

SLEEP MEDICINE PEARLS

## A veteran with CPAP intolerance

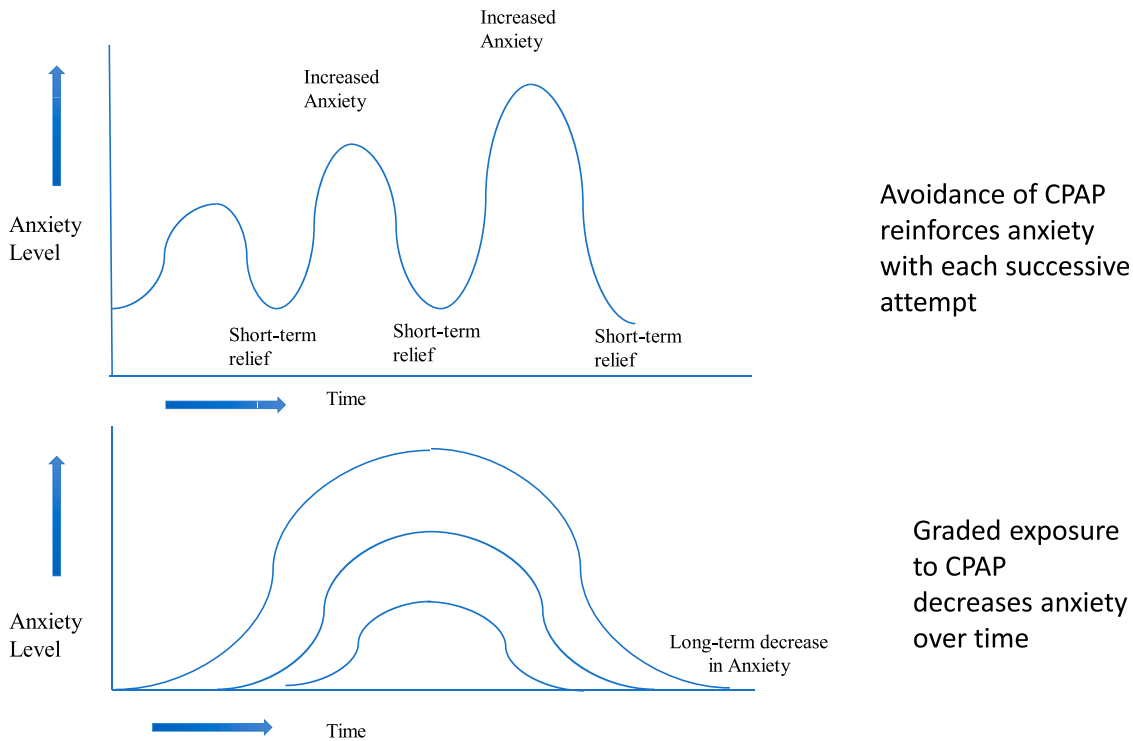
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A 68-year-old veteran presented with symptoms of loud snoring, frequent witnessed apneas, daytime fatigue, and sleepiness. He underwent home sleep apnea testing that showed mild obstructive sleep apnea with respiratory event index of 9.6 events/h (nonpositional) and was initiated on autotitrating continuous positive airway pressure (CPAP) therapy, with pressure ranging from 6 to 18 cm H<sub>2</sub>O. Despite trials of different mask interfaces (including nasal pillows, full face, and nasal masks), he was unable to tolerate CPAP and stated he was “scared of the mask.” He noted that the difficulty was not related

to the CPAP pressures. While in the military, he had a traumatic experience while wearing a gas mask. Using the positive airway pressure (PAP) mask now elicited feelings of claustrophobia, anxiety, and distressing memories of wearing a gas mask while in the military. He was edentulous and therefore not a candidate for oral appliance therapy.

**QUESTION: What is the best next step in treating this patient's obstructive sleep apnea?**

**Figure 1**—Illustration of CPAP desensitization.

CPAP = continuous positive airway pressure.

**ANSWER: PAP desensitization therapy.**

## DISCUSSION

Experiences of anxiety and claustrophobia with PAP therapy are common.<sup>1</sup> For our patient, the PAP mask elicited memories of a traumatic experience while wearing a gas mask during his military service. These memories resulted in phobic-like fear and avoidance of PAP therapy.

Exposure therapy has been shown to be effective for treatment of multiple anxiety disorders, including specific phobia and panic disorder.<sup>2</sup> In a meta-analysis of 20 randomized controlled treatment studies for specific phobia, active psychological treatment, such as exposure therapy was found to be 84% effective when compared to no treatment.<sup>3</sup> While no randomized controlled trials have evaluated the effectiveness of exposure therapy for CPAP-related anxiety specifically, case studies demonstrate an increase in CPAP use after exposure therapy.<sup>4</sup> Graded exposure involves helping the patient confront the feared object in a gradual manner without the need to escape or avoid. Systematic desensitization involves the inclusion of relaxation training as a form of counterconditioning. Using this method, exposure to PAP in a systematic and step approach and within a safe context leads to a reduction in anxiety (Figure 1).<sup>5</sup>

Patient selection is very important, as this type of therapy requires significant motivation and time commitment from the patient. Factors that influence effectiveness include the patient's

willingness to wear PAP and engage in at-home exposure exercises between sessions.

Our patient completed an initial intake assessment with a clinical psychologist who recommended PAP desensitization therapy in 6 individual sessions, lasting between 30 and 60 minutes each.

A hierarchy of exposure steps was developed collaboratively with the patient from least to most anxiety inducing:

- Step 1: Hold PAP mask over your nose (during activities such as watching TV) without connecting it to the CPAP device.
- Step 2: Wear PAP mask with straps on sitting up during the day, initially without connecting to the CPAP device. Once comfortable with this, the mask can be connected to the CPAP device with the pressure applied.
- Step 3: Wear PAP while lying down during the day but not attempting to sleep.
- Step 4: Wear PAP at night when sleeping.

The patient was taught relaxation exercises, including diaphragmatic breathing and progressive muscle relaxation, to practice before and after each exposure exercise. He was provided with a tracking sheet to rate his anxiety level on a scale from 0 to 100 before, during, and at the end of the exercise. During each exposure exercise, the patient was encouraged to wear PAP until his anxiety level came down by at least half and to move to the next step only when he felt comfortable with his current step.

The patient spent 1 to 2 weeks on each of these hierarchy steps. Progress was monitored through self-reported anxiety ratings and through remote PAP monitoring. Following treatment, the

patient's self-reported anxiety dropped from 85 out of 100 to 10 out of 100, and he slept comfortably with PAP through the night.

## SLEEP MEDICINE PEARLS

1. Intolerance to PAP therapy due to anxiety and claustrophobia are common, especially among veterans.
2. Sleep clinicians should consider referring patients with such symptoms to a clinical psychologist.
3. Exposure therapy involves using PAP in a systematic and step approach which gradually results in a reduction in anxiety.
4. PAP desensitization therapy involves having a relaxation component to the therapy.

## CITATION

Dholakia S, Balderas C, Fields B. A veteran with CPAP intolerance. *J Clin Sleep Med*. 2021;17(5):1129–1131.

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## DISCLOSURE STATEMENT

All authors have seen and approved the manuscript. Work for this study was performed at the Atlanta VA Medical Center. The authors report no conflicts of interest.