

Does Multinight Quantification of OSA Severity Provide More Precise Estimates of Associations With Incident Hypertension?

STUDY DESIGN

- **3,831** participants without baseline hypertension

Participants had

- ≥ 28 days of nightly apnea-hypopnea index (AHI) recordings via an under-mattress sensor

and

- ≥ 3 separate BP measurements over a 3-month baseline period followed by ≥ 3 separate BP measurements 6 to 9 months postbaseline.



RESULTS

PARTICIPANT CHARACTERISTICS

Mean Age

51 +/- 12 years

Gender

91% men

Mean BMI

28 +/- 5 kg/m²

100% Rate

AHI ≥ 28 nights

42% Rate

Single-night

OUTCOMES

100% of trials **detected** an association with hypertension when AHI was quantified ≥ 28 nights.

Single-night quantification of OSA failed to detect an association with hypertension risk in **42%** of simulated trials ($\alpha = 0.05$).

Night-to-night variability in OSA severity is a major source of variance that negatively impacts the ability to detect associations between OSA severity and health outcomes.