



### Dear Patient:

Due to the large number of patient enquiries that my team and I receive by email every day, it is unfortunately no longer possible for me to deal with all questions and requests individually. Therefore, I have created the attached questionnaire, which you can complete and send back to us. Based on your information and previous findings, I will perform an assessment and if necessary offer you suggestions for therapy. Alternatively, of course, you have the option of making an appointment directly at our special ENS clinic. For our international patients in particular it would definitely be advisable to have us do an assessment of your findings and any CT scans that may be available before making an appointment for an examination or treatment.

Below you will also find an overview of the most common questions (FAQ list), which should help you to decide whether an assessment of your findings is advisable to begin with, or whether you should schedule an examination right away.

### What is ENS?

Empty Nose Syndrome (ENS) is a highly complex and varied clinical picture that can occur in about 5% of patients who have had surgery on their superior or middle nasal turbinates. Instead of being able to breathe better through their nose after the procedure, as expected, the patients complain that their nasal breathing feels worse. Their symptoms can become extremely serious, even to the point of feeling they are suffocating. This is often associated with sleep disorders and generally decreased ability to function.

However, many other patients describe their symptoms as a feeling of having an empty, dry nose and the sensation that they have too much air in their nose or throat. This is often accompanied by a dry throat and a cold feeling in the nose and throat area. Pain in the nose is sometimes mentioned as well.

### How is ENS diagnosed?

In view of the highly varied causes and symptoms of ENS, careful diagnosis is essential in order to facilitate individualised therapy. For this reason we have an extensive array of diagnostic tools at our disposal, including:

- Flexible endoscopy using an HDTV video nasopharyngoscope with „chip on the tip“ technology
- Digital volume tomography (DVT) with up to 10 times higher resolution (85 µm) than a traditional CT and up to 10 times less radiation exposure
- Nasal flow measurement (rhinoresistometry and acoustic rhinomanometry)
- Nasal turbinate function testing via 24-hour nasal flow measurement
- Simulation of ENS surgery using the „cotton test“

### What are the treatment options?

The primary objective of any treatment is to restore natural air flow, which ideally passes between the inferior and middle nasal turbinates. Depending on the patient's initial findings, this can be achieved through a number of different procedures. Depending on findings, these could include:

- AlloDerm implantation
- Injection of hyaluronic acid or PRP
- Medialisation of the remaining inferior turbinate, thus narrowing the air flow channel
- Septum correction
- Septal perforation closure
- Removal of a concha bullosa (air-filled middle turbinate)
- Sinus correction

In recent years, implantation of an acellular collagen matrix (AlloDerm) in the lateral wall of the main nasal cavity or the septum at the level of the former inferior and/or middle turbinates has proven particularly successful.

In cases where the amount of nasal turbinate tissue is still sufficient, but its function has been severely limited due to bipolar cauterisation, scarring or laser treatment, platelet-rich plasma (PRP) therapy is also a possibility. In this procedure, 10 ml of the patient's blood is drawn. The platelets present in the blood are then concentrated in a special centrifugation process, and the growth factors they contain are released. Injecting this solution into the remaining nasal turbinate triggers regeneration of the surrounding tissue, similar to the way in which a wound heals. This procedure has already been used for years in orthopaedics for a variety of degenerative diseases with great success, and shows great potential for success in ENS as well.

Besides these special ENS and septum procedures, additional sinus correction is quite often necessary as well. In addition to electromagnetic navigation-guided FESS surgery, balloon sinuplasty or the ENTrique system are also available for this purpose.

All procedures, whether done on an outpatient basis in our offices or on an inpatient basis at Lichtenfels Hospital, are performed without using nasal packing, which makes them very easy on the patient and less stressful.

### How expensive is it?

All costs are calculated based on the GOÄ (German Medical Fee Schedule). For an evaluation of your medical history form and a CT scan from an outside source, the cost would be 102.00. For a complete examination with DVT, endoscopy and nasal flow measurement, including 24-hour recording, the cost is estimated at 651.96.

The costs for the individual procedures are highly variable, depending on whether they can be performed on an outpatient basis or have to be done in hospital. For example, the cost for one session of PRP treatment (a total of 3 to 5 treatments are necessary) is 318.92. The costs for inpatient surgery including AlloDerm implantation total about 5,000.00. If surgery on the sinuses or the nasal septum is required, the costs increase accordingly.

### For our German patients:

Please note that statutory health insurance plans will not cover the costs for an assessment or for the special ENS examinations. In that case, you would incur costs of 102.00 and 329.05 respectively. Private insurance plans, on the other hand, will generally cover the full costs. The costs for outpatient procedures are also not covered by statutory health insurance, unlike private insurance. Statutory health insurance will cover part of the costs for inpatient procedures only. However, the material costs for the AlloDerm implant material are not covered. The situation is similar for private insurance, which often will not cover the material costs for AlloDerm.

