

# OSA and cardiovascular disease

**Obstructive sleep apnea (OSA) affects up to 80% of patients with cardiovascular disease (CVD)<sup>1</sup> yet remains widely underdiagnosed. Identifying and managing this modifiable risk factor offers a critical opportunity to improve outcomes and save lives.**

## Hypertension

### OSA prevalence:

Up to **80%** of patients with resistant hypertension;  
**30–50%** of those with hypertension<sup>1</sup>

### Risk:

OSA is an independent risk factor. Repeated oxygen drops and sympathetic surges make blood pressure harder to control.<sup>3</sup>

### Benefit treating OSA:

Positive airway pressure (PAP) therapy lowers systolic and diastolic blood pressure, especially in resistant hypertension and with good adherence.<sup>3</sup>

## Coronary artery disease (CAD)

### OSA prevalence:

**40–60%** of patients with cardiovascular disease, including CAD<sup>4</sup>

### Risk:

Repeated oxygen drops trigger inflammation and oxidative stress.<sup>5</sup> OSA nearly doubles the risk of major heart events and increases mortality after heart attack.<sup>4</sup>

### Benefit treating OSA:

PAP therapy use  $\geq$  4 hours per night is linked with a lowered risk of future cardiovascular events by  $\sim$ 30%, improved blood pressure and vascular health and some reduction in inflammation.<sup>6</sup>

## Heart failure

### OSA prevalence:

Up to **80%** of patients with chronic heart failure<sup>7</sup>

### Risk:

Untreated OSA increases cardiac strain, causes structural changes and raises mortality risk.<sup>7</sup> Over time, stress worsens heart function and accelerates disease progression.

### Benefit treating OSA:

Consistent PAP therapy use can improve ejection fraction, reverse left atrial enlargement and slow disease progression.<sup>8</sup>

## Arrhythmias (including atrial fibrillation)

### OSA prevalence:

**48%** of patients with OSA experience cardiac arrhythmias in one study<sup>2</sup>; OSA nearly doubles risk of developing atrial fibrillation (AFib)<sup>9</sup>

### Risk:

In people undergoing cardioversion or ablation, untreated OSA is associated with markedly higher AFib recurrence rates, as high as 80% within one year.<sup>10</sup> OSA is also associated with an increased risk of ventricular tachycardia and sudden cardiac death.<sup>10</sup>

### Benefit treating OSA:

PAP therapy use is associated with reduced AFib recurrence after ablation.<sup>11</sup>

## Stroke

### OSA prevalence:

**60–70%** of stroke patients have OSA<sup>12</sup>

### Risk:

Untreated OSA increases stroke risk 2–4 times.<sup>5</sup> Post-stroke OSA is linked to slower recovery and higher mortality.<sup>13</sup>

### Benefit treating OSA:

Early PAP intervention after stroke is associated with improved neurologic recovery and may reduce the risk of recurrence.<sup>13</sup>

## Mortality and overall cardiovascular risk

### Risk:

Untreated moderate-to-severe OSA may increase the risk of cardiovascular death by 2 to 3 times.<sup>14</sup>

### Benefit treating OSA:

A 2025 meta-analysis of 1.1 million patients found that PAP therapy reduced all-cause mortality by 37% and cardiovascular mortality by 55%, with the greatest benefits in adherent patients. Nightly use over 4 hours also lowers the risk of recurrent heart attack or stroke by 31%.<sup>15</sup>

## References

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