

Snore-Cure®

The 5 Minute Chair-side Anti Snoring Appliance



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CE ONE OR MORE OF THE FOLLOWING U.S. PATENTS MAY APPLY
AS WELL AS FOREIGN PATENTS AND PATENTS PENDING:
4,898,535; 5,876,199; 6,129,084; 6,626,664 B1; 7,234,933 B2

Snoring and the Snore-Cure® Appliance

Snoring occurs when the lower jaw and tongue relax during sleep and drift in a backward direction partially closing the airway passage. This partial closure restricts airflow, which causes the uvula and soft palate to vibrate and produce typical snoring sounds. To eliminate or minimize snoring, it is necessary to position the lower jaw and tongue in a forward and downward direction in order to open up the airway passage and allow unrestricted airflow into the pharynx.

The Snore-Cure® appliance (fig. 1) is scientifically designed to position the mandible and tongue in a forward and downward direction to open up the airway passage. In addition, Snore-Cure's® unique hinged feature separates the anterior upper and lower jaws, allowing increased air intake, eliminating or reducing vibrations of the uvula and soft palate and snoring.

The Snore-Cure® appliance can be customized for your patient in 5 minutes at chair-side by adding Snore-Cure's® specially formulated lining material to the interior portion of the appliance. This customized liner (fig. 2) provides your patient additional comfort by allowing the appliance to snap into place and hold the mandible securely in a forward position, which significantly reduces or eliminates snoring. A liner kit (fig. 6) containing all the necessary materials and instructions to line at least 3 to 4 Snore-Cures® is available and is highly recommended.

RESULTS:

For many people snoring begins 4 to 11 minutes after falling asleep and continues throughout the night. When the Snore-Cure® appliance (without a lining) is used, the onset of snoring is usually delayed by 1 to 2 hours after falling asleep. The loudness of the snoring sounds are reduced and the patient's snoring is intermittent rather than continuous.

When the Snore-Cure® is custom lined (fig. 2) for the patient with our specially formulated acrylic, the patient's lower jaw is held firmly in a forward position, which eliminates or dramatically reduces snoring. In a clinical study, it was found that snoring stopped altogether or the onset of snoring was delayed 2 ½ to 3 hours after falling asleep. The snoring sounds, if present, were soft or had a “swooshing” sound caused by air escaping from the mouth. These soft or “swooshing” sounds lasted only a few minutes separated by long periods of silence during nighttime wear. The lining procedure is of great benefit in improving the snoring results, and also makes the Snore-Cure® appliance more comfortable and secure for the patient.



FIG. 1
The Snore-Cure®
appliance without liner

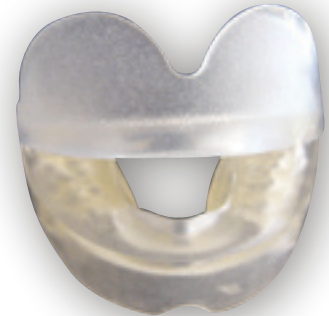


FIG. 2
The Snore-Cure® appliance with liner
in the lower posterior segments

THE ADVANTAGES OF THE SNORE-CURE® ARE:

- Designed to advance the mandible and tongue to eliminate or minimize vibrations of the uvula and soft palate, which cause snoring.
- The appliance's patented hinged feature with the anterior separation of the upper and lower jaws increases air intake, which also significantly reduces or eliminates snoring.
- Can be customized with liner material in 5 minutes at chair-side for a firm snap-in fit.
- High upper anterior margins prevent the lower jaw from slipping backwards and aids in keeping the appliance firmly in place during sleep.
- One size fits all.
- Easily cleaned with toothpaste and toothbrush.
- Prefabricated.
- No adjustments and is easy to fit.

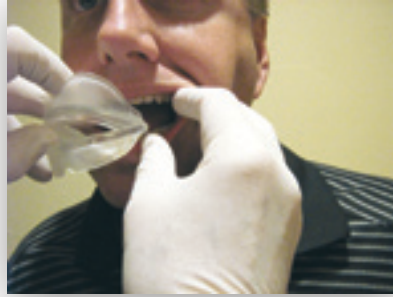


FIG. 3
The Snore-Cure® is initially tried
in the mouth to check its fit

DIRECTIONS:

The first step is to try the appliance in the patient's mouth to make sure all the teeth occlude in the device at the same time and that none of the margins of the Snore-Cure® impinge on any of the soft tissues of the mouth. In either case, the device can be adjusted or trimmed with a sharp carbide acrylic bur.

Instruct the patient to insert the Snore-Cure® in their mouth so that the larger front margins with the arrow pointing upwards (fig. 4) fits onto their upper arch.

There are two ways in which the Snore-Cure® can be worn - with or without the recommended liner. If the patient opts to use the appliance without the liner, they should be advised to place the Snore-Cure® in their mouth ½ hour before bedtime so that they become accustomed to having something in their mouth. If the Snore-Cure® falls out during the night, the patient should wear it again each night for a week longer. If the patient still expels the appliance, then lining the appliance should be considered.



