

News on sleep apnea for the commercial trucking industry

CPAP FRUSTRATION?

Relax. Device problems are common. Find out how you can tackle your challenges head-on and get a comfortable sleep.



By Stephanie Richardson
PPD, Manager of Clinical Services

Many people have problems with their CPAP device, especially at first. DO NOT GIVE UP! This is a change to your lifestyle and like anything else, it may take some time to accept and embrace. Sometimes the biggest challenges go away once you get used to wearing the device. A comfortable mask that fits you will make using your CPAP easier. Sometimes it takes more than one try to get the right mask so don't get discouraged.

There are three basic types of CPAP masks. First, the most popular is the nasal, which fits around your nose. The triangular shape will come in a range of sizes and vary in style to accommodate nose shape, whether yours is long and slender or short and wide, there is a mask out there for you. The nasal mask creates a seal with gel-type material or other cell technology.

Next, there is the full-face, which will cover the nose and the mouth, help keep your mouth in line and allow for breathing through the mouth during

your treatment.

Last is the nasal pillow, which are the minimal coverage and provide the most freedom. This mask is made of silicone and inserted into the nostrils for treatment. It looks like a large nasal cannula but lighter in weight and allows more freedom to reposition during the night without coming off.

So, how do you decide which will work for you? At a sleep lab, you can have the technician let you try them on. Take in to consideration your

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Precision Pulmonary Diagnostics

(PPD), provides professional screening for drivers who are at risk for sleep apnea. This is a HIPPA-compliant, online tool customized to a company's requirements.

Once a driver has been diagnosed with sleep apnea, PPD will provide local diagnostic services with the ease of Webbased scheduling and quick, reliable turn-around — from diagnosis to treatment.

Drivers who require treatment will be fitted for and provided with a CPAP mask, flow generator, and heated humidifier for nightly use.

In order to ensure drivers are using their masks correctly, PPD has partnered with a leading manufacturer of CPAP equipment, masks, and the only provider of a patented wireless compliance monitoring system.

The wireless compliance monitoring system provides daily information of CPAP use, efficacy, and allows real-time troubleshooting of any problems your drivers may be experiencing. With this data, we can enhance your drivers' CPAP acceptance and long-term compliance. In short, our protocols can maximize your results and your return on investment.

Dear Readers,

I would like to take this opportunity to share a special Holiday greeting with all of the readers and drivers PPD has worked with through the years. As we now service Schneider, Swift and H.O. Wolding drivers, we could not do it without you. You have taught us how to better serve you, and you alone have helped make PPD the premier sleep apnea disease management program it is today.

You are our inspiration and are playing a big part in shaping your industry to be healthier and safer. We salute you and wish you all a wonderful Holiday season.

Compliance with your CPAP machine provides you with so many benefits. Being from Green Bay, Wisc., all I need to do is mention Reggie White from the Green Bay Packers who died from complications of sleep apnea in his early forties. A tragic and untimely death I never want to see repeated. Compliance with your CPAP machine is literally a 'life' saver. WHY?

- Helps protect your heart
- Can improve your blood pressure
- Can improve impotence
- Helps you pass your DOT exam
- Can aid, with your improved energy, your weight loss potential
- Enhance your safe driver status
- Improve your mood (irritability); relationships
- Improved energy to do more with your family when 'time at home'
- Help prolong your life

Many of you have already realized many of these benefits. If not, you will over time. Obstructive sleep apnea did not come about in a day. It happened over time.

Please share your success stories with other drivers you talk to. They need you, too. Many drivers still remain fearful of out-of-service time or job loss....all unfounded when you use your CPAP machine every night (day) as you sleep.

During this time of special family memories, my wish for you is many more years to come with your loved ones. Your health and safety is a big part of making that happen. Stay compliant. We can help if you need it.

As always, PPD is working to PROTECT PROFESSIONAL DRIVERS.

With deepest respect,

Wendy Sullivan RN

Vice President Project Implementation/ DOT
Health and Safety Consultative Services

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Using “wrong” water in CPAP could lead to lung disease

Using contaminated well water in a continuous positive airway pressure (CPAP) machine could lead to a rare complication of the lungs, claims a new case report in the December Southern Medical Journal.

