



OBSTRUCTIVE SLEEP APNEA (OSA) AND OBESITY 101



My health
on my terms

Supported by Eli Lilly and Company.

**THIS TOOLKIT IS WRITTEN
WITH UNION MEMBERS IN MIND.**



The goal of this resource is to help you understand and advocate for your moderate-to-severe OSA and obesity care.



A white house icon on a green background.	Chapter 1 Understanding OSA	Chapter 2 How OSA Impacts Health and Safety	Chapter 3 OSA Diagnosis	Chapter 4 Comprehensive Care for OSA	Chapter 5 OSA and Your Union	Chapter 6 Summary & Resources
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What is obstructive sleep apnea?

- Obstructive sleep apnea, or OSA, is a common sleep breathing disorder
- If you have OSA, your breathing stops and starts while you sleep
- This can keep you from getting deep, restful sleep
- You may feel tired during the day. Over time, OSA may lead to other health issues¹

How common is OSA?

About 24 million adults in the US between the ages of 30 and 69 are estimated to have moderate-to-severe OSA.^{a,2}

Are there other types of sleep apnea?

Yes. Some people may have central sleep apnea (CSA), but it is less common than OSA.³



Mild OSA⁵:

AHI of 5–14 events/hour

Moderate OSA⁵:

AHI of 15–30 events/hour

Severe OSA⁵:

AHI of 30+ events/hour

DID YOU KNOW?



More than **80%** of people with moderate-to-severe OSA are undiagnosed⁴

AHI=Apnea-Hypopnea Index; US=United States

^aBased on Apnea-Hypopnea Index criterion of ≥ 15 events per hour.⁵

1. Chang JL, et al. *Int Forum Allergy Rhinol.* 2023;13(7):1061-1482. 2. Benjafeld AV, et al. *Lancet Respir Med.* 2019;7(8):687-698. 3. <https://www.sleepapnea.org/central-sleep-apnea/>. Accessed June 24, 2025. 4. Faria A, et al. *Sleep Sci.* 2021;14(3):257-265. 5. Rezaie L, et al. *Life.* 2021;11(5):368. doi: 10.3390/life11050368

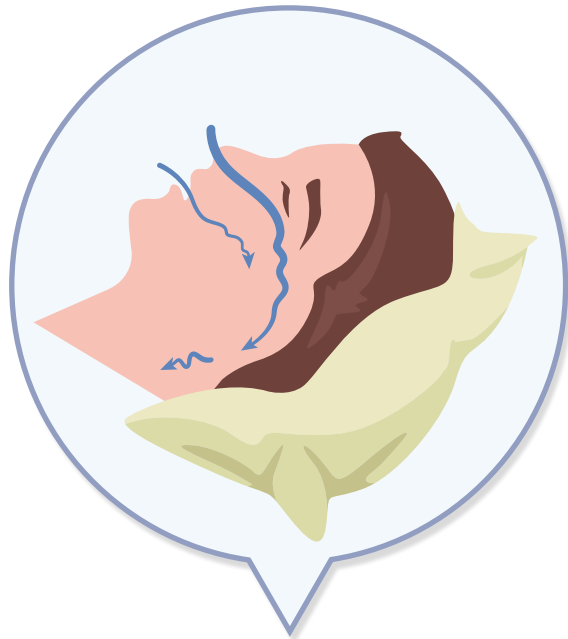




What happens in your body when you have OSA?

While you sleep, your muscles relax, including the ones in your throat. For some people, this causes the airway to get smaller or close.¹⁻⁴

There are two types of blockages:



Partial blockage = Called *hypopnea*



Full blockage = Called *apnea*

Each time your airway is blocked, your brain wakes you up just enough to start breathing again.

You may not remember waking up, but your sleep is interrupted.

That's why you might feel tired, even after being in bed all night.²

1. Chang JL, et al. *Int Forum Allergy Rhinol.* 2023;13(7):1061-1482. 2. Abbasi A, et al. *Sleep Sci.* 2021;14(2):142-154. 3. www.mayoclinic.org/diseasesconditions/obstructive-sleepapnea/symptoms-causes/syc-20352090. Accessed October 9, 2024. 4. Gottlieb DJ, Punjabi NM. *JAMA.* 2020;323(14):1389-1400.





