

A microscopic view of a petri dish containing a blue agar medium. Numerous green, rod-shaped bacteria with flagella are visible, some in chains and others individually. The background shows concentric ripples on the surface of the agar.

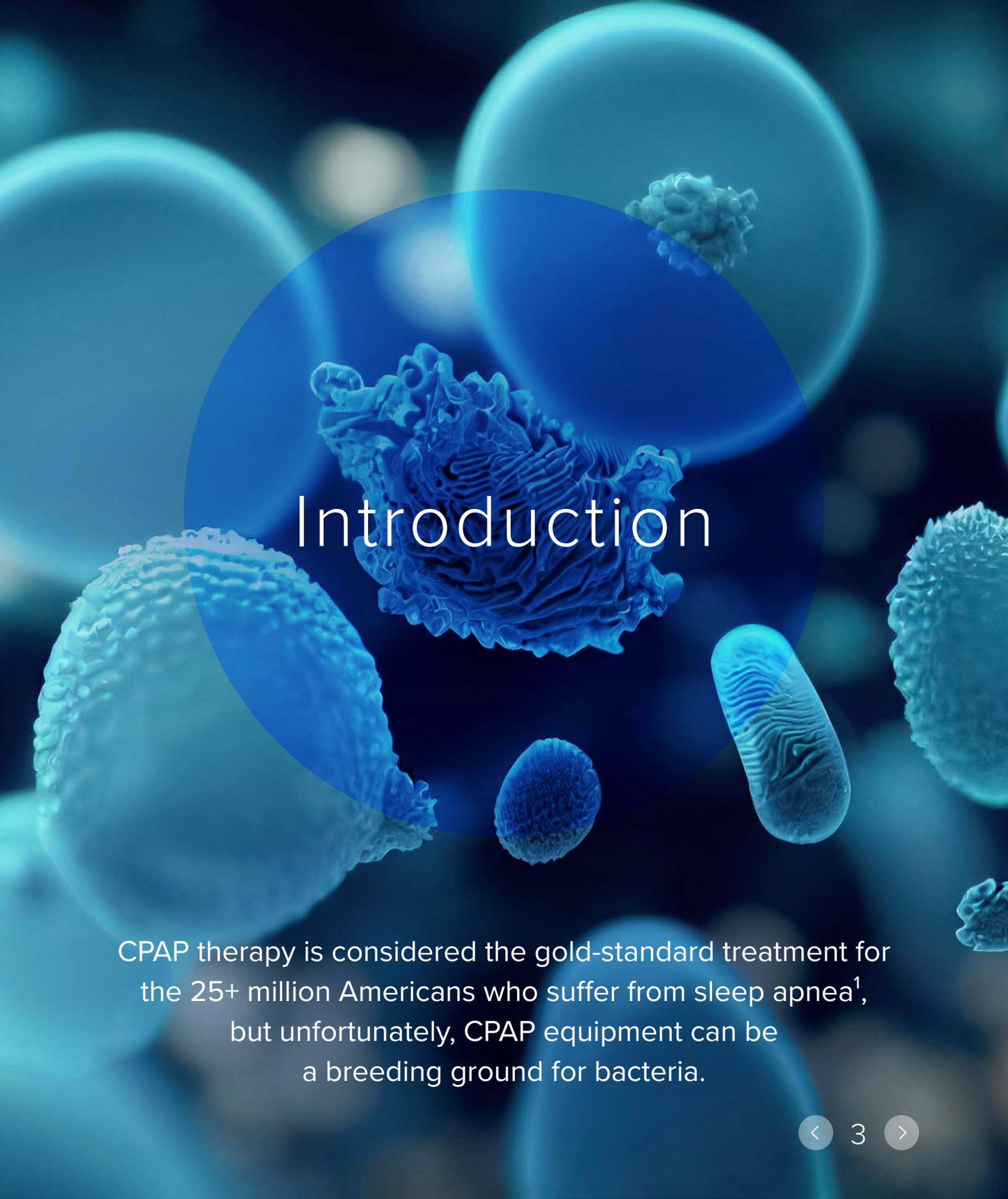
Dirty CPAP Equipment Could Make You Sick

