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How Sleep Apnea Causes Pepsin Reflux

Sleep apnea and acid reflux go hand in hand. An obstruction causes a vacuum effect in the throat, which suctions up your normal stomach juices into your throat, causing more inflammation and swelling, causing more obstruction. If you have large tonsils, it becomes even more enlarged, causing severe breathing problems at night. Not only do the mucous membranes of the throat become swollen, the tongue swells up as well, leaving impressions on the sides of your tongue due to pressing on the teeth.

Most people are aware of acid reflux, but what's virtually ignored is the fact that your stomach juices contain many other irritating substances, including bile, digestive enzymes, and bacteria. In fact, pepsin, one of the main digestive enzymes, and H. pylori, a common stomach bacteria, are both found in ear, sinus and lungs washings. These are major sources of inflammation and swelling in your upper airway.

A [recent study](#) published in Otolaryngology – Head & Neck Surgery showed that deposits of pepsin can linger in the throat, and every time acid comes up, it gets activated in the more acidic, low-pH environment. They cultured throat cells with and without pepsin and measured 84 different inflammatory markers, of which 9 were found to be significantly increased, even in a non-acidic environment. This can potentially explain why people with laryngopharyngeal reflux disease have persistent symptoms despite maximal acid reflux medication therapy.

Laryngopharyngeal reflux disease is a common condition where small amounts of stomach juices reach the throat. But it's important to realize that giving acid suppressing medications like Nexium or Prilosec does nothing to prevent reflux. What these medications do is to lower acid production in the stomach so that whatever comes up doesn't irritate the throat (or esophagus) as much. It's not surprising that these medications don't always help.

I think you'll agree that constantly having small amounts of digestive enzymes in your throat can definitely cause problems. More commonly, people will complain of post-nasal drip, throat clearing, hoarseness, chronic cough, a lump sensation, tightness, burning, usually with no stomach problems whatsoever.

This is why eating early and not snacking before bedtime is so important for people with sleep apnea (and everyone else, too).

Do you have to clear your throat constantly, or have post-nasal drip, chronic cough, or hoarseness? Please enter your experiences below in the comments box.

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Patricia Fister says:
January 9, 2017 at 11:27 pm

I also have LPR and probably UARS. I have been using xPAP regularly for about 15 months. It has helped the LPR. I wake up with less phlegm and sore throats. However, due to mask problems (my jaw is recessed and I have 2 missing lower molars), the xPAP is extremely disruptive to my sleep because I can't stop the leaks that wake me up. The leaks are not bad enough to render the therapy unsuccessful, but they constantly wake me up. It has made my insomnia much worse and I have lost a lot of sleep because of it. Some nights I just have to take off the mask just to get some much needed sleep.

I also use Sleepyhead, but I don't find it very useful because my AHI is always low (around 1), but I feel lousy. Once in awhile, I get a good night's sleep with it, but not often. I feel more tired and irritable than before I started xPAP. Something I have noticed is that the Sleepyhead pressure graph always looks like the auto PAP pressure wants to go higher than the max pressure I have set it for. I can't go over 7 on max pressure because the mask leaks will be intolerable. Another thing is that I have quite a bit of activity on my Flow Limitation chart, which maybe why the machine pressure wants to go higher. When I use my PR Dreamstation (I like the Resmed much better), there are a lot of RERA's on the pie chart. I had a really good attitude before starting xPAP, but I have to consider my case a failure.



Trish says:
March 4, 2017 at 9:04 am

I have been on my CPAP for five years. Over the last 6-8 months, I wake up with very thick mucos in my throat. This causes lots of gagging. It take about 30 minutes to get my throat clear. I am clearing my throat constantly. I also have asthma.



Patricia Fister says:
March 5, 2017 at 6:09 pm

I began using CPAP about a year and a half ago, not because I had a sleep test and was diagnosed wit sleep apnea, but because I thought I might have some type of sleep disordered breathing. For years, I would wake up with sore throats and stuffed up nose and lots of mucous in my nose and throat. After reading Dr. Park's book, I decided to try CPAP. I have not had any serious sore throats or asthma attacks at night and in the morning since. I had to train myself NOT to mouth breathe while I slept and spent many months with my mouth taped shut at night. I needed to learn to keep my tongue at the top of my mouth behind my teeth at all times so that I could not mouth breathe. It was a long slog, but it paid off. I still have some mucous and dry mouth at times, but I am doing so much better.

Trish – do you know about the online help forum for CPAP called cpaptalk.com. They may be able to help you optimize your therapy if you tell them about your problem. CPAP therapy is not perfect for me either, but it is much better for me than without it.

Trish says:
March 6, 2017 at 8:53 am



I was diagnosed with sleep apnea by a sleep doctor in 2012. I was having numerous episodes where I would stop breathing. My problem with the mucos just started a few months. If I go a night without my cpap I have terrible headaches. I have not heard of the site you mentioned but I will check it out.