What are the signs you might have moderate-to-severe OSA?

OSA can look different from person to person, but there are some common signs to watch for.¹⁻³



Snoring¹



Breathing pauses,
choking, or gasping
during sleep^{1,4}



Waking up
feeling tired^{1,6}



Daytime
sleepiness^{1,5}



Feeling down
or depressed^{6,7}



Brain fog or
trouble focusing⁸



Feeling worn out
or low energy^{2,7}



Morning
headaches^{2,4,6}



To check your risk of OSA, take
the **STOP-BANG questionnaire**

1. www.mayoclinic.org/diseasesconditions/obstructive-sleepapnea/symptoms-causes/syc-20352090. Accessed October 9, 2024. 2. Kerner NA, Roose SP. *Am J Geriatr Psychiatry*. 2016;24(6):496-508. 3. Stepnowsky C, et al. *J Clin Sleep Med*. 2019;15(2):235-243. 4. Reisstein JL, et al. *Issues Ment Health Nurs*. 2006;27(3):319-330. 5. Luyster FS. *J Clin Sleep Med*. 2017;13(3):467-477.



Who is at higher risk for OSA?

Some people are more likely to have moderate-to-severe OSA than others¹⁻³



Men

(2-3 times more likely than premenopausal women)



Adults over 40 years old



People with a family history of OSA



People with obesity

How is OSA associated with obesity?

Obesity is one of the biggest risk factors for moderate-to-severe OSA.¹

In fact, an **estimated 32% of people with obesity also have moderate-to-severe OSA in the US.^{a,b,2}**

Extra weight around your neck and chest can put pressure on your airway.

This can make it harder to breathe while you sleep, and increases the chance your airway may collapse.^{4,5}

BMI=Body Mass Index; OSA=Obstructive Sleep Apnea; US=United States

^aObesity defined as BMI ≥ 30.9 kg/m² for men and ≥ 31.7 kg/m² for women²; ^bBased on Apnea-Hypopnea Index criterion of ≥ 15 events per hour.¹

1. Quan SF, et al. *J Clin Sleep Med*. 2008;4(3):210-211. 2. Messineo L, et al. *Sleep Med Rev*. 2024;78:101996. 3. Yayan J, Rasche K. *Prev Med Rep*. 2024;42:102750. 4. <https://www.nhlbi.nih.gov/health/obesity-hypoventilation-syndrome>. Accessed May 15, 2025. 5. Pillar G, Shehadeh N. *Diabetes Care*. 2008;31(Supplement_2):S303-S309.



Can OSA have an impact on health and safety?

OSA can impact cardiovascular health^{1,2}

140%

higher risk of heart failure^{1,2}

60%

higher risk of stroke^{1,2}

30%

higher risk of coronary heart disease

People with OSA have an 83% increased risk of injury³

1.8x

higher risk of traffic injuries³

1.5x

higher risk of falls³

1.5x

higher risk of fractures³

1.4x

higher risk of dislocations³



People with OSA have a **2.5x higher risk of motor vehicle accidents⁴**

CPAP=Continuous Positive Airway Pressure

^aMeaning patients with OSA not receiving CPAP therapy.^{5,6}

1. Jean-Louis G, et al. *J Clin Sleep Med*. 2008;4(3):261-272. 2. Shahar E, et al. *Am J Respir Crit Care Med*. 2001;163(1):19-25. 3. Cheng AC, et al. *Int J Environ Res Public Health*. 2021;18(24):13416.

4. Tregear S, et al. *J Clin Sleep Med*. 2009;5(6):573-581. 5. <https://aasm.org/study-shows-that-people-with-sleep-apnea-have-a-high-risk-of-death/>. Accessed July 16, 2025.

6. Young T, et al. *Sleep*. 2008;31(8):1071-1078.

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What happens if OSA goes untreated?

Can OSA affect your heart?

Yes. OSA can lower oxygen and raise blood pressure during the night. Over time, this can put stress on your heart.

This can lead to:



**High blood pressure
(hypertension)^{1,2}**



**Irregular heart rhythms
(like atrial fibrillation)^{1,3}**



Stroke³



Heart failure¹



Heart disease¹

Can OSA affect your metabolism?