According to Dr. Lawrence W. Raymond and colleagues of Carolinas HealthCare System, Charlotte, the patient in the case report had used her CPAP machine for several years with no problems until she forgot to bring distilled water on a trip. Instead, she used tap water, which came from a well. The next morning she woke with a severe sore throat.

The patient was ill for several weeks with “crackles” in the lungs and decreased blood oxygen levels, despite treatment with antibiotics. She finally started getting better after beginning treatment with steroids; her condition gradually improved over several weeks. However, even three years later, she still had minor problems related to a chronic cough.



An infection from contaminated well water was suspected, but testing of the water showed no bacteria. Instead, there were high levels of a toxic bacterial compound called endotoxin, probably related

to repair work done on the pipes a few weeks earlier.

Raymond and colleagues diagnosed their patient’s illness as bronchiolitis: an inflammatory condition affecting the smallest air passages in the lungs (bronchioles). Most often caused by viral infections in infants, bronchiolitis has also been linked to high levels of endotoxin—for example, in dusty rooms. Bronchiolitis and exposure to high levels of endotoxin have both been linked to the development of asthma.

Although the patient’s illness was moderately severe and lasting, Raymond and colleagues point out it was very unusual and would not likely result from using normal tap water in a CPAP machine.

The recommendation to use distilled water in CPAP machines is related to preventive maintenance, rather than avoiding contamination. Infections related to CPAP machines are rare, and most often related to poor cleaning of the machine.

Sleep apnea patients more apt to grind teeth at night

Teeth grinding is linked to sleep apnea, according to a new study presented at CHEST 2009 -- the 75th annual international scientific assembly of the American College of Chest Physicians. Researchers found that nearly one in four patients with obstructive sleep apnea (OSA) also suffer from nocturnal teeth grinding, especially found in men and in Caucasians compared with other ethnic groups.

Dr. Subramanian and colleagues from the Baylor College of Medicine assessed the prevalence of teeth grinding in 150 men and 150 women with OSA.

Each group consisted of 50 Caucasians, 50 African-Americans, and 50 Hispanics. Results showed that 25.6% of patients suffered from teeth grinding. They found

teeth grinding higher in men than in women – 43 vs. 31 percent. Caucasians had the highest rate of grinding compared to other ethnic groups – 35 vs. 19 percent in Hispanics.

Subramanian said men have more severe sleep apnea, which explains why there is a higher number of men grinding their teeth. Also, men tend to report more symptoms of sleep apnea than women, such as snoring, loud grunting, and witnessed apneas.

About 8 percent of the United States grinds their teeth, which is a condition frequently associated with dental or jaw disorders, stress, anxiety or caffeine use.

If a person suffers from sleep apnea, their daytime sleepiness may provoke



them to ingest caffeine, which puts them at higher risk of grinding their teeth at night, Subramanian said.

Kalpalatha Guntupalli, MD, FCCP, president of the American College of Chest Physicians added, when treating sleep disorders, teeth grinding must also be looked at, in order to create a thorough treatment plan.

Increase sleep apnea success with low-calorie diet

Sleep patterns, including obstructive sleep apnea, can improve with a better diet, according to a new study gathered by Professor Kari Johansson and colleagues at the Karolinska Institute in Stockholm, Sweden. The clinical trial monitored the sleeping patterns of 60 obese men as their diets changed.

According to the study, 30 men were used as a control group and their diets did not change. The other 30 of the men (who had a BMI between 30-40), followed a low-calorie liquid diet for the first 7 weeks. The next 2 weeks they were slowly reintroduced to a normal diet.

At the beginning of the study, a subject stopped breathing or had shallow breathing on average 37 times each hour. According to the study, anything more than 30 is considered to be severe sleep apnea.

By the end of the study, the number dropped significantly – to 12 – compared to 35 times in the control group. In fact, five of the subjects no longer suffered from sleep apnea with scores less than 5. The diet significantly affected the subjects' weight, with the men losing about 41 pounds. The men in the control group gained an average of 2.4 pounds.

