



## Sleep Requirements for Hypertensive Patients

Quality sleep plays a significant role in blood pressure regulation. Poor sleep patterns, including short sleep duration, fragmented sleep, and sleep disorders like obstructive sleep apnea (OSA), can contribute to hypertension and increase cardiovascular risk.

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### 1. Recommended Sleep Duration

| Age Group | Ideal Sleep Duration |
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| Adults (18–64 years) | 7–9 hours per night |
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| Elderly (65+ years) | 7–8 hours per night |
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- ✓ Consistent sleep patterns help in BP regulation.
- ✓ Sleeping less than 6 hours per night increases hypertension risk.

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### 2. How Sleep Affects Blood Pressure

- ✓ Sleep regulates blood pressure through the autonomic nervous system.
- ✓ During deep sleep (non-REM sleep), BP drops by 10–20% (known as "nocturnal dipping"), which helps the heart recover.
- ✓ Poor sleep = higher nighttime BP = increased cardiovascular risk.

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### 3. Sleep Disorders & Hypertension

#### a) Obstructive Sleep Apnea (OSA) & Hypertension

- ✓ OSA is a major cause of resistant hypertension (BP that remains high despite 3+ medications).
- ✓ Symptoms: Loud snoring, daytime sleepiness, morning headaches, frequent nighttime awakenings.
- ✓ OSA leads to repeated oxygen deprivation, causing BP spikes and increased heart strain.

Solution:

- Sleep study (Polysomnography) to diagnose OSA.
- CPAP (Continuous Positive Airway Pressure) therapy reduces BP in OSA patients.

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#### b) Insomnia & Hypertension



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✓ Chronic insomnia increases stress hormones (cortisol, adrenaline), leading to high BP.

✓ Poor sleep quality worsens BP control, even in medicated patients.

Solution:

- Establish a consistent sleep schedule.
- Limit screen time before bed.
- Practice relaxation techniques (meditation, deep breathing).

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## 4. Tips to Improve Sleep in Hypertensive Patients

✓ Follow a Fixed Sleep Schedule – Sleep & wake up at the same time daily.

✓ Limit Caffeine & Alcohol Intake – Avoid coffee, tea, and alcohol at least 4–6 hours before bedtime.

✓ Reduce Salt & Heavy Meals at Night – Late-night salty foods can cause fluid retention, increasing BP.

✓ Exercise Regularly (But Not Too Late at Night) – Helps regulate BP and improve sleep.

✓ Create a Relaxing Pre-Bed Routine – Reading, meditation, or light stretching can help.

✓ Keep Bedroom Dark, Quiet & Cool – Ideal sleep temperature is 18–22°C.

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## Conclusion

✓ Hypertensive patients should aim for 7–9 hours of good-quality sleep.

✓ Sleep apnea, insomnia, and poor sleep habits worsen BP control.

✓ Improving sleep hygiene can significantly lower BP and improve heart health.