Yes. Bad sleep alters the hormones that control hunger, which may cause weight gain.⁴



OSA can do more than make you tired, it can raise your risk for other health problems¹⁻³, and impact your work and home life⁵

1. <https://www.thoracic.org/patients/patient-resources/resources/obstructive-sleep-apnea-and-heart.pdf>. Accessed May 15, 2025. 2. Peppard PE, et al. *N Engl J Med*. 2000;342(19):1378-1384. 3. Yaranov DM, et al. *Am J Cardiol*. 2015;115(4):461-465. 4. Kurnool S, et al. *Curr Diab Rep*. 2023;23(7):165-171. 5. <https://www.nhlbi.nih.gov/health/sleep-deprivation/health-effects>. Accessed August 11, 2025.





What happens if OSA goes untreated?

Can OSA affect your brain, work and home life?

Yes. Chronic sleep disruptions from OSA may contribute to:



**Trouble focusing
(brain fog)¹**



Memory problems²



**Feeling down
or depressed²**



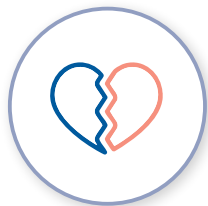
Lower quality of life²



**Trouble getting
things done at work³**



**Drowsiness when
spending time
with your family
and friends⁴**



**Strain on relationships
from mood changes
or snoring⁵**

1. www.mayoclinic.org/diseasesconditions/obstructive-sleepapnea/symptoms-causes/syc-20352090. Accessed October 9, 2024. 2. Stepnowsky C, et al. *J Clin Sleep Med*. 2019;15(2):235-243. 3. Sweed RA, et al. *Egypt J Bronchol*. 2013 ;17(75);doi.org/10.1186/s43168-023-00247-w. 4. <https://myhealth.alberta.ca/health/medications/pages/conditions.aspx?hwid=td1135&lang=en-ca>. Accessed May 15, 2025. 5. Luyster FS. *J Clin Sleep Med*. 2017;13(3):467-477. 6. Lee JH, Cho J. *Sleep Med Clin*. 2022;17(1):111-116.



How is OSA diagnosed?

Step 1: Screening

If you think you may have OSA and mention your symptoms to a doctor, they may:¹



Ask questions about your sleep, tiredness, or snoring



Have you fill out a short form about your sleep habits



Perform a physical examination of the upper airway²

These steps help the doctor decide if a sleep test is needed

Step 2: Testing

If your doctor thinks you might have OSA, they may suggest a sleep study.

This can happen:³⁻⁵

At home: You wear a small device while you sleep in your own bed. It tracks your breathing, oxygen, and heart rate.⁶

In a sleep lab: You stay overnight at a clinic where more things are measured, like brain activity and movements.^{4,7}



KEEP IN MIND:

Getting diagnosed is an important first step. For next steps refer to the resource guide at the end of this toolkit.

BMI=Body Mass Index

1. Feltner C, et al. Screening for Obstructive Sleep Apnea in Adults: An Evidence Review for the U.S. Preventive Services Task Force. Rockville (MD): Agency for Healthcare Research and Quality (US); 2022. 2. Goldberg AN, Schwab, RJ. *Otolaryngol Clin North AM*. 1998;31(6):919-30. 3. Chang JL, et al. *Int Forum Allergy Rhinol*. 2023;13(7):1061-1482. 4. www.mayoclinic.org/diseasesconditions/obstructive-sleepapnea/symptoms-causes/syc-20352090. Accessed October 9, 2024. 5. Barnes N, Herbert L. *J Nurs Pract*. 2023;19(7):104649. 6. <https://www.mayoclinic.org/diseases-conditions/sleep-apnea/diagnosis-treatment/drc-20377636>. Accessed November 12, 2024.



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Discussion Guide: Ready to talk to your doctor?

Here are some questions you can ask your doctor to help guide the conversation about moderate-to-severe OSA and obesity:

I feel tired during the day, even after a full night's sleep. Could it be sleep apnea?

My partner says I snore a lot. Should I get that checked out?

What are my treatment options if I do have OSA?

Could sleep apnea be affecting my weight, energy, or mood?

Does my weight affect my sleep apnea risk?

What can I do now to have a better sleep?



What treatment options are available for moderate-to-severe OSA?

