

Questionnaire: This questionnaire has been designed to determine the potential suitability of a SILENSOR to reduce snoring, obstructive sleep apnea and hypopnea. It may be useful to have the patient to discuss the questions with his or her partner.

	yes	sometimes	no
Do you snore only when lying on your back?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you snore only when your mouth is open?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No anteriorization of the lower jaw with the SILENSOR.

No anteriorization of the lower jaw with the SILENSOR.

Shorter connectors may be fitted after testing.

Anteriorization of the lower jaw with the SILENSOR necessary or see below.

Do you snore noisily?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you feel tired on waking up?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you wake up with a headache?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have problems concentrating for long periods?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does sleep suddenly overcome you or do you doze off unintentionally during the day?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does your breathing stop at any time during sleep?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Obstructive Sleep Apnea is probably present. Treatment is necessary.

Anteriorization of the lower jaw with the SILENSOR is necessary.

Obstructive Sleep Apnea cannot be completely excluded. Further diagnosis is necessary. Anteriorization of the lower jaw with the SILENSOR is necessary.

Obstructive Sleep Apnea is probably not present. Anteriorization of the lower jaw with the SILENSOR is necessary or see above.

Do you feel stiffness in the area of the temporomandibular (jaw) joints?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do your facial muscles feel strained or tense in the morning?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you grind or clench your teeth?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Treatment with the SILENSOR is not recommended because it could cause further damage to the temporomandibular joints.

Before the SILENSOR is fitted, it is necessary to find if temporomandibular joint problems can be excluded.

Temporomandibular joint problems probably do not exist. Treatment with the SILENSOR is indicated.

This questionnaire does not claim to be complete. Mostly the results shown can only be considered as tendency. Further steps for finding results are perhaps necessary. Where an Obstructive Sleep Apnea is suspected, patients should undertake appropriate tests in a sleep laboratory.

From 150 % of the normal weight upwards oral devices mostly have no effect.

Name:	Weight:	Size:
.....	kg	cm
Address:	
	
	

Do YOU SNORE....



...Your dentist
could help.



Copyright by ERKODENT • Printed in Germany • P. 53-3011-6

SILENSOR®

Anti-snoring device



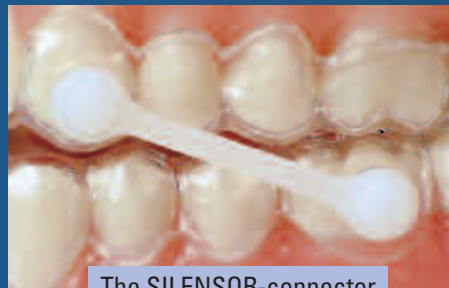
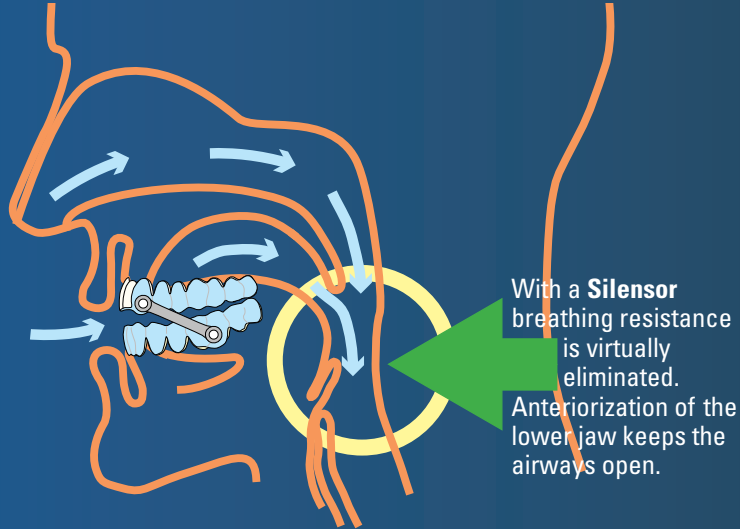
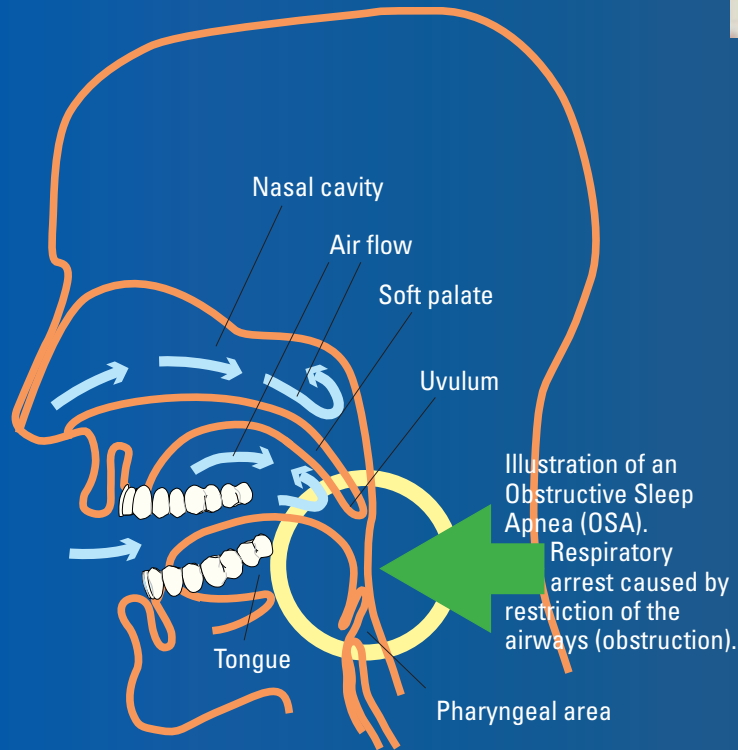
Siemensstraße 3 • 72285 Pfalzgrafenweiler (Germany) • Tel. + 49 (0) 74 45/85 01-0
Fax + 49 (0) 74 45/20 92 • www.erkodent.com • info@erkodent.com

Snoring:

Studies have shown that in industrialized countries approximately 40 % of the population snore¹. The percentage increases to 60 % with men above the age of 60. Snoring is generated when soft tissue vibrates. During sleep, muscle tone in the neck and pharynx decreases. This causes narrowing of the pharyngeal space, the required volume of air must be inspired at a higher velocity and noisy vibration (snoring) of soft tissues, such as the velum palatinum (soft palate) and the uvulum, is stimulated.

