduced blood pressure and fewer medications

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Credit: Vera Kratochvil/public domain

Midday naps are associated with reduced blood pressure levels and

prescription of fewer antihypertensive medications, according to research presented at ESC Congress today by Dr Manolis Kallistratos, a cardiologist at Asklepieion Voula General Hospital in Athens, Greece.

"Although William Blake affirms that it is better to think in the morning, act at noon, eat in the evening and sleep at night, noon sleep seems to have beneficial effects," said Dr Kallistratos. "Two influential UK Prime Ministers were supporters of the midday nap. Winston Churchill said that we must sleep sometime between lunch and dinner while Margaret Thatcher didn't want to be disturbed at around 3:00 pm. According to our study they were right because midday naps seem to lower [blood pressure levels](#) and may probably also decrease the number of required antihypertensive medications."

He added: "Midday sleep is a habit that nowadays is almost a privileged due to a nine to five working culture and intense daily routine. However the real question regarding this habit is: is it only a custom or is it also beneficial?"

The purpose of this prospective study was to assess the effect of midday sleep on blood pressure (BP) levels in hypertensive patients. The study included 386 middle aged patients (200 men and 186 women, average age 61.4 years) with arterial hypertension. The following measurements were performed in all patients: midday sleep time (in minutes), office BP, 24 hour ambulatory BP, pulse wave velocity,² lifestyle habits, body mass index (BMI) and a complete echocardiographic evaluation including left atrial size.³ BP measurements were reported as diastolic and systolic BP.⁴

After adjusting for other factors that could influence BP such as age, gender, BMI, smoking status, salt, alcohol, exercise and coffee, the researchers found that midday sleepers had 5% lower average 24 hour ambulatory systolic BP (6 mmHg) compared to patients who did not

sleep at all midday. Their average systolic BP readings were 4% lower when they were awake (5 mmHg) and 6% lower while they slept at night (7 mmHg) than non-midday sleepers (Figure 1).

Dr Kallistratos said: "Although the mean BP decrease seems low, it has to be mentioned that reductions as small as 2 mmHg in systolic blood pressure can reduce the risk of cardiovascular events by up to 10%."

The researchers also found that in midday sleepers pulse wave velocity levels were 11% lower and left atrium diameter was 5% smaller. "These findings suggest that midday sleepers have less damage from high blood pressure in their arteries and heart," said Dr Kallistratos.

The duration of midday sleep was associated with the burden of arterial hypertension. Patients who slept for 60 minutes midday had 4 mmHg lower average 24 hour systolic BP readings and a 2% higher dipping status⁵ compared to patients who did not sleep midday. Dippers had an average of 17 minutes more midday sleep than non-dippers.

Dr Kallistratos said: "Our study shows that not only is midday sleep associated with lower blood pressure, but longer sleeps are even more beneficial. Midday sleepers had greater dips in blood pressure while sleeping at night which is associated with better health outcomes. We also found that hypertensive patients who slept at noon were under fewer antihypertensive medications compared to those who didn't sleep midday."

He concluded: "We found that midday sleep is associated with lower 24 hour [blood pressure](#), an enhanced fall of BP in night, and less damage to the arteries and the heart. The longer the midday sleep, the lower the systolic BP levels and probably fewer drugs needed to lower BP."

More information: Dr Kallistratos will present the abstract

'Association of mid-day naps occurrence and duration with BP levels in hypertensive patients. A prospective observational study'

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