

What is snoring and what is its origin?

The treatment of
snoring by means of
the SchnarchSTOP



...snoring less – living more relaxed!

Guidebook electrostimulation

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What is snoring and what is its origin?

Up to 30% of the male and up to 20% of the female middle-aged population snores. Snoring is a respiratory sound which develops in the nasal pharynx. While sleeping, the soft palate becomes slack and the tongue falls back. This causes constrictions where the air of the breathing through mouth or nose needs to cleave. The result are noisy vibrations, above all in the area of the soft palate or the root of tongue.

The severity level of snoring can reach from light to serious. Some of the persons concerned just snore temporarily, others are habitual snorers. Snoring is disturbing for all persons involved. The sleep of the snorer and, of course, the sleep of the partner is disturbed significantly. Additionally, snoring often leads to an unpleasant dehydration of the mucous membranes.

Not infrequently, snoring is connected with another complaint, the so-called „obstructive apnea“. Obstructive in this case means a shift of the respiratory tract and apnea means “non-breathing” in the sense of a pause in breathing. These patients have interruptions in breathing during sleep, whereby the gas exchange of the body and the quality of sleep may suffer significantly. So far, it is not clear whether this complaint is treatable by electrostimulation.

Snoring may also be caused by a number of other diseases like, for instance, changes in the nasal pharynx or by systemic diseases. The determination and the treatment of such a primary disease must be made by a doctor. In these cases, a

therapy with the SchnarchSTOP as an additional measure is only suggestive if agreed upon with a doctor.

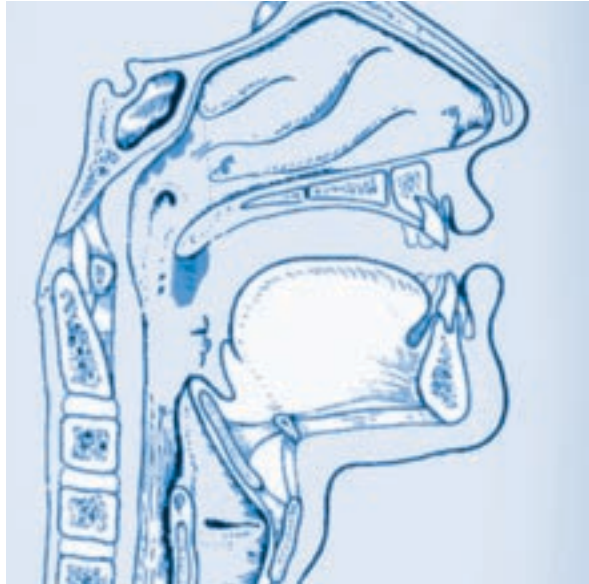


Figure 1
Graph of the
nasal pharynx

What is the SchnarchSTOP and how does it work?

The SchnarchSTOP produces electrical pulses which lead to a contraction of the musculature. This procedure is used in other areas of medicine, too, the so-called electrical muscle stimulation (EMS). A periodical repetition of the treatment trains the musculature and makes it more powerful, similar to sports. The success of this training does not come immediately but only with periodical training and the associated increasing muscular strength respectively muscular condition.

The pulses are transmitted to the skin and the below musculature via self-adhesive electrodes. Due to an appropriate placement of the electrodes, a specific muscle respectively muscle group can be treated.

What are the different programs of the SchnarchSTOP for?

The device offers 3 programs. The programs 1 and 2 are designed for the stimulation during the day. The program 3 is a special program for the stimulation at night.

■ Program 1

When starting therapy, it is advisable to use program 1. Stimulation is effected with 5 Hz, i. e. the device produces 5 pulses per second. This treatment leads to an improved basic tension of the lower jaw and floor of the mouth muscles. Treatment should be effected 2-3 times per day for a period of 20 minutes each time.

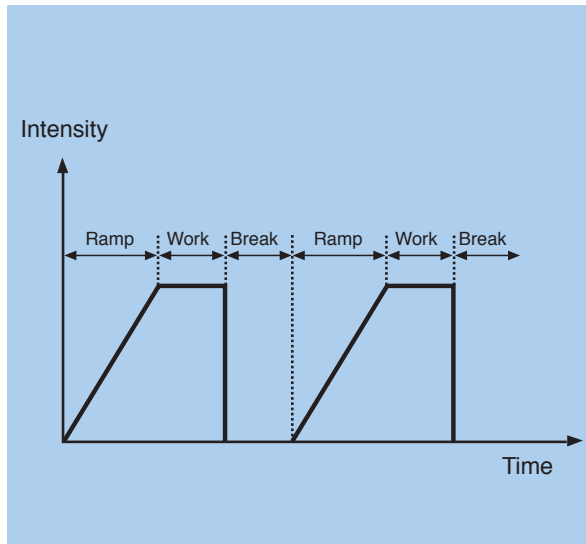
Intensity should be set in order to have muscle contractions, leading to muscular twitching due to the successive pulses. Stimulation must not be painful.

■ Program 2

This program should be applied if the training success with program 1 is not sufficient. This program has 40 Hz, i. e. the device produces 40 pulses per second. Due to this frequency, it affects on different muscle fibers than program 1.

These muscle fibers fatigue when working for a prolonged period. Therefore, program 2 has periodical breaks during stimulation enabling the muscles to recover. Moreover, the current intensity increases slowly to the pre-set value (ramp up) and, after some seconds of stimulation and contraction of the muscles (working time), it decreases again (ramp down). The musculature recovers during the subsequent break. Afterwards, stimulation restarts with the ascending ramp. This course of stimulation is shown in figure 2.