Respiratory arrest during sleep (sleep apnea):

Sleep apnea is, at a certain level of severity, a **serious disease** that may cause not only sleepiness during the day but also serious vascular diseases. This form of respiratory arrest lasts at least 10 seconds, before the patient resumes breathing in an explosionlike and noise-generating event. Obstructive sleep apnea (OSA) is defined as a respiratory arrest caused by restriction of the airways. Hypopnea is a reduction in respiratory volumes during sleep. The severity is assessed using the apnea index. An index up to 5 is considered normal, 6 - 20 is mid range and > 20 is severe sleep apnea. This index can only be determined in a sleep laboratory.



The SILENSOR-connector

SILENSOR - How can it help you?

The SILENSOR consists of two transparent splints, one each for the upper and lower jaw. The lower jaw is held in a predetermined position by 2 connectors

that are fixed laterally to the splint causing the pharyngeal space to open up. The velocity of the inspired air decreases and so do noise-generating vibrations of soft tissues. With the SILENSOR small movements of the jaws are possible which makes the SILENSOR a comfortable and effective snoreguard.

Clinical tests have shown that the anteriorization of the lower jaw reduces snoring at 90 % and may reduce the apnea index at up to 50 %^{2,3,4,5}.

Suitability of the SILENSOR:

The SILENSOR can be expected to be very successful since in almost all cases the noise involved in snoring is caused by constriction of the airways. Similarly, when breathing through the nose is difficult or blocked, e.g. by polyps, the use of the SILENSOR is in no way precluded. Because of its compact design, the device does not inhibit breathing through the mouth. Severe corpulence and/or severe alcohol intake impair the efficacy of the device. Success of treatment with the SILENSOR is questionable in these cases. The SILENSOR cannot be used with edentulous patients and should only be fixed to a partial denture which has adequate retention. It is up to the dentist to assess whether or not residual teeth provide enough retention.

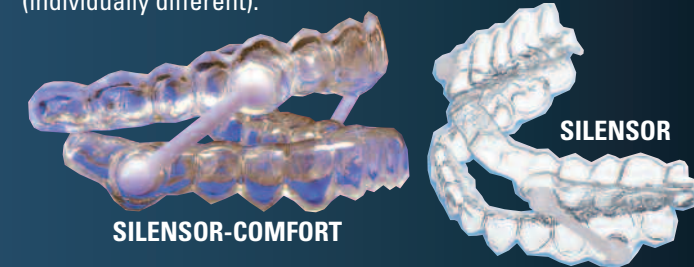
If a sleep apnea is suspected, the efficacy of the SILENSOR should be assessed in a sleep laboratory considering the seriousness of this disease.

Hints for wearing the SILENSOR:

Initially, the patient may experience some tension and the mandible may feel slightly out of alignment in the morning. Two reasons are stated for this disalignment: muscle disorientation and /or lymphatic liquid in the joint. Both will disappear in a short time (individually different).

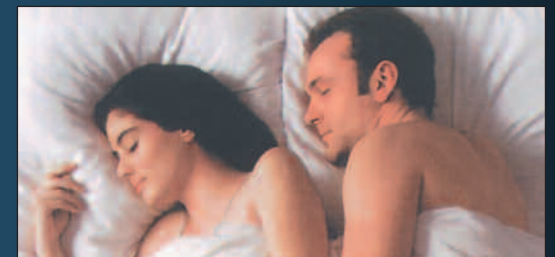


The fitted SILENSOR



The SILENSOR-COMFORT consists of a splint material that is soft and comfortable on the inside. The hard layer on the outside ensures sufficient stability. The SILENSOR made of hard material should be used in case of very little retention or if there are big gaps in the teeth.

1. A. H. + I. K. Friedlander, Pogral, Dentistry's role in the diagnosis and co-management of patients with OSA-syndrome, British Dental Journal, Vol. 19, No. 2, July 22, 2000
2. Y. K. Tan, P. R. L'Estrange, Y.-M. Luo, C. Smith, H. R. Grant, A. K. Simonds, S. G. Spiro, J. M. Bettagel, mandibular advancement splints and CPAP in patients with OSA, european Journal of Orthodontics 24 (2002) 239-249
3. Schmidt-Nowara W, Lowe A et al, Oral Appliances for treatment of snoring and obstructive sleep apnea: a review, Sleep 18(6): pp. 501-10, 1995
4. Robert R. Rogers, Oral Appliance Therapie for the Management of Sleep Disordered Breathing: an Overview Sleep and Breathing-Vol. 4, No. 2, 2000
5. Clark Glenn.T, Kobayashi, Freymiller, Mandibular Advancement an Sleep Disordered Breathing, CDA Journal, 4, 1996.



Thanks to the SILENSOR you and your partner will sleep in peace again. Please consult your dentist for more details.