### Which doctors treat ENS?

If you believe you may have ENS, contact the doctor who performed your surgery first. Unfortunately, the causes and treatment of ENS are not yet generally accepted principles, so not all doctors are familiar with proper diagnosis at present. However, I have been pleased to see that discussion of the clinical picture of ENS has increased over the last few years, at least in Germany. Nevertheless, it will definitely be several more years until the causes of ENS – specifically, overly aggressive removal of the turbinates and decreased turbinate function – are generally recognised and surgical methods are modified accordingly.

For these reasons, I am unfortunately not aware of any other ENT specialists who have similar levels of experience in the diagnosis and treatment of ENS apart from Dr. Houser in Cleveland, Ohio, USA. We keep in close contact with one another and regularly share our experiences in treating ENS.



To get an assessment based on your medical history, please complete the following form and send it, along with your CT scan, to the following address:

Dr. Robert Bodlaj  
Otolaryngology Practice  
Bamberger Str. 7  
96215 Lichtenfels  
Germany

Please remit the fee of € 102.00 for the assessment of your findings to the following account:

Dr. Robert Bodlaj  
Account no.: 0006147690  
Bank code: 30060601  
Bank: apoBank Bayreuth

For foreign remittances:

Dr. Robert Bodlaj  
IBAN: DE29300606010006147690  
BIC: DAAEDED1028

Once payment is received, you should receive an email response within one week with a therapy recommendation and, if needed, a suggested date for a more extensive examination.

If you would also like to get treatment as part of the examination, we can arrange this as well and reserve a surgery date for you. However, it is generally advisable to wait to have the examination, and then plan the appropriate treatment. Doing both at the same time is advisable only for international patients who have a long distance to travel.

### Medical history form

When did you first have nasal surgery?

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What were the symptoms for which that operation was performed?

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What kind of operation was it? If you have the surgical report available, please attach a copy.

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Where did you have the operation? Which hospital or medical practice?

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Have you had any other operations? If so, when?

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If so, what kind of operations?

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When did you first have ENS symptoms?

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What did you do for it?

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What symptoms are you having currently?

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### SNOT questionnaire

Sino-Nasal Outcome Test (SNOT 20/25)

Below you will find a list of symptoms and social/emotional consequences of your nasal problems. We would like to know more about your problems, and so we ask that you complete the form to the best of your knowledge. There are no right or wrong answers. Only you can answer these questions for us, and thus help us to better classify and understand your symptoms. Incidentally, this questionnaire is not specifically for ENS, but is a validated tool for assessing diseases of the nose and sinuses. Please rate your symptoms over the past two weeks in terms of their severity and how often they occurred.

Considering how severe the problem is when you experience it and how frequently it happens, please rate each item below on how „bad“ it is by typing in the number that corresponds with how you feel using this scale:

#### Please type the numbers of the most important items affecting your health (maximum of 5 items)

0 = Not present/no problem

1 = Very mild problem

2 = Mild or slight problem

3 = Moderate problem

4 = Severe problem

5 = Problem as “bad as it can be”

		0	1	2	3	4	5
1	Need to blow nose:	<input type="checkbox"/>					
2	Sneezing:	<input type="checkbox"/>					
3	Runny nose:	<input type="checkbox"/>					
4	Cough:	<input type="checkbox"/>					
5	Post-nasal discharge:	<input type="checkbox"/>					
6	Thick nasal discharge:	<input type="checkbox"/>					
7	Ear fullness:	<input type="checkbox"/>					
8	Dizziness:	<input type="checkbox"/>					
9	Ear pain:	<input type="checkbox"/>					
10	Facial pain/pressure:	<input type="checkbox"/>					
11	Difficulty falling asleep:	<input type="checkbox"/>					
12	Wake up at night:	<input type="checkbox"/>					
13	Lack of a good night's sleep:	<input type="checkbox"/>					
14	Wake up tired:	<input type="checkbox"/>					
15	Fatigue:	<input type="checkbox"/>					
16	Reduced productivity:	<input type="checkbox"/>					
17	Reduced concentration:	<input type="checkbox"/>					
18	Frustrated/restless/irritable:	<input type="checkbox"/>					
19	Sad:	<input type="checkbox"/>					
20	Embarrassed:	<input type="checkbox"/>					
21	Dryness:	<input type="checkbox"/>					
22	Difficulty nasal breathing:	<input type="checkbox"/>					
23	Suffocation:	<input type="checkbox"/>					
24	Nose is too open:	<input type="checkbox"/>					
25	Nasal crusting:	<input type="checkbox"/>					

Please tell us your postal address, your phone number and your e-mail address that we can contact you and assign your patient documentation.

Surname \_\_\_\_\_ First Name \_\_\_\_\_

Address \_\_\_\_\_ Post code / Zip \_\_\_\_\_

Telephone \_\_\_\_\_ E-mail \_\_\_\_\_