

00:00 Introduction

01:24 Weight gain

03:14 Bite changes

04:18 Expiratory palatal obstruction

06:00 Epiglottic laryngomalacia

07:18 Nasal Congestion

09:02 Nasal decongestion experiment

10:26 Summary

Do you hate CPAP? Are you thinking about chucking your CPAP machine once and for all? In this video, I'm going to review the five most common reasons why you either can't or should not use CPAP, and when you have to think about looking for other options. Hi, I'm Dr. Steven Park an ENT surgeon and sleep medicine doctor, and my mission is to help you get the sleep need for the life you want.

If you have obstructive sleep apnea, it's likely that you were given a CPAP machine to try at home. For many people, CPAP is a lifesaver. But for some of you, it can be really challenging to use CPAP, and sometimes it makes things even worse. There are lots of great resources out there online helping you to troubleshoot your CPAP

machine, but I'm guessing that you're watching this video because you're still struggling.

The good news is that for the vast majority of you, going through the steps that troubleshoot CPAP can lead to success. For over 10 years as a sleep medicine doctor, I was able to help people use their CPAP machines, but I was also able to offer other options if CPAP wasn't working for them. I wrote down everything I know in my book, <u>Totally CPAP</u>, A Sleep Physician's Guide to Restore Your Sleep and Reclaim Your Life.

But in this video, I'll go over five of the most common reasons why you're not having any luck with CPAP, and I guarantee that some of these may be surprising. Stick to the end and I'll reveal to you what you can do to have over a 90% chance of being able to sleep much better with your CPAP machine. And maybe even a 10% chance of not needing your CPAP at all.

01:24 Weight gain

Number one, we know that being overweight can cause sleep apnea, but one thing that most people don't know is that CPAP can actually cause you to put on pounds. This meta-analysis from 2015 pulled over 3000 patients from 25 randomized trials and found that overall, there was a small but significant weight gain. This is what's called a forest plot, with all 25 studies. The black dots to the right of the vertical black line means that there was a positive effect size and the red arrow points to the average of all the studies.

On average, it was small, but a statistically significant amount of weight gain, almost one pound. But notice some of the studies at the bottom have much higher levels of weight gain. The explanations for why some people gained weight weren't too satisfying. It was mainly blamed on hormonal and metabolic changes when using CPAP.

My theory is that even though CPAP helps to get rid of severe apneas, just by having a mask on your face is causing many micro-arousals leading to a stress

response. And this raises your cortisol levels. Here's one retrospective study where subjects gained 16 pounds after being on CPAP for one year.

This is a <u>blog post</u> I did in 2020, which got 70 responses. The first 20 commenters averaged about 23 pounds. So what should you do if you're gaining weight? It depends. If it's only a few pounds, then just keep track of it to see if it's slowly coming down or still going up. If you're seeing severe weight gain like 20 up to even 50 pounds, then talk to your sleep doctor. Chances are, your sleep quality may get worse if you're on a CPAP machine since it's calibrated to your weight.

If you're on an automatic PAP device, then this isn't an issue. You may need to think about another way to treat your sleep apnea. And don't let them have you take any prescription weight loss pills. If you continue to gain weight, then you are at a higher risk of getting diabetes, high blood pressure, or heart disease, if you don't have them already. Either way, you're going to need to have a serious talk with your doctor.

03:14 Bite changes with CPAP

Now, I've always argued that crooked teeth predispose you to sleep apnea due to the narrowing of your jaws in your airways. But believe it or not, using CPAP long-term has been shown to actually cause crooked teeth. Here they looked at 46 people in Japan who used CPAP for at least two years. What they found was that the front teeth are pushed back along with the upper and lower jaws as well.

The good news is that most people didn't notice any difference in their bites, and it didn't affect the way they were able to use their CPAP. The distance it was pushed back was 0.69 millimeters on average. On the higher end, it was 1.04 millimeters. This is a small amount but was statistically significant. Again, the study was for only two years. Unfortunately, I didn't see any long-term 10 to 20-year outcome studies.

This may not be an issue for most of you using CPAP, but if you feel any bite changes, see your dentist as well as your sleep doctor. The dilemma is that if your sleep doctor recommends a mandibular advancement device, this can cause bite

changes as well. So whether or not you decide to continue using CPAP depends on how much it's affecting your bite or how well you can chew.

04:18 Expiratory palatal obstruction

Number two, this is something you won't hear about from your sleep doctor or even your ENT doctor. In this video, you're looking from the back of the nose down into the throat. The little thing hanging down from the top flap is called the uvula. It's what you see in the back of the throat if you look inside your mouth, but this view is from the back. Now notice that with each breath out through the nose, the uvula, and what's connected above, the soft palate, gets blocked and the middle part bulges towards you. With inhalation, the space opens up.

What's interesting is that if you look at the mouth, the air will puff out just after the soft palate blocks during mid-nasal exhalation. Essentially, you can't physically breathe out through your nose, and this happens typically only when you're sleeping. Rarely, people can feel this happening while awake.

So you can imagine if you're using a CPAP device with a mask, you may feel like you can't breathe out against the pressure. But it's not from the CPAP machine. Having a mask on your face and breathing out against positive pressure will be more difficult, and you wake up more often, and you'll end up hating CPAP. I call this expiratory palatal obstruction. Unfortunately, there's no easy fix for this except some kind of procedure.