The importance of bacterial* reduction
and best practices for CPAP
accessory** care

Provided by **SoClean**®

Table of Contents

Introduction	<u>Page 3</u>
CPAP Users Have a High Risk of Getting Sick from Dirty Equipment	<u>Page 5</u>
Current Recommended CPAP Cleaning Methods	<u>Page 9</u>
The Science of Ozone	<u>Page 13</u>
The Bottom Line	<u>Page 20</u>



Introduction

CPAP therapy is considered the gold-standard treatment for the 25+ million Americans who suffer from sleep apnea¹, but unfortunately, CPAP equipment can be a breeding ground for bacteria.

For individuals who find that they are feeling sick more than usual, dirty CPAP equipment could be a contributing factor. Potentially harmful bacteria are everywhere – and they thrive in warm, moist environments like CPAP hoses and masks. Placing a dirty CPAP mask directly on the face allows these bacteria to enter the body through the nose and mouth, making the CPAP user susceptible to infectious diseases.

A recent article published in January 2025 highlights the risks associated with dirty CPAP equipment, linking a clinical case of *Pseudomonas pneumonia* to an inadequately cleaned CPAP mask.²

This is one of the reasons why CPAP manufacturers recommend cleaning CPAP equipment regularly. Potentially harmful bacteria aren't going anywhere on their own, so it's up to CPAP users to take on the responsibility of reducing them. While soap and water provide a basic level of cleaning, studies suggest they may not be sufficient for thorough bacterial reduction – particularly in hard-to-reach areas of the CPAP hose and mask where bacteria can accumulate.

1 <https://aasm.org/rising-prevalence-of-sleep-apnea-in-u-s-threatens-public-health/>

2 <https://pmc.ncbi.nlm.nih.gov/articles/PMC11836909/>



CPAP Users Have
a High Risk of
Getting Sick from
Dirty Equipment

A study published in the Canadian Medical Association Journal sheds some light on the link between sleep apnea, CPAP therapy, and pneumonia – a potentially deadly respiratory infection that affects the lungs. The conclusion? Adults with sleep apnea have a 20% increased risk of being diagnosed with pneumonia than those in a control group and CPAP therapy bumps that risk up to 32%, due in part to poor CPAP maintenance.³