Johansson said the study was the first clear evidence weight loss can lessen severity of sleep apnea.

However, sleep apnea patients must note CPAP is often still required with weight loss – just at a lesser pressure setting. Also, weight loss must be maintained over time to avoid the same sleep apnea issues and the need to be retested, which can be costly.

Try these tasty, low-calorie recipes at home

Cauliflower O'Gratin

Makes 4, 1-cup servings
 4 cups 1-inch cauliflower florets (about 1/2 large head)
 1 1/2 cups nonfat milk, divided
 1/4 teaspoon salt
 1/2 cup dry breadcrumbs, preferably whole-wheat
 3/4 cup shredded sharp Cheddar cheese, divided
 1/2 teaspoon extra-virgin olive oil
 2 tablespoons all-purpose flour
 1 tablespoon chopped fresh chives
 1 teaspoon Dijon mustard
 1/4 teaspoon white pepper

Nutrition facts: 185 calories; 8 g fat (5 g sat, 2 g mono); 24 mg cholesterol; 17 g carbohydrates; 11 g protein; 2 g fiber; 366 mg sodium; 314 mg potassium

Preheat broiler. Boil cauliflower, 1 1/4 cups milk and salt in ovenproof skillet. Reduce heat, cover and simmer until cauliflower is tender. Combine bread crumbs, 1/4 cup cheese and oil. Whisk flour and the remaining 1/4 cup milk separately until smooth. Stir mixture into skillet and cook, stirring until thickened. Stir in the remaining 1/2 cup cheese, chives, mustard and pepper. Sprinkle with the breadcrumb mixture. But in oven to broil until the top is crispy and beginning to brown, 1 to 2 minutes.

Creamy Mushroom Chicken Breast

Makes 2 servings
 2 5-ounce boneless, skinless chicken breasts, trimmed
 1/2 teaspoon freshly ground pepper
 1/4 teaspoon salt
 1 tablespoon canola oil
 1 medium shallot, minced
 1 cup thinly sliced shiitake mushroom caps
 2 tablespoons dry vermouth, or dry white wine
 1/4 cup reduced-sodium chicken broth

Nutrition facts: 275 calories; 15 g fat (5 g sat, 7 g mono); 84 mg cholesterol; 5 g carbohydrates; 25 g protein; 1 g fiber; 373 mg sodium; 370 mg potassium

Season chicken on both sides with salt and pepper. Heat oil in skillet. Add chicken and cook until brown. Transfer to a plate and tent with foil to keep warm. Add shallot to the pan and cook 30 seconds. Add mushrooms and cook until tender. Pour in vermouth and let simmer until almost evaporated. Pour in broth and cook until reduced by half. Stir in cream and chives and return to simmer. Return the chicken to the pan, turn to coat with sauce and cook until heated through.

Beef Cabbage Soup

Makes 6 – 1 3/4-cup servings
 1 tablespoon canola oil
 1 pound lean (90% or leaner) ground beef
 1 1/2 teaspoons caraway seeds
 1 teaspoon dried thyme
 2 1/2 cups frozen pepper/onion mix, thawed, chopped
 1 medium Golden Delicious apple, unpeeled, diced
 6 cups reduced-sodium beef broth
 1 15-ounce can crushed or diced tomatoes
 1 1/2 tablespoons honey
 1 tablespoon paprika, preferably Hungarian sweet

Nutrition facts: 250 calories; 10 g fat (3 g sat, 5 g mono); 54 mg cholesterol; 20 g carbohydrates; 20 g protein; 4 g fiber; 705 mg sodium; 717 mg potassium

Heat oil in Dutch oven. Add beef, caraway seeds and thyme and cook, stirring and breaking up the beef with a spoon, until browned. Stir in pepper-onion mix and apple. Cook for additional 2-3 minutes. Stir in broth, tomatoes, honey and paprika and adjust the heat so the mixture sits at a gentle boil. Cook for 8-10 minutes. Stir in cabbage and cook just until barely tender. Season with vinegar to taste, salt and pepper.