Figure 2
Course of
stimulation
program 2



Intensity should be set high enough in order to have a muscle contraction during the working time. Stimulation must not be painful.

Stimulation with program 2 should be effected 2-3 times per day for a period of 20 minutes each time.

Program 3

This program serves for treating extremely serious cases. It is used at night during sleep. Stimulation is effected with 3 Hz, i. e. the device produces 3 pulses per second. The program runs for 3 hours and stops automatically. Intensity should be set in order to only have a light muscle twitching which is not found to be disturbing. When starting therapy, treatment should be effected every night.

As soon as there is a significant improvement, therapy should be continued by applying program 1 during the day.

How to place the electrodes of the SchnarchSTOP?

The electrode placement is the same for the 3 programs. Prior to placing the electrodes, the skin must be cleaned. It should be dry and free of grease, otherwise, electrodes will not adhere. Especially cosmetics, personal hygiene products or hairs may impair the adhesion of electrodes to the skin and need to be removed in advance.

Remove the electrodes from the foil and place them on the height of the lower jaw angle onto the lower jaw soft tissue (see figure 3). They must stick onto the skin with their whole adhering surface.

- **CAUTION: Electrodes must not touch one another! Risk of short-circuit!**

Figure 3
Placement of the left
electrode on the
lower jaw angle



Tip: To ensure the safe fitting of the electrodes, place the electrode cables over the ears like a bow.

After use, return the electrodes to their original foil. Electrodes are re-usable as long as they adhere completely to the skin. Otherwise, they need to be replaced.

About the muscle twitching

The pulses of the SchnarchSTOP stimulate muscles of the floor of the mouth and tongue. Due to the position of the electrodes, also other muscles are affected by direct stimulation or by the stimulation of special nerves. Even a slight change of the electrode placement may cause new effects, e. g. contractions of facial muscles like in the area of the lips, for instance. This phenomenon is harmless, but if it is found to be disturbing, the electrode placement must be changed.

How long do I have to stimulate with the SchnarchSTOP?

The programs 1 and 2 should be applied daily for a period of 4 weeks. The same is valid if the program is changed. As soon as there is a significant improvement, the number of treatments can be diminished slowly.

Program 3 should be applied every night for a period of 4 weeks. As soon as there is a significant improvement, therapy may be continued by applying program 1 during the day.

Which side-effects does the SchnarchSTOP have?

The treatment with the SchnarchSTOP is very well tolerated and nearly free from side-effects. In some cases, the following side-effects may occur:

■ Pain

Stimulation should be pain-free. In case of painful or unpleasant symptoms stop therapy and consult your doctor.

■ Skin alterations

Due to their special form, the pulses of the SchnarchSTOP are very skin-friendly. Stimulation may cause a slight reddening of the skin in the area of the electrode placement, which is normal. In case of skin reactions like itching, tense skin or blisters stop therapy and consult your doctor. These might be allergies or incompatibilities.

In which cases is it not allowed to use the SchnarchSTOP or only with the consent of a doctor?

- Patients with an electronic implant like pacemakers, medication pumps or stimulators
- Patients with severe primary diseases like irregularity of pulse, epilepsy, or states of loss of consciousness (syncope)
- Patients with carotid sinus syndrome (drop of blood-pressure or loss of consciousness because of a stimulation of certain regions in the area of the carotid)
- During pregnancy
- Patients with tumor diseases in the area of the head and the neck
- Patients having injuries in the area of head and neck
- Patients having skin diseases in the area of the electrode placement

Further precautionary measures

- Only place the electrodes on the clearly recommended places. Different electrode placements may lead to serious side-effects.
- Therapy with the SchnarchSTOP should not be effected with children or patients with restricted personal responsibility.
- Do not use the SchnarchSTOP when carrying out activities which require a high degree of

concentration like driving a car or operating other machines.

- If using a SchnarchSTOP and another high frequency medical device like a microwave concurrently, this may lead to malfunctions of the device and to electric shocks.
- Electronic monitoring devices like the ECG (electrocardiogram) may interfere with the SchnarchSTOP.

What else can you do to minimize snoring?

You may support the therapy with the SchnarchSTOP by:

- contracting the floor of the mouth and lower jaw muscles strongly several times per day for some seconds
- reducing overweight
- dispensing with alcohol and nicotine
- dispensing with narcotics, if possible

SchnarchSTOP: Short guidance in 9 steps

1. Clean and dry the skin in the area of the lower jaw angle.
2. Connect the cable to the device.
3. Connect the cable to the electrodes.
4. Remove the electrodes from the foil and place them onto the described places (figure 3).
5. Select a program.
6. Switch on the device by rotating the intensity knob in clockwise direction and slowly increase intensity until the muscles in the area of the electrodes react with muscle twitching.
7. After therapy, turn back the intensity knob in direction to 0 and switch off the device.
8. Remove the electrodes from the skin and return them to their original foil.
9. Cable connections can stay until the next treatment session or they can be disconnected for transportation purpose, for instance.

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What is snoring?

How may the SchnarchSTOP help me?

Where do I have to place the electrodes?

What else can I do to minimize snoring?

This brochure gives answers to questions like the above mentioned in a competent and understandable way.

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