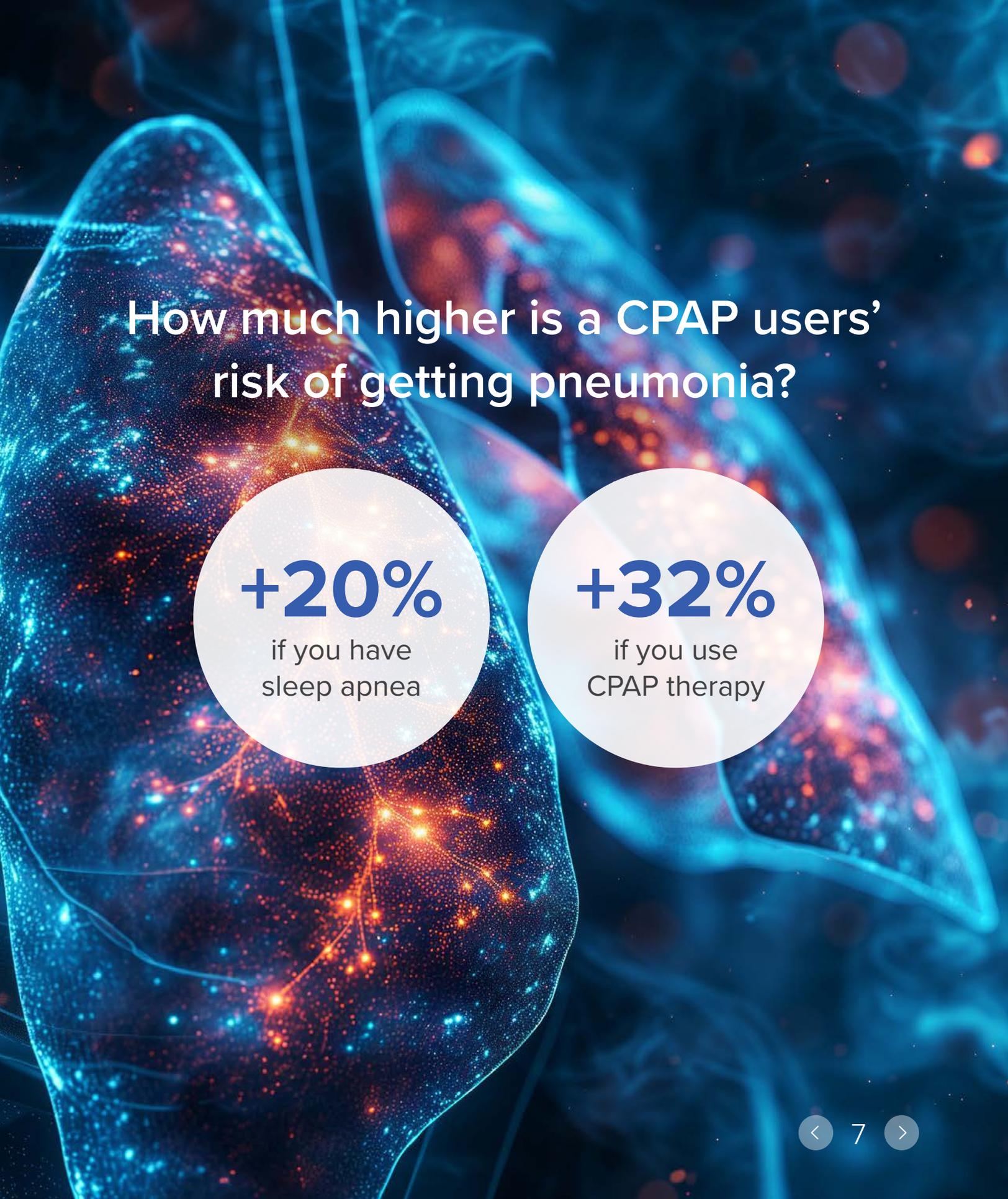
But pneumonia isn't the only illness. According to a study published in the Journal of Clinical Sleep Medicine, CPAP users have an 18% higher risk of getting infectious diseases like a cold or the flu than those who don't use CPAP therapy.⁴

In a separate report, researchers from Brigham and Women's Hospital and Harvard Medical School collected samples from CPAP masks and found 2,000+ bacteria counts evident on 48% of the units after just 48 hours.⁵ This report concludes by stressing the importance of regular and effective cleaning.

3 <http://www.cmaj.ca/content/186/6/415>

4 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2556912/>

5 http://www.pureflowhealthcare.ca/pdf/Horowitz_APSS_poster_2009_mask_microbes.pdf



How much higher is a CPAP users' risk of getting pneumonia?

