

# Sleep apnea and related diseases



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# Symptoms of sleep apnea

- Excessive daytime sleepiness<sup>1</sup>
- Loud, disruptive snoring<sup>1</sup>
- Irregular breathing (gasping, long pauses) during sleep<sup>1</sup>
- Poor concentration and forgetfulness
- Depression or irritability<sup>1</sup>
- Morning headaches<sup>1</sup>
- Waking frequently to urinate<sup>1</sup>
- Dry mouth or sore throat upon awakening<sup>1</sup>



The combination of sleep apnea and other serious diseases can lead to comorbidity

Comorbidity is the condition of having two or more diseases in the body at the same time or back to back. The diseases often last a long time and may be difficult to treat.

## **The health risks of having comorbidity may include:**

- Decline in health<sup>3</sup>
- More frequent doctor visits<sup>3</sup>
- Increased healthcare costs<sup>3</sup>



Untreated sleep apnea may increase the risk of comorbid conditions

**Here are some of the more common comorbid conditions suffered by those with sleep apnea:**

### **High blood pressure**

Sleep apnea is increasingly being recognized as playing a part in the development of high blood pressure while sleeping and awake.<sup>4</sup> High blood pressure is linked to significantly increased risks of stroke and heart attack.

43% of patients with mild sleep apnea and 69% of patients with severe sleep apnea have hypertension.<sup>5</sup>

### **Obesity**

Obesity, carrying an abnormal or excessive amount of body fat, increases the likelihood of having sleep apnea and its effect.<sup>6</sup> Some studies show that sleep apnea may itself cause weight gain.<sup>6,7,8</sup>

60% of adults in industrialized countries are estimated to be overweight, with at least 30% obese.<sup>6,9</sup>

### **Type 2 diabetes**

Sleep apnea has been shown to have an effect on glucose metabolism in people without diabetes. Sleep apnea is a highly prevalent comorbidity in people who have type 2 diabetes.<sup>10</sup>

Approximately 72% of type 2 diabetes patients have sleep apnea.<sup>11</sup>

### **Heart failure**

Heart failure is when the heart is not pumping at full efficiency and, as a result, the body doesn't receive enough circulating oxygen. Sleep apnea also deprives the body of oxygen.

Up to 73% of patients with stable heart failure also have sleep disordered breathing (SDB).<sup>12</sup>

The likelihood that sleep apnea is found in people who have the following diseases is:

83%<sup>13</sup>

**Drug-Resistant Hypertension**  
(high blood pressure)

77%<sup>14</sup>

**Obesity**

76%<sup>15</sup>

**Congestive Heart Failure**

49%<sup>16</sup>

**Atrial Fibrillation**  
(rapid heart rate)

72%<sup>11</sup>

**Type 2 Diabetes**

Learn more about the relationship between these diseases and sleep apnea at [ResMed.com/Relatedconditions](https://www.ResMed.com/Relatedconditions).



CPAP is the most effective and widely accepted treatment for sleep apnea

Continuous positive airway pressure (CPAP) involves using a bedside machine that non-invasively delivers pressurized air through a mask, keeping your upper airway splinted open and helping prevent sleep apneas.\*

Continued CPAP use has been shown to:

- Allow users to get a better night's sleep
- Reduce the symptoms associated with sleep apnea
- Allow users to take back control of their lives

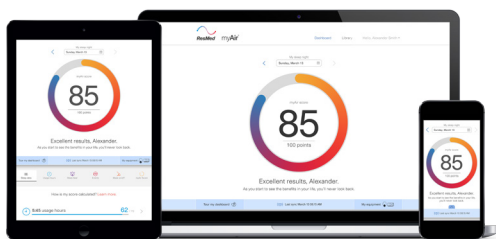
What you can do about sleep apnea

If you have or know someone who has sleep apnea, talk to a physician about getting tested.

\*CPAP is used only for treatment of sleep apnea.

# ResMed Air Solutions gives you the tools to stay engaged

- A full range of CPAP machines
- Lightweight, cutting-edge masks
- myAir™ online support program and app\*
  - Tracks your therapy
  - Tells you how you slept
  - Sends tailored tips via email and text
  - Includes a library of support videos



Patient identity and corresponding data used are fictional.

\*Available with some ResMed devices.

**1** National Heart, Lung, and Blood Institute. What are the Signs and Symptoms of Sleep Apnea? 2012  
**2** Peppard et al. Increased prevalence of sleep disordered breathing in adults. Am J Epidemiol 2013  
**3** Valderas JM et al. Ann Fam Med 2009 **4** Philips C and O'Driscoll D. Nat Sci Sleep 2013 **5** Young et al. Sleep 2008 **6** Romero-Corral A et al. Chest 2010 **7** Phillips BG et al. J Hypertens 1999 **8** Phillips BG et al. Am J Physiol Heart Circ Physiol 2000 **9** Ogden CL et al. JAMA 2006 **10** Aronsohn RS et al. Am J Respir Crit Care Med 2010 **11** Einhorn D et al. Endocr Pract 2007 **12** Ferreira S, et al. BMC Pulm Med 2010 **13** Logan et al. J Hypertens 2001 **14** O'Keeffe & Patterson. Obes Surg 2004 **15** Oldenburg et al. Eur J Heart Fail 2007 **16** Gami et al. Circulation 2004

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