Susie says:
June 5, 2017 at 10:02 pm

Thank you for this information. I have been dx'd with GERD and asthma and also have severe sleep apnea which is often left untreated because I seemingly rip my mask off every night in my sleep after a short while of wearing it. I sleep half sitting up on foam wedges to help prevent the reflux and obstruction. I often wake up with an extremely dry mouth. I've even tried a chin strap to help my mouth stay closed. I still wake up with a dry mouth even though my mouth has stayed closed and the mask on. I experience much of what you mention in post-nasal drip, chronic cough, choking on food and water, burning, along with the acid reflux.

Now it feels as if my mouth, tongue, cheeks and throat are scaled all the time. Is this part of it, as well? It's difficult to eat or talk much. Also canker sores, but I don't think they account for the entire scaled mouth as they are only in one location.

I have not had a good nights sleep except for one night in 2008 and I felt so good for the one and only time, I knew I could rule the world if I felt like that all the time.. It's 2017 now. Are there any solutions?

At one point they wanted to break both jaws and reposition them—it was going to be on an outpatient basis. I don't think so! I've heard of the Inspire surgery. Has this had any success? I'm desperate!



patricia says:
June 7, 2017 at 12:49 am

I am so sorry for what you are going through. From about 2007 to 2012, I had horrible LPR. I often would have sore throats, stuffed nose, cough, etc for weeks on end. I had no idea what was causing this. my ENT would send me to the Gastroenterology and both would swear they could not find any reason for it. My diet was not a problem and I had no stomach issues. I also lost a lot of weight because I was often too stuffed up to eat or my throat was sore.

So I just did a lot of research on my own. Now I am pretty much LPR free, but it took years to figure this out, WITH NO HELP FROM ANY OF MY DOCTORS. I absolutely refused to take any of their horrible medications, like the acid suppressing drugs. My doctors could not understand that I needed my stomach acid to digest my food. Those drugs lead to disaster. I did not need worse problems.

Anyway, I had 2 medical problems that were causing my mostly nighttime reflux. One was a condition called HYPERPARATHYROIDISM. This is when one or more of your parathyroid glands turns into a benign tumor called an adenoma and mis-regulates the distribution of

calcium in your body. The excess calcium in your blood causes all sorts of problems, one of which is uncontrolled reflux. None of my doctors thought I had this, including the Endocrinologists. So I took matters into my own hands and became a patient of Dr. Jim Norman at the Norman Parathyroid Clinic in Tampa. Simple surgery solved the problem. I suffered for many years with this, feeling terrible because of my idiot doctors. (My husband is one of them). After the surgery, my reflux symptoms were greatly improved, but not gone, so I knew there was something else going on. I discovered that discrete events happening at night while in deep sleep seemed to be responsible for my reflux. Around that time, I read Dr Parks book, Sleep Interrupted. I realized it was possible that sleep apnea was causing this. I am so grateful to Dr. Parks because I would not have guessed that I might have some type of sleep disordered breathing. After awhile, I got a CPAP machine and began therapy. Again, my doctors laughed at me when I suggested I might have it.

This really helped and I no longer have LPR problems. All of my cold symptoms are gone, no sore throats, mysterious coughs, stuffed up nose, choking at night, etc. Actually, I think I have UARS, not sleep apnea. CPAP therapy was extremely difficult for me and often still is. But anything is better than the horrible and scary symptoms of LPR. I had a lot of problems because of the shape of my face. Full face masks leaked all night and I could not sleep with them. I also have bad insomnia. I successfully trained myself NOT to breathe through my mouth so I could wear nasal pillow masks that are comfortable for me. I got a lot of help from an online community for CPAP users called CPAPTALK.COM. There is also another one, but I don't remember the name. They helped me with all my problems, including the insomnia. So I have been able to stick with it for almost 2 years. It has made such a difference in my life. Why don't you join this community, Post your story and let them help you with your mask problems. You may need a different mask or other items to make it work for you. There is plenty of help available and these people generally know more than the doctors and technicians. It sounds like you desperately NEED this therapy.



Bishop says:
August 24, 2017 at 8:11 pm

This is interesting! It adds yet more complexity and overlap to my health issues. I was getting sores in my mouth and throat due to pemphigus vulgaris which also caused a croaky voice. The PV is now thankfully in remission.

I was sent to ENT to check out my throat and was diagnosed with LPR. A low acid diet plus Gaviscon Advance Liquid eased the symptoms – sore throat/croaky voice.

I have a hiatus hernia caused by severe kyphoscoliosis plus restrictive lung deficit and mild sleep apnoea. I've been using a vpap machine since 1st June.

When I read the article about peptin and sleep apnoea and also considered the possible damage to my throat caused by PV, I despair of ever understanding how these medical conditions overlap and which is the predominant cause. Perhaps it doesn't matter, provided I'm in reasonable health? I'm very much unable to identify any LPR symptoms, except for a very occasional reflux or reaction to food. I've been discharged by ENT some time ago. I just feel more confused than ever about what's going on. I was mistakenly diagnosed with and treated for asthma for about 25 years and I was suspicious that a mistake had been made but was told the meds were keeping me stable. I'm not cross that there was a mistake but it

seems nobody really has a holistic view of what's going on! I'm sorry to ramble but it's hard to write this coherently!