+20%

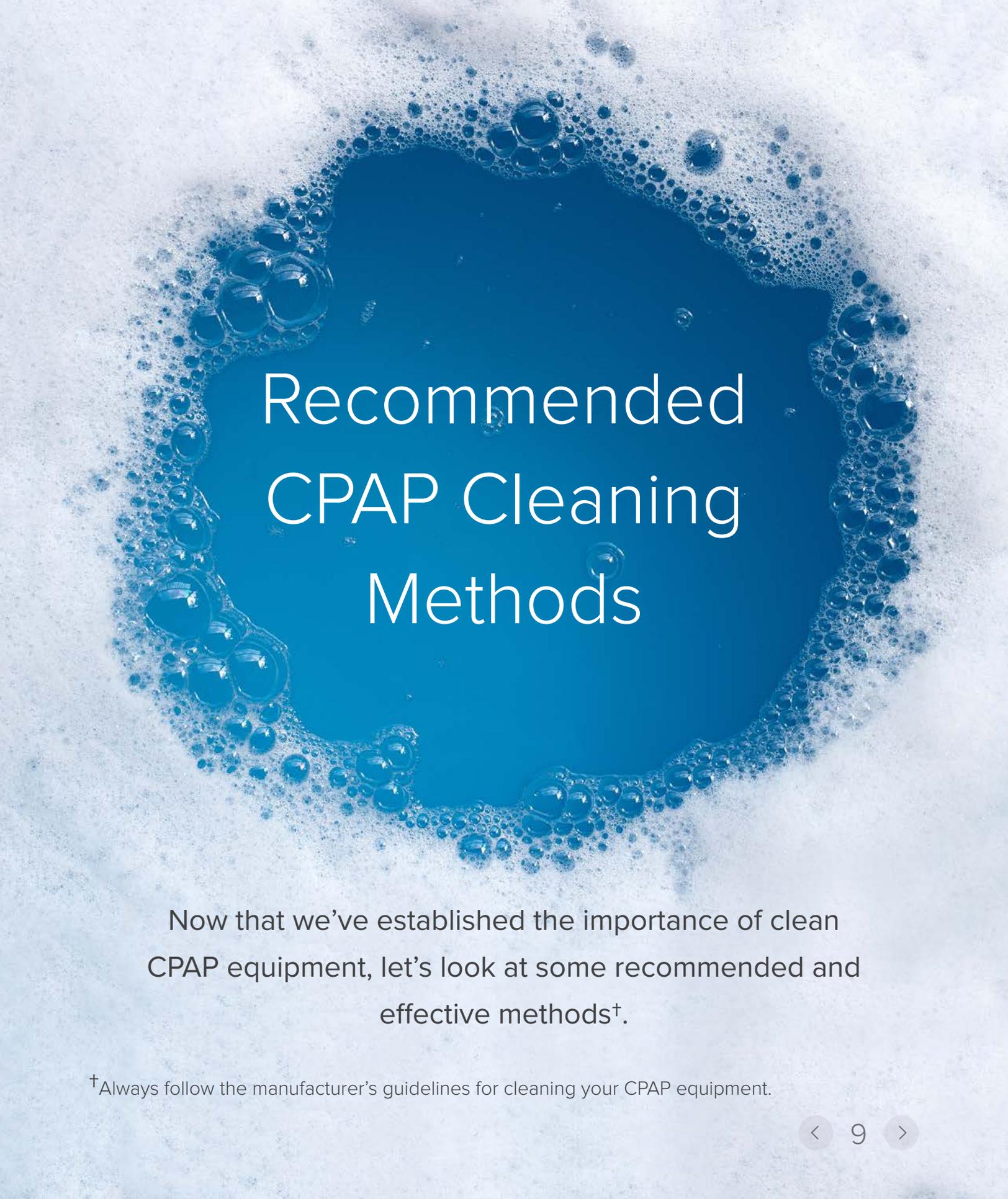
if you have
sleep apnea

+32%

if you use
CPAP therapy

“Every effort should be made to minimize the risk of pneumonia, such as enhanced cleaning of CPAP tubing and humidifier.”

Dr. Kun-Ta Chou, CEO,
Taipei Veterans General Hospital, with coauthors CMAJ
April 1, 2014 vol. 186 no. 6



Recommended CPAP Cleaning Methods

Now that we've established the importance of clean CPAP equipment, let's look at some recommended and effective methods[†].

[†]Always follow the manufacturer's guidelines for cleaning your CPAP equipment.