FIG. 4
The higher margins fit into the upper jaw
with the arrow pointing upwards

CUSTOMIZING THE SNORE-CURE®

There are two ways to customize the Snore-Cure® appliance. The first and easiest way is to insert the appliance containing the lining material directly into the patient's mouth at chair-side (Fig 3). Once the Snore-Cure® is placed in the mouth with the uncured lining material in its lower posterior segments, push the appliance in a distal direction and have the patient bite down in this position for 4 minutes (see pages 4 and 5 for more details).

The second way is to customize the Snore-Cure® directly on a plaster model of the patient's mouth (see pages 5 and 6 for more details). If a patient has had gingival recession with extensive embrasure undercuts, using a patient's model would be the recommended method of choice.



FIG. 5
Snore-Cure® appliance with liner in lower posterior segments

SNORE-CURE® LINER KIT

The Snore-Cure® kit includes:

- Lining Powder
- Lining Liquid
- Primer Liquid
- Measuring Tube
- Mixing Cup
- Dropper
- Spatula
- Applicator Brush
- Instructions

Note: This fast-set, self-cure acrylic, which generates very little heat and odor, is specially formulated to adhere to this appliance. DO NOT SUBSTITUTE OTHER MATERIALS.



FIG. 6
Liner kit suitable for lining
3 to 4 Snore-Cure® appliances



Fig 7 (a) The textured posterior area is painted twice with primer; **(b)** the powder is dispensed to the 2nd marking on the measuring tube; **(c)** the liquid is filled to the 2 ml marking on the dropper; **(d)** the powder and liquid is then spatulated for 30 seconds.

LINING THE SNORE-CURE® DIRECTLY IN THE MOUTH:

TOTAL ELAPSED TIME (MIN:SEC)

1. Paint the textured posterior surfaces of the Snore-Cure® with 2 coats of primer (Fig 7a).
2. Dispense the powder to the 2nd marking of the measuring tube and pour into the mixing cup. This is enough powder for both posterior segments (Fig 7b).
- 0:00 3. Fill the dropper with liquid to the 2ml marking (Fig. 7c) and dispense over the powder into the mixing cup and begin spatulating (Fig. 7d).
- 0:30 4. Spatulate the powder and liquid for 30 sec.
- 1:00 5. Let stand for 30 sec.
- 1:00 6. Load both posterior segments of Snore-Cure® (Fig. 8a).
- 2:30 7. Let stand for 1min. 30 sec.
- 2:30 8. Insert into mouth and hold firmly in place (Fig. 8b).
- 6:30 9. Hold for 4 min., then remove.

NOTE: Be sure to hold both posterior segments level in the mouth and at the same time hold the appliance as far posteriorly as possible. It is important to hold the lingual segments of the posterior area against the teeth to prevent them from rolling buccally. This insures a flat occlusal plane for an ideal occlusion with the opposing arch. An alternative procedure is to have the patient bite firmly to hold the appliance in place while the liner is setting.

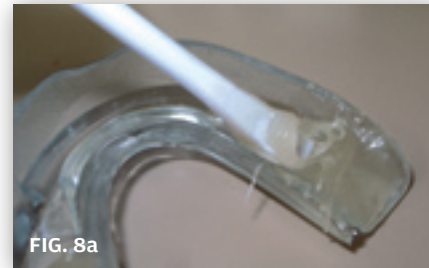


Fig 8 (a) The spatulated self-cure acrylic liner is loaded into the posterior textured areas of the Snore-Cure® and held in place for 4 minutes **(b).**

Remove and trim the excess material from the margins. Any sharp, fragile spicules should be snapped off with a ligature cutter or scissor. Do not remove these spicules completely, however, since they hold the appliance in place.

It is important that the appliance remain in place in its posterior position until the liner is hard, which takes 4 minutes in the mouth. If the appliance slips away from the incisors while in place, it is recommended that the anterior area be lined as well. This, however, is usually not necessary due to the usual tight fit of the posterior lined areas. If the anterior segment is lined, the plastic liner should be only placed gingivally in the textured labial and lingual areas. Dispense the powder to the 1st mark and the liquid to the 1 ml. level and proceed as before.

If the plastic flows over the crowns of the incisors, these teeth will be well retained, however if any acrylic veneers are present they should be coated first with petroleum jelly.

LINING THE SNORE-CURE® ON A PLASTER MODEL

The advantage of this lining method is that it is a better way in individuals that have gingival recession with extensive undercuts. It also saves time in trimming the excess liner from the margins since it can be easily cut away with a plaster knife while the liner is in it's doughy state.