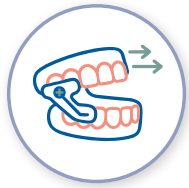
Treatment options may include CPAP, oral appliances, surgery, or lifestyle changes – talk with your doctor to see what’s right for you.



What is CPAP and how does it work?

CPAP stands for Continuous Positive Airway Pressure. It’s a common treatment for moderate-to-severe OSA.¹

A CPAP is a small machine that blows air through a mask. The air keeps your airway open while you sleep.¹



What are oral appliances and who are they for?²

Oral appliances are custom-fitted by dentists. They work by temporarily moving your lower jaw forward to increase airway space while you sleep. Your doctor may recommend an oral appliance if you have moderate OSA.^{1,2}



Are there other options to manage OSA?

Yes. Surgery might be an option if your OSA is moderate-to-severe and other treatments haven’t helped. Surgery is not for everyone, but it can help in some cases.^{1,3-5}

Behavioral changes, positional therapy and weight management including dietary changes are also often recommended for patients with moderate-to-severe OSA^{1,3-6}

CPAP=Continuous Positive Airway Pressure

1. https://icer.org/wp-content/uploads/2020/10/Action-Guide_OSA_Final_Jan2013.pdf. Accessed August 11, 2025. 2. Ramar K, et al. *J Clin Sleep Med*. 2015;11(7):773–827. 3. Kent D, et al. *J Clin Sleep Med*. 2021;17(12):2499-2505. 4. Sutherland K, et al. *Multidiscip Respir Med*. 2018;13:44. 5. <https://www2.gov.bc.ca/assets/gov/health/practitioner-pro/bc-guidelines/doctorsbc-sleepapnea-guideline-2021-v2.pdf>. Accessed August 11, 2025. 6. Morgenthaler TI, et al. *Sleep*. 2006;29(8):1031-5.



Practical Tips



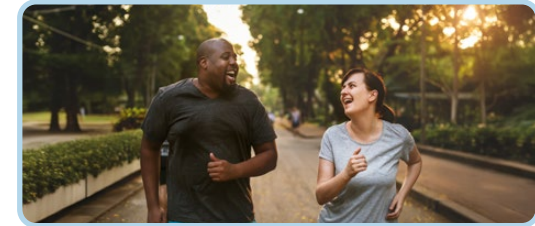
1. Build a better bedtime routine

- Go to bed at the same time every day¹
- Reduce screen time (TV, phones) before bed²
- Keep your room cool, quiet, and dark^{3,4}
- Avoid big meals, caffeine, sedatives and alcohol before bed⁵
- Try sleeping on your side, or on a wedge pillow^{6,7}



2. Make small food changes⁸

- Add more fiber to your diet
- Eat more fruits and vegetables
- Avoid high-fat foods
- Choose lean meat over red meat
- Drink water instead of soda
- Add less salt to your food



3. Move your body in ways that work for you^{9,10}

- Take a 30-minute walk after lunch^{9,10}
- Use the stairs instead of the elevator when you can¹⁰

1. Sawyer AM, et al. *Res Nurs Health*. 2014;37(6):504-511. 2. Buman MP, et al. *Chest*. 2015;147(3):728-734. 3. Valham F, et al. *Sleep*. 2012;35(4):513-517. 4. Aubrecht TG, et al. *Am J Physiol Regul Integr Comp Physiol*. 2013;305(1):R78-R86. 5. <https://www.lung.ca/living-sleep-apnea>. Accessed August 8, 2025. 6. <https://www.mayoclinic.org/diseases-conditions/obstructive-sleep-apnea/diagnosis-treatment/drc-20352095>. Accessed August 8, 2025. 7. Souza FJFB, et al. *Sleep Breath*. 2017;21(4):815-820. 8. Du Y, et al. *Nat Sci Sleep*. 2021;13:1783-1795. 9. Peng J, et al. *Int J Environ Res Public Health*. 2022;19(17):10845. 10. <https://www.resmed.com/en-us/sleep-health/blog/can-exercise-improve-your-sleep-apnea/#:~:text=Start%20with%20easy%20exercise%20routines,windpipe%20may%20improve%20your%20sleep>. Accessed August 8, 2025.



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How to get more information

To learn more about OSA in your workplace, here are some questions you can ask:

Your employer

Is screening for OSA included in our company's wellness plan?