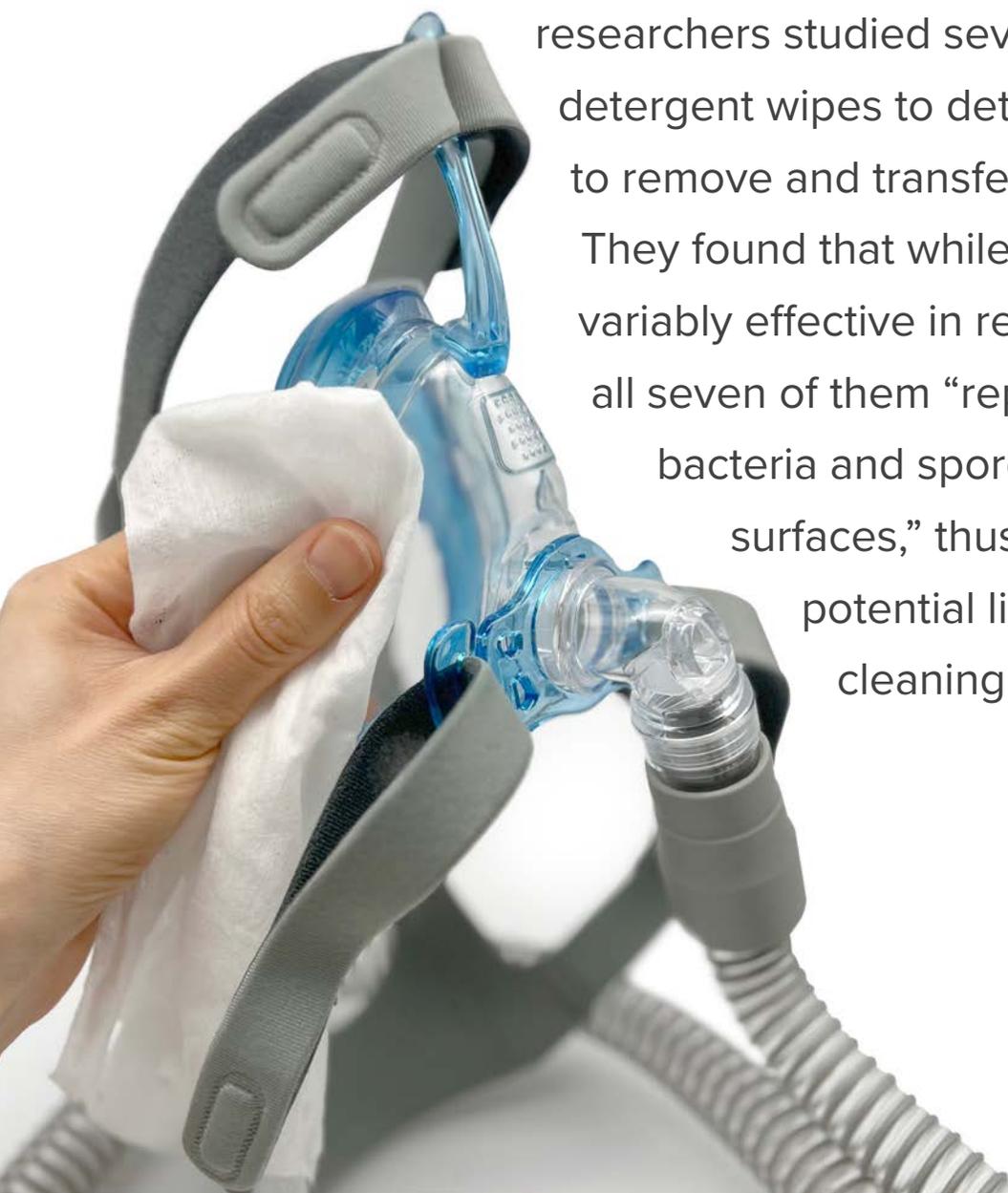
Wipes

There are wipes that are specifically designed for cleaning and deodorizing CPAP masks and accessories. By regularly using these wipes, the idea is that CPAP users can effectively reduce the buildup of bacteria, grease and oils. In an article published

in the American Journal of Infection Control,

researchers studied seven different detergent wipes to determine their ability to remove and transfer pathogens.⁶

They found that while the wipes were variably effective in removing pathogens, all seven of them “repeatedly transferred bacteria and spores onto multiple surfaces,” thus demonstrating the potential limitations of this cleaning method.