Try these tasty, low-calorie replacements on the road

Instead of	Try
Chips	Mini rice cakes or unsalted pretzels
Ice cream	Frozen Cool Whip
Soda	Flavored water
Candy	Dried fruit
French fries or baked potato	Sweet potato
Pork sausage/bacon	Turkey sausage/bacon
Cookies	Fig bars
Sour cream	Plain yogurt



GI tract conditions common among OSA patients

The majority of sleep apnea patients also suffer from gastrointestinal (GI) tract conditions, according to a new paper presented at the 2009 American Academy of Otolaryngology – Head and Neck Surgery Foundation (AAO-HNSF) Annual Meeting & OTO EXPO in San Diego.

Researchers collected data from 42 adult patients but performing overnight observation for sleep apnea as well as an upper GI endoscopy to evaluate their gastrointestinal health.

The vast majority of patients (83.3 percent) had GI issues. 59.5 percent of them had two or more issues. The most common issues included:

- hiatus hernia (64%),
- erosive esophagitis (45.2%)
- histological esophagitis (21.4%)
- erosive gastritis (21.%)
- duodenal ulcer (7.1%)
- biliary reflux (4.8%)

Researchers concluded patients who may suffer from sleep apnea should also be referred to a gastroenterologist for additional diagnostic exams and comprehensive treatment can be established.

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bedtime routine. Do you like to watch television or read before going to bed? Are you a mouth-breather? Can't stand to have anything on your face? Do you have facial hair?

If your activities include reading or watching television before bed, you might want to try the nasal pillow system, as this will not obstruct your view.

Never settle for a mask that gives you any discomfort. Comfort is the most important thing, because it will affect your use and treatment. Having trouble with your mask? Here are some common problems you might experience.

The APAP dispensed at PPD has a mask-fit feature. This will allow you to see how your mask is fitting until you get the hang of it. Put your mask on and adjust it. Then press the start/stop button and hold it down for three seconds. The LCD screens will read how your mask fits and will determine if your mask needs adjustment. Make sure that the mask you are checking is the mask listed on the screen (SWIFT, Mirage Full, etc.). The reading you want to see is GOOD, V GOOD, or EXCELLENT. If anything else appears, adjust the mask and the machine will read it again.

[My mask is starting to cause sores around my nose. What can I do?](#)

This can be caused from overtightening of the mask or an improper size. This is another opportunity to use the mask-fit feature on the CPAP to ensure you are not overtightening the mask. Every mask should have a small amount of air leak, but sometimes there is a tendency to tighten to the point of no leak, thinking it will be better. To remedy the sores on the nose, pick up a product called "Gentle tape," which will create a barrier so you can still use the mask while your skin heals.

[I pull my mask off during the night and don't remember to put it back on, so I am missing used time?](#)

It's normal to sometimes wake up to find you've removed the mask in your sleep. If you move a lot in your sleep, you may find a full face mask will stay on your face better. You may be pulling off the mask because your nose is congested. If so, ensuring a good mask fit and adding a CPAP-heated humidifier may help. A chin strap also may help keep the device on your face. If this is a consistent problem, maybe turning on the Mask-Off feature would help until you get adjusted to the unit.

[I feel claustrophobic with mask, what now?](#)

While you're awake, practice by first just holding the mask up to your face without any of the other parts. Once you're comfortable with that, try wearing the mask with the straps. Next, try holding on the mask and hose, without the straps, with the hose attached to the CPAP machine at a low pressure setting (turn the settling feature on). And, finally, wear the mask with the straps and with the air pressure machine turned on while awake. After you're comfortable with that, try sleeping with it on. It may help to get a different size mask or try a different style, such as one that uses nasal pillows.

Using an CPAP device can be frustrating as you try to get used to it, but it's important you stick with it. The treatment is essential to avoiding sleep apnea-related complications such as heart problems and daytime fatigue. Work with your doctor and CPAP supplier to ensure the best fit and device for you, and try making adjustments if you're experiencing some of the common CPAP problems. With time and patience, CPAP can positively affect your quality of life and health.