Usually, this problem goes away with one of the various palatal operations for sleep apnea. But you can also treat it with any of the in-office procedures to treat snoring. My wife had this many years ago, and I treated her with something called injection snoreplasty. This is a simple shot or injection in the middle of the soft palate under the mucus membranes using a scarring agent that's normally used for varicose veins. It's called sodium tetradecyl sulfate.

It's not that painful and you feel like you have peanut butter stuck in your palate for about a week. But after a few weeks, the mucus membrane scars and stiffens, getting rid of the snoring as well as this condition in most cases, but not all.

06:00 Epiglottic laryngomalacia

Here number three, you can see the epiglottis flapping back and collapsing with each breath. The epiglottis is made of cartilage and covered my mucus membrane. Notice that in this case, you can see some air squeaking through the sides in the tiny black holes along with some vibrations on the sides. This is like sucking through two tiny straw holes. In many cases, it gets completely blocked. You can also see the tongue base just above the epiglottis pull away from the back of the throat, with each breath in.

Here from the side, you can see the uvula. The epiglottis is closing off to the right, and the tongue base that's moving to the left in the previous video. And here, this is what happens when you move the lower jaw forward. Notice how much more open the airway becomes. This is what normal should look like. This is also what a mandibular advancement device does, but not to this extreme. Unfortunately, the only way I've seen that treats this is with surgery. The official name is called epiglottic laryngomalacia. You have to see an ENT to see if you have epiglottis collapse or expiratory palatal obstruction.

One important thing you realize is that in general, you won't see this or the expiratory palatal obstruction in the office while you're sitting up and wide awake. It can only be seen under what's called drug-induced sleep endoscopy, which are the videos you're seeing here. You'll have to do some research to find someone that does it regularly.

07:18 Nasal Congestion

Number five, this last condition is probably the common one and something that's most treatable with the best potential outcomes, and this is the stuffy nose. It makes sense that if your nose is stuffy, you're going to open your mouth and you won't be able to use a CPAP machine. The good news is that studies have proven that nasal surgery can significantly improve your chances of not only being more able to use CPAP, but sleeping much better with it as well.

And here are some examples. This <u>meta-analysis</u> from 2015 found that people who underwent nasal surgery went from using CPAP for three to five and a half hours per night. It also lowered the CPAP pressure needs by about 2.6 points. Overall, 89% of people who are not using CPAP were able to use it after nasal surgery.

You may be asking if nasal surgery can cure sleep apnea. Unfortunately, the answer is no. This <u>meta-analysis</u> found only a slight drop in the AHI or sleep apnea score. However, there's one study I saw years ago that found that thinner patients with mild sleep apnea had better results after nasal surgery. Unfortunately, I can't find that article, but this result makes sense.

Now, here's a small study looking back on 26 patients that underway a much more complete or comprehensive type of nasal surgery, much more in line with a functional septorhinoplasty. In addition to addressing the septum and the turbinates, they also stiffened the nostrils. Their results were pretty impressive in thinner patients. In those with BMI less than 30, the AHI dropped 57%, from 22 to 6. This was a 50% surgical success rate for sleep apnea.

After reading this paper, I started to offer nostril stiffening along with nasal surgery and the results were much better overall. And even if the sleep apnea didn't get any better, quality of life as well as the ability to use CPAP was much higher overall. This is why I focus on good nasal breathing before offering any type of treatment for sleep apnea or upper airway resistance syndrome.

09:02 Nasal decongestion experiment

But not everyone wants nasal surgery and don't have access to someone who can do it. However, there's a simple test that you can do on your own temporarily to improve your nasal breathing. And these are the two things I want you to do. Go to the pharmacy and pick up two things. The first is a box of nasal dilator strips. A common brand name is called <u>Breathe Right strips</u>, or you can get something generic. These devices are like soft springs with tape that gently opens the nostrils

apart. In addition, pick up a nasal decongestant spray with the generic name oxymetazoline. These are 12-hour decongestant sprays.

Use both at night for three nights only. And make sure to stop the spray after three days since it's something that you can get addicted to since it works so well. Do both for three nights only, along with your CPAP machine. You can even experiment with going without your CPAP machine at all to see if you're in the small minority that responds just by improving your nasal breathing.

If you feel like you slept much better during the experiment, then see an ENT for a consultation regarding possible nasal surgery. Even if you didn't get any benefit from CPAP that night, but you liked the way you're able to breathe better through your nose, it's still worth looking into nasal surgery.

The decongestant shrinks the nasal turbinate dramatically. So if you can breathe much better, this means that you may benefit from regular nasal surgery such as a septoplasty with or without a turbinoplasty. But for some people, adding nasal dilator strips can make a huge difference. So your surgeon may want to think about adding a nostril stiffening procedure as well. In the small chance that you're sleeping and feeling dramatically better after nasal surgery, then think about getting another sleep study.

10:30 Summary

So to summarize, I want over five things that can sabotage your experience using CPAP. Number one is if you're gaining too much weight on CPAP. Number two is if your teeth are shifting too much. Number three is expiratory palatal obstruction. Number four is epiglottis collapse, and number five is nasal congestion. Even if you don't have sleep apnea or upper airway resistance syndrome, if you have a stuffy nose, do the Afrin and Breathe Right strip experiment I just described. If you're adventurous, tape your lips at night vertically. I'll place a link to why and how to do this below. Bookmark this video and come back to place your results in the comments area.

If you're thinking about giving up on CPAP completely, give it one last chance by doing this nasal experiment. I also cover many other ways like it to help make CPAP work for you in my book, <u>Totally CPAP</u>: A Sleep Physician's Guide to Restoring Your Sleep and Reclaiming Your Life. Click on the link above the order now.