⁶ <http://www.ncbi.nlm.nih.gov/pubmed/25997876>

Soap and Water

This process typically consists of taking CPAP equipment apart and washing each piece with warm, soapy water, then rinsing with warm water and letting the equipment air-dry. Lingering moisture can attract bacteria, so it's important to allow plenty of time for CPAP equipment to dry thoroughly.

Vinegar and Water

A solution of vinegar and water can be used to clean out the water reservoir on a weekly or monthly basis. Users should let the reservoir soak for 20-30 minutes, then rinse it out thoroughly and let it dry. It's worth noting that vinegar produces an odor that can irritate sinuses, so proper rinsing is important.



SoClean 3+ A Fast, Easy, Effective Device

For individuals seeking a trusted companion product for thorough and consistent CPAP accessory maintenance, SoClean 3+ is highly effective, easy to use –and the only FDA-cleared device of its kind.

In a recent article, the FDA notes that an add-on device may augment your regular CPAP accessory cleaning process, ensuring bacterial reduction is accomplished, but it's important that the device you use is FDA-cleared.⁷



The Science of Ozone



SoClean 3+ uses Ozone (O_3)—a naturally occurring, activated form of oxygen—known for its bacterial reduction power. It penetrates deep into CPAP accessories, targeting bacteria that linger in hard-to-reach areas.

Beyond CPAP care, ozone plays a vital role in protecting Earth from the Sun's ultraviolet radiation⁸. It's also widely used in industries where high standards of cleanliness are critical, including healthcare, food processing, water purification, and hospitality.

Ozone, also known as activated oxygen, is a naturally occurring compound that plays an essential role in protecting the planet from the sun's ultraviolet radiation.⁸ It is also a naturally occurring compound often used to achieve bacterial reduction in hospitals, food handling, water purification, and the hotel industry.



Water Purification



Produce Handling



Hotel Housekeeping



Hospital Maintenance

Ozone is one of the most effective, bacterial reduction compounds of all earth's elements, and it's been proven to reduce many types of bacteria in water, air, and on surfaces. Here's some of the science behind how it works according to Ozone Solutions:⁹

“Ozone interferes with the metabolism of bacterium-cells, most likely through inhibiting and blocking the operation of the enzymatic control system. A sufficient amount of ozone breaks through the cell membrane, and this leads to the destruction of the bacteria [...] Ozone destroys bacteria by diffusing through the protein coat into the nucleic acid core, resulting in damage of the viral RNA. At higher concentrations, ozone destroys the capsid, or exterior protein shell by oxidation so DNA (deoxyribonucleic acid), or RNA (ribonucleic acid) structures of the microorganism are affected.”

⁹ <https://ozonesolutions.com/blog/ozone-effects-on-pathogens/>



But in everyday terms how does it work? Let's discuss the process as it relates to activated oxygen. When two oxygen atoms join, that is the oxygen (O_2) we breathe every day. When energy is applied to O_2 , the molecules break apart and re-organize into an activated O_3 molecule (ozone).¹⁰

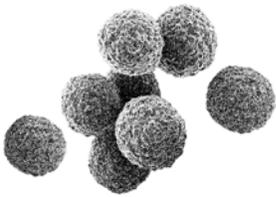
During oxidation, a single atomic oxygen disconnects and attacks, reducing potentially dangerous contaminants like potential harmful bacteria.¹¹ Next, the ozone transforms back into regular oxygen, completing an eco-friendly, naturally recycled process.¹²

¹⁰ [Ozone equipment manufacturer and ozone system integrators FAQ - Ozone Basics - Ozone Info Ozone Integration Experts](#)

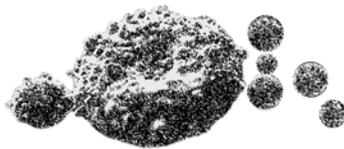
¹¹ <https://ozonewatch.gsfc.nasa.gov/facts/SH.html>