If the lining is done directly in the mouth in those cases with considerable gingival recession, the interproximal spicules of plastic will often break off when removing the Snore-Cure® and it is time consuming to remove them from between the teeth. If there are minimal interproximal undercuts, they might have to be slightly increased in the model with a sharp instrument such as the pointed end of a wax spatula (Fig. 9a) which significantly increases retention (Fig. 9b).



Fig 9 (a) The undercuts of a case can be increased by twisting a sharp instrument into the interproximal areas of the plaster model (b).

The following procedure is recommended for lining the Snore-Cure® on a model:

TOTAL ELAPSED TIME (MIN:SEC)

1. Check the fit of the Snore-Cure® appliance in the mouth in the same manner as outlined previously (Fig 3).
2. Paint the textured posterior surfaces of the Snore-Cure® with 2 coats of primer (Fig 10a).



Fig 10 (a) The textured posterior area is painted twice with primer; (b) the powder is dispensed to the 2nd marking on the measuring tube



FIG. 11a



FIG. 11b

Fig 11 (a) the liquid is filled to the 2 ml marking on the dropper; (b) the powder and liquid is then spatulated for 30 seconds.

**TOTAL ELAPSED TIME
(MIN:SEC)**

3. Coat the plaster model with separating medium, being careful not to heavily plug up the interproximal undercuts.
4. Dispense the powder into the 2nd marking of the measuring tube (Fig. 10b) and pour into the mixing cup.
- 0:00 5. Fill the dropper with the liquid to the 2ml marking (Fig. 11a) and dispense over the powder into the mixing cup. Begin spatulating.
- 0:30 6. Spatulate the powder and liquid for 30 sec. (Fig. 11b).
- 0:30 7. Immediately smear the mixed plastic into the interproximal undercuts and around the posterior teeth on the model.
- 2:00 8. Let the remainder of the plastic in the mixing cup stand for 1 min. 30 sec.
- 2:00 9. Load the Snore-Cure® appliance with liner on both sides of the textured posterior areas (Fig. 12a).
- 2:00 10. Insert onto the plaster model (Fig. 12b).



FIG. 12a



FIG. 12b

Fig 12 (a) The spatulated self-cure acrylic liner is loaded into the posterior textured areas of the Snore-Cure® and (b) held in place on the model for 6 min. 30 sec.

- 8:30 11. Hold the appliance in place for 6 min. 30 sec. in the same way as described above.
12. While the plastic is still in its doughy state, cut the excess material off around the margins of the Snore-Cure® with a plaster knife (Fig. 13a). This saves considerable trimming of the set plastic.



FIG. 13a



FIG. 13b

Fig 13 (a) Excess plastic can be trimmed away with a plaster knife while in it's doughy state. (b) The Snore-Cure® and plaster model held in place with a C clamp.

CONTRADICTIONS FOR SNORE-CURE® USE:

- If the patient has episodes where breathing stops for at least 10 seconds during sleep and experiences sleepiness during the day, the patient's physician should be consulted prior to any appliance use.
- Not to be used in individuals that are still growing.
- Not to be used in those undergoing orthodontic treatment unless mandibular advancement is desired as part of the therapy.
- Not recommended for edentulous patients.
- Do not use substitutes or other manufacturer's products for the lining procedure.

REFERENCES:

1. Young, T., Palta, M., Dempsey, J. Skatrud, J. Weber, S., and Badr, S., The occurrence of sleep disordered breathing among middle-aged adults, N. Engl. J. Med., 328: 1230-1235, 1993.
2. Caskadon, M.A., and Dement, W.C., Nocturnal detriments of daytime sleepiness, Sleep, 5: 573-581, 1982.
3. Schmidt-Nowara, W.W., Meade, T.E., and Hays, M.B., Treatment of snoring and obstructive sleep apnea with a dental orthosis, Chest, 99: 1378-1385, 1991.
4. Strohl, K.P., and Redline, S., Recognition of obstructive sleep apnea, Am. J. Respir. Crit. Care Med., 154; 279-289, 1996.
5. Tsai, H-H., Ho, C-Y., Lee, P-L., and Tan, C-T., Cephalometric analysis of nonobese snorers either with or without obstructive sleep apnea syndrome, Angle Orthod., 77: 1054-1061, 2007.



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**NOTE: This fast-setting, minimal odor and heat-generating, self-cure acrylic is specifically formulated for use with this appliance.
DO NOT SUBSTITUTE OTHER MATERIALS.**

WARNINGS:

- Dentists and assistants should wear gloves and protective eye wear.
- Patients should wear eye protection.
- If contact with eyes occurs, flush with generous amounts of water.
- If contact with skin occurs, wash with soap and water.
- In case of ingestion, seek medical attention immediately.
- Eugenol-containing materials may inhibit curing.
- Material is flammable. Keep away from sources of heat.
- Any item that is handled in the delivery of the dental service should be disinfected by standard dental office hygiene procedures.
- Do not allow the appliance to remain in the mouth more than 4 minutes because exothermic curing could cause burning and irritation.