What workplace accommodations are in place for employees with OSA?

Do you offer training on OSA and sleep disorders to employees?

What safety policies are in place regarding OSA symptoms (ie, daytime sleepiness, workplace performance)?

Your union representative

Is OSA screening required for my profession?

Am I required to disclose an OSA diagnosis to my employer?

Are there any initiatives to increase awareness of OSA?

Are there any policies to support employees with OSA?

How does the union advocate for health insurance coverage for OSA and related conditions?

Does the union involve members in the decision-making process related to OSA and health insurance coverage?

Your insurance provider

Are there any steps to take before employees are considered for OSA care coverage?

Does the employee policy cover OSA treatment?

Is there a chance an employee would be denied coverage?

What else should employees know about OSA coverage?



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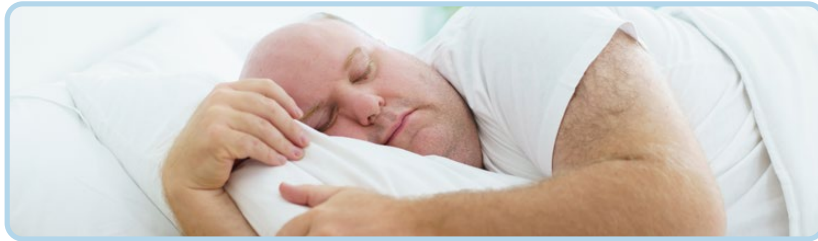
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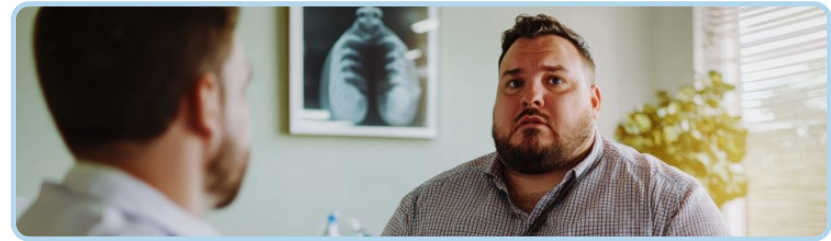
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Next steps on your OSA care journey



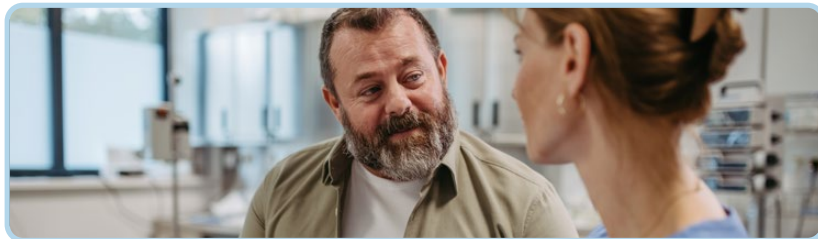
It's never too early – or too late – to take care of your sleep.

If you're noticing symptoms or just want to learn more, talk to your doctor about OSA and obesity.



Getting diagnosed is an important first step.

Once you know what's going on, you can choose a treatment plan that works for you.



Work with your doctor to develop a personal OSA care plan.

Understand your treatment options, set goals, and adjust your plan as needed.



Know the rules before you start or change treatment.

Talk to your employer, your union representative, and your insurance provider to learn more about OSA in your workplace.



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SUMMARY & RESOURCES



Looking for more help?

These websites can give you information, tools, and support:

Sleep Health & Apnea

American Academy of Sleep Medicine

Learn more about OSA, testing, and treatment.
www.sleepeducation.org/category/obesity

Alliance of Sleep Apnea Partners (ASAP)

A patient-centered nonprofit 501(c)(3) advocacy organization dedicated to improving patient care
<https://www.apneapartners.org/>

Project Sleep

A non-profit organization dedicated to raising awareness about sleep health, sleep equity, and sleep disorders
<https://project-sleep.com/>

Healthy Eating & Weight Support

Dietary Guidelines for Americans

Tips on eating well, portion sizes, and meal planning.
www.dietaryguidelines.gov

Extra Help

- Ask your doctor about local support groups
- Talk to your union representative about available wellness programs
- Look into community health clinics for sleep or weight services



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