¹² <https://pmc.ncbi.nlm.nih.gov/articles/PMC10001170/>

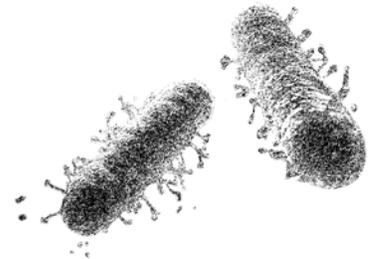
This activated oxygen cycle is the process that SoClean 3+ uses. Ozone has been shown to be safe and effective in reducing dozens of bacteria, including *Staphylococcus aureus*, *Klebsiella aerogenes*, *Staphylococcus haemolyticus*, *Escherichia coli*, *Staphylococcus hominis*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, and *Streptococcus pyogenes* after a complete processing cycle.*



*Staphylococcus
Aureus*



*Staphylococcus
Haemolyticus*



*Pseudomonas
Aeruginosa*



Staphylococcus Hominis



Escherichia Coli (E. coli)

“SoClean changed the CPAP experience for the better. Best investment I have made.”

– Ronald W.



SoClean 3+ does not release ozone into the outside environment. Instead, SoClean 3+ generates an Ozone Stream using technology within a closed system, passing through a special filter that converts ozone back into breathable oxygen, thus making it safe to use.

Any residual ozone that remains in the system naturally reverts back into the air we breathe in about two hours' time.

The Bottom Line

A CPAP is essential to treat obstructive sleep apnea. It should only be helping patients with this condition feel better – not worse. A good way to help prevent pneumonia, the flu and other infectious diseases is to keep one’s CPAP clean, and establishing a consistent, reliable routine is important.

CPAP accessory care should be simple and effective. That’s the philosophy behind the SoClean 3+. To learn more about this #1-rated, FDA-cleared¹³ device, visit [SoClean.com](https://www.soclean.com)



¹³ [SoClean Obtains FDA Clearance - 2024/08/20](https://www.soclean.com)



 [SoClean.com/contact](https://www.soclean.com/contact)

 Consumers: (866) 501-3705 Sales: (888) 822-2261

 Consumers: info@soclean.com Sales: orders@soclean.com

 1 Vose Farm Road, Peterborough, NH 03458, U.S.A.

[Read Again](#)

Copyright © 2011-2026

SoClean® is a registered trademark of SoClean, Inc.

Patent: [SoClean.com/patents](https://www.soclean.com/patents)

Contraindications for Use: Persons with underlying lung diseases, such as asthma and chronic obstructive pulmonary disease (also known as COPD, which includes emphysema and chronic bronchitis), and those with cardiovascular disease may be sensitive to ozone and should consult with their health care professional before using this product. Safety in pregnant or breastfeeding women and children under the age of 22 have not been established. Consult with your health care professional before using this product.

In this ad, any mention of the term “bacteria” references the disclaimer * and any mention of the terms “accessory” or “hose and mask” references the disclaimer **

*The SoClean 3+ device is intended to be used as an adjunct to reduce bacterial populations on certain compatible home use CPAP mask and ventilation hoses after cleaning. An in vitro 3-log (99.9%) bacterial reduction by SoClean 3+ has been demonstrated for the following bacteria: Staphylococcus aureus (ATCC 6538), Klebsiella aerogenes (ATCC 13048), Staphylococcus haemolyticus (ATCC 29970), Escherichia coli (ATCC 11229), Staphylococcus hominis (ATCC 27844), Klebsiella pneumoniae (ATCC 4352), Pseudomonas aeruginosa (ATCC 15442), and Streptococcus pyogenes (ATCC 14289) after a complete processing cycle. Any correlation between in vitro results and clinical outcome has not been established.

**The SoClean 3+ bacterial reduction device is an over-the-counter device for single patient home use. This device must not be used to replace the cleaning procedures as recommended by the CPAP mask and hose manufacturers. SoClean 3+ has been tested for use with ResMed Mirage FX (nasal mask), ResMed ClimateLine Air (tubing), and SlimLine (tubing) for ResMed AirSense 10 CPAP device. The safe use of SoClean 3+ with any other respiratory devices or accessories has not been established.