

Computer-aided EEG Control **(BIS / Narcotrend)**

Personalized anesthesia management and maximum safety during anesthesia are essential for anesthesiological treatment for you, your child, or the person you are caring for. Therefore, in addition to monitoring the cardiovascular system and ventilation during anesthesia by ECG, blood pressure measurement, pulse oximetry, and gas measurement, we will also use the EEG as a supplementary monitoring tool. EEG provides the ability to monitor the influences of anesthetic medicines on the brain, allowing direct measurement of brain function. Die üblicherweise in mg/kg Körpergewicht angegebenen allgemeinen Dosierungsrichtlinien können nunmehr speziell an den jeweiligen Patienten angepasst werden. Die Messwerte werden auf einem Monitor dargestellt. By combining the monitoring of brain activity and the assessment of clinical symptoms, we as anesthesiologists have an extended range of tools at our disposal for optimizing the dosage of the anesthetic medicines or additional medications. General dosage guidelines, usually given in mg/kg body weight, can now be adjusted specifically to the individual patient. The measured values are displayed on a monitor.

For the patient, this means:

- Individual dose adjustment compared to standard doses.
- Avoidance of overdoses and therefore less strain on the body.
- Reduction of anesthesia withdrawal and recovery times.
- Avoidance of intraoperative states of wakefulness ("awareness").

In order to perform the anesthesia on you, your child, or the person you are caring for in an optimal and individually adjusted manner, it is necessary to use this measurement method. We will invoice you for this examination according to GOÄ 827, which is the code for an electroencephalographic (EEG) examination in the German medical fee schedule. If this service is not reimbursed by your private health insurance, the cost you will be charged is **€ 63,47** (1.8 times the standard rate).

I agree to pay the costs for anesthesia neuromonitoring. *(Please mark the appropriate box with an X, complete the fields, and sign below)*

☐ me ☐ my child ☐ of the patient(s) in my care

Surname / Given name of the patient

date of birth

☐ w ☐ m

Surname/ Given name of the insured person

Address of insured the person

Date / Signature of the insured person, legal guardian, legal custodian

Patient Information

Why is EEG monitoring useful during anesthesia?

- Advantages and Benefits of Computerized EEG Monitoring -

What is an EEG?

EEG stands for "electroencephalogram." An electroencephalogram is a recording of brain waves. Special adhesive electrodes are attached to the scalp to measure the EEG. These electrodes transfer the brain waves to an EEG measuring device, which records and evaluates the EEG as a curve. This EEG curve allows for the assessment of brain function.

What are the advantages of using the EEG in anesthesia?

Brain function is influenced by medications in a characteristic way, allowing the monitoring of changes in a patient's EEG. Consequently, EEG recording and computer-aided evaluation offer several advantages.

These advantages include the following:

- Checking the depth of sleep during anesthesia:
Continuous EEG monitoring during anesthesia makes it easier to control the patient's depth of sleep. This allows for better dosing of anesthetic medications and avoids unnecessarily long stays in the recovery room or post-operative ventilation in the intensive care unit.
- Early recognition of dangerous situations:
Potentially dangerous situations for the patient, such as an undersupply of oxygen or the occurrence of seizure potentials, can be recognized at an early stage with an EEG check.

Which patients in particular benefit from EEG monitoring?

Children and older patients, in particular, benefit from personalized anesthesia guidance based on the EEG. It is more difficult to find the right dose of anesthetic medicines for children because many drugs are not approved for children or are only approved to a limited extent. The dosage is often based on experiences with adults, increasing the risk of incorrect doses. The dose required for older people is often lower; they frequently have concomitant illnesses and limited physical capacity.

EEG monitoring benefits patients of all ages. This balance is achieved through individualized measurements of medication. Computer-assisted EEG monitoring aids in this anesthesiology assessment.