CHARLES NELSON says:
September 18, 2017 at 2:56 am

I have this same problem . Throat clearing thick sperum late night and wake up 2 to 3hrs after asleep with throat irritation. Have to have something warm to loosen spetum. I take mus in ex every night and day but don't think it thins it.. I do sleep on back but I'm told by wife I do not snore. I take Dexalant twice a day and rata dine 300 mg before bed. When this comes on have it for weeks. There are times I don't have this for months. I need help .left side of roof and throat are the side irrated. Could this be a fungal infection. Same think the neck below is sore and tender.



Patricia says:
September 22, 2017 at 12:20 am

Charles – What you describe sounds a lot like what I suffered with for years.. Mine was also intermittent and happened only at night causing me to wake up often with choking, asthma symptoms, throat sore,etc. At times, I had to just stay up so my symptoms would get better. I am now sure, after using CPAP for 2 years, that my LPR (reflux into breathing apparatus) was caused by night time breathing problems. I have not had problems since I began using the machine, although for me it was a struggle to get used to it.

A good place to start is to read 2 books: One is Dr. Steven Parks book, Sleep Interrupted. The other is called Why Stomach Acid Is Good For You, by Dr. Jonathan Wright. I figured out my problem out from these 2 books.



Michael Bradman says:
October 7, 2017 at 3:34 am

I have all those symptoms and I'm going to try "no snaking" and eating early as you pointed out.

Also, I am scheduled for a CPAP device next month and will check the performance. Initially, I was diagnosed with GERD and Asthma as if they were the sole culprits of my condition. I do hope that I am on the road to a better nights sleep and perhaps eliminating the inhalers or at best, a big drop in the frequency of use.



Theresa says:
October 23, 2017 at 1:54 pm

Hi-

I was diagnosed with Sleep Apnea (22 Apneas on my home test with oxygen of 90% or better, and 5.5 apneas and 13 respiratory disturbances on my in-center test I had afterwards, but with oxygen going down to 84% a couple times in 2 hours). With the CPAP, my AHI is almost always less than one and hour, and according to the in-center study, my oxygen averaged 96%. So, it seems to be working, but I wake up still all night (it's only been a month) and am still extremely tired during the day.

At the same time, I was diagnosed with LPR (mainly by symptoms – tight/constricted throat, a feeling of a lump, throat clearing, and my voice seems more gravelly, and also a scope down my nose to my throat. The ENT said my vocal cords look okay and said LPR.

I don't seem to have symptoms at night though – only during the day. And the tight feeling isn't always there, but is becoming more often. Weird throat constriction to where even wearing a necklace bothers my throat.

I was also diagnosed with TMJ and displaced discs about the same time, and arthritis in my cervical spine, C3-C7.

Coincidence? My ENT prescribed something like prilosec, which I haven't taken yet. I haven't changed my diet – it's hard enough with the TMJ, and the thought of no more tomatoes or tomato products makes me really sad. Actually, the list I've seen is basically my diet – love spicy foods, love an occasional glass of wine or a margarita, have been eating berries in my yogurt, love salsa, spaghetti, chili. It's all so depressing.

Any advice would be great. Is it common for LPR to only have symptoms during the day? Especially after eating spicy foods? I really can't think of one time that it's bothered me at night.

Thanks!

Theresa



Dennis says:
November 16, 2017 at 9:44 pm

I have throat every time I sit in the car and it is constant. Sometimes I chew gun and it subsides. I have sleep apnea machine and use every night. All kinds of test, now lot diagnosed, more medication actions nothing works, now taking an antidepressant nortripiline 100 mg, nothing works.

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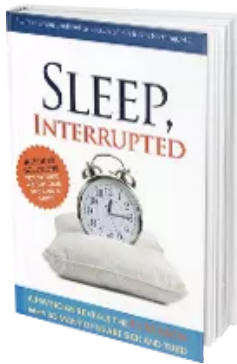
About Dr. Park

Dr. Steven Y. Park is an author and surgeon who helps people who are always sick or tired to once again reclaim their health and energy.

His passion is to identify and empower people to overcome ***sleep-related breathing problems***, which most people don't realize is the real reason for many of their common medical ailments.

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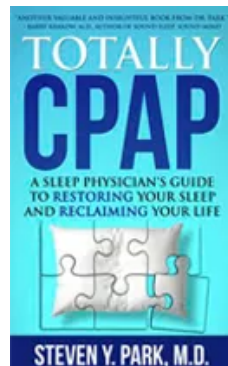


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ABOUT DR. PARK

Dr. Steven Y. Park is an author and surgeon who helps people who are always sick or tired to once again reclaim their health and energy. For the past 13 years in private practice and 4 years in academia, he has helped thousands of men and women breathe better, sleep better, and live more fulfilling lives.

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