

# Women with sleep apnea and associated diseases



**ResMed**

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## Women with sleep apnea may be underdiagnosed

Obstructive sleep apnea is more common in men than women. This may be because women with sleep apnea have different symptoms than men. Being underdiagnosed may place women at higher health risks.<sup>1</sup>

**Sleep apnea is a potentially fatal condition that is commonly found in 13 – 50% of women.<sup>2</sup>**



## Symptoms of sleep apnea

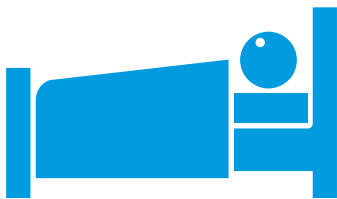
- Excessive daytime sleepiness<sup>3</sup>
- Loud, disruptive snoring<sup>3</sup>
- Irregular breathing (gaspings, long pauses) during sleep<sup>3</sup>
- Poor concentration and forgetfulness<sup>3</sup>
- Waking frequently to urinate<sup>3</sup>
- Dry mouth or sore throat upon awakening<sup>3</sup>

Women with sleep apnea are likely to experience:

- Anxiety<sup>4</sup>
- Depression<sup>4</sup>
- Insomnia<sup>4</sup>
- Morning headaches<sup>4</sup>
- Fatigue<sup>4</sup>
- Irritability<sup>4</sup>

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

Comorbidity is 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.



Untreated moderate to severe sleep apnea in women may increase the risk of:

- Obesity<sup>5</sup>
- High blood pressure<sup>5</sup>
- Stroke<sup>5</sup>
- Heart attacks<sup>5</sup>
- Diabetes<sup>5</sup>
- Depression<sup>6</sup>
- Cognitive impairment<sup>6</sup>
- Dementia<sup>6</sup>
- Hypothyroidism<sup>7</sup>
- Joint diseases (Arthropathy)<sup>7</sup>

**NEARLY 40%**  
**OF PATIENTS**  
diagnosed with  
**OBSTRUCTIVE SLEEP APNEA**  
today are female.<sup>8</sup>



**Risk of developing sleep apnea increases during pregnancy because of:**

- Changes in the respiratory system<sup>9</sup>
- Altered upper airway dimensions<sup>10</sup>
- Development of a larger neck circumference<sup>11,12</sup>

**Untreated sleep apnea may put women at risk during pregnancy for:**

- High blood pressure<sup>13</sup>
- Gestational diabetes mellitus<sup>14</sup>
- Pulmonary blood clots<sup>14</sup>
- Preeclampsia<sup>15</sup>
- Neonatal intensive care unit admissions<sup>15</sup>
- Cesarean delivery<sup>15</sup>

**Sleep apnea risk may increase after menopause**

Women are three times more likely to have post-menopausal sleep apnea than pre-menopausal.<sup>16</sup> There is also an almost four-fold risk for postmenopausal women without hormone replacement therapy.<sup>17</sup> This could be due to body fat distribution and hormonal changes that occur after menopause.<sup>1</sup>

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

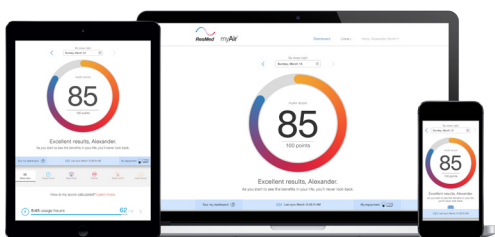
CPAP devices and equipment made for women

To address the needs of women with sleep apnea, ResMed's created CPAP devices that use a special algorithm to provide pressure therapy just for women.

ResMed for Her masks are specifically made to accommodate women's sizing needs.

# ResMed Air Solutions gives you the tools to stay engaged

- 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.

Visit [ResMed.com/sleepforwomen](https://www.resmed.com/sleepforwomen) to learn more about women and sleep apnea.

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

\*\*Available with some ResMed devices.

**1** Lin C et al. Sleep Med Rev. 2008 **2** Wiggins A et al. BioMed Research International 2016 **3** National Heart, Lung, and Blood Institute. What are the Signs and Symptoms of Sleep Apnea? 2012 **4** Tamanna S, Geraci SA South Med J. 2013 **5** Collop NA et al. Clin Chest med 2004 **6** Smith et al. Chest 2002 **7** Greenberg-Dotan S et al. Sleep, 2007 **8** Medicare 5% sample & OptumInsight medical claims data, 2012 **9** Weinberger SE et al. Am Rev Respir Dis 1980 **10** Pilkington S et al. Br J Anaesth 1995 **11** Izci, B. et al. Sleep Med 2005 **12** Pien GW et al. Sleep, 2005 **13** Franklin, KA et al. Chest, 2000 **14** Weinberger SE et al. Am Rev Respir Dis 1980 **15** Louis J et al. Obstet Gynecol. 2012 **16** Kales et al, Am J Respir Crit Care Med. 2001 **17** Bixler EO et al. Am J Respir Crit Care Med. 2001

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