# Video-EEG monitoring

## Patient instruction

### Information on video-EEG monitoring

Video-EEG monitoring is an examination method in which EEG (electrical activity of the brain) and video (clinical manifestations of the patient) are recorded simultaneously.

The purpose of the monitoring is to record your typical seizures - that is, the seizures you usually have. The examination will help determine whether these seizures are epileptic and what type they are, or whether they are of other (non-epileptic) origin. If epilepsy surgery is being considered, the examination will help determine in which area of the brain the seizures originate. It is also possible to assess whether you are experiencing subclinical seizures (i.e. seizures with minimal or no clinical manifestations) and to what extent your disease is compensated. Answering any of these questions may significantly influence the future management of your seizures.

During the video-EEG monitoring, electrodes are placed on your head and record the electrical activity of your brain; at the same time, your ECG (heart activity) will also be recorded. The presence of the electrodes is not painful. The electrodes are easily peeled off after the examination. Also, y*ou will be monitored by a video-camera at all times during the examination (except when in the toilet and bathroom). The* image from the video-camera, together with the EEG signal, is recorded and stored so that it can be reviewed and evaluated by the doctor. The image from the camera is simultaneously transmitted to the nurses' station of Inpatient Ward I, where your clinical condition is monitored by the medical staff. Similarly, the audio recording is also captured. These measures are important for your safety - in the event of a seizure, the staff can respond immediately and provide the necessary assistance.

Video-EEG monitoring is carried out in two well-equipped rooms (single and double) with a separate bathroom and toilet, TV and a telephone where calls can be received (room 1: +420 22443 7474; room 2: +420 22443 6810*).* Calls outside (outside the hospital) are blocked. Although there is a television in the monitoring room, we recommend that you bring enough books or magazines to read, or some other activity to help you pass time while waiting for a seizure (laptop with movies or games, puzzles, knitting, etc.). Devices directly plugged into the mains (especially mobile phone and laptop chargers) should not be used at the bedside due to interference with the EEG signal being recorded. However, devices powered by batteries or rechargeable batteries can be used on the bed (under these conditions, the use of a mobile phone, reader, laptop, etc., is fine). The batteries of the devices can be recharged in the room at a designated location. Motol Hospital offers a paid WiFi option for patients - if you wish to use this service, please ask the medical staff upon admission. If you have specific dietary restrictions (ketogenic diet, gluten-free diet, lactose intolerance, severe food allergies, etc.), please inform the video-EEG monitoring coordinator in advance (contact: epilepsie@fnmotol.cz, tel. +420 702 001 866).

Since the occurrence of seizures cannot usually be planned in advance, it is often necessary to increase the chances of their detection. This is done by partial or complete withdrawal of anti-seizure medication or sleep deprivation. In some patients, other specific methods can be used to induce seizures, such as deep breathing (hyperventilation) or flashing light (photostimulation). If these procedures are used, the doctor will inform you in advance. An intravenous line will be inserted when anti-seizure medication is reduced or withdrawn so that anti-seizure medication can be given intravenously if necessary. When video-EEG monitoring is initiated, you will be re-informed by the EEG technician and the attending physician of the progress of the examination.

Many patients are able to recognize an impending seizure by characteristic sensations/manifestations. *If you feel a seizure coming on during video-EEG monitoring, please mark it immediately by pressing the red button.* If you did not manage to mark a seizure at the beginning of the seizure, and you feel that a seizure has taken place, please mark it after the seizure has ended. Pressing the button will create a mark in the EEG recording so that the physician can evaluate the EEG and clinical manifestations before and after the mark in more detail when evaluating the recording afterwards. At the same time, an alarm is triggered when the button is pressed to alert medical staff. A nurse is called in to test your ability to respond and communicate. Therefore, when you arrive in the room, she will have you memorize a certain color and ask you simple questions. This is all a standard part of the examination.

*During video-EEG monitoring, you must spend all your time (except for personal hygiene and toileting) on the bed. There is a no smoking policy in the video-EEG monitoring room as well as in the entire ward.* Interrupting the monitoring for a "cigarette" is not possible (due to the risk of having a seizure outside the monitoring room with the risk of injury or other complications, and at the same time invalidating the whole examination if the seizure is not recorded)*.* We understand that some patients may find it challenging to restrict smoking - however, nicotine patches can usually solve this problem. If this issue concerns you, please do not hesitate to contact the treating medical staff. Due to the patient's restricted freedom of movement, visits to the room are allowed outside of normal visiting hours. In indicated cases (for medical reasons), a family member may be present with the patient for the entire examination (in which case the video-EEG takes place in a double room).

The length of video-EEG monitoring depends on how early you can capture your typical seizures in sufficient numbers for reliable evaluation. Typically, video-EEG monitoring takes 5-7 days. If anti-seizure medications are reduced or discontinued, you must continue monitoring for at least one more day after they are reinstated.

**Please wash your hair with a regular shampoo without conditioner before attending the video-EEG, do not use hairspray, hair dye or hair sealants. On the day of admission, please report to the outpatient clinic of the Neurology Clinic - Blue Building, elevators at communication hub D, 2nd floor by 10:00 am. Bring personal items, medications and available medical records. After the necessary administrative tasks, you will be taken to the ward and the video-EEG monitoring will be started.**

### Video-EEG location

The video-EEG monitoring unit is located in the adult part of the Motol Hospital. Access is from node C / 2nd floor, 1st neurology station.

**Phone number of the department:** *+420 22443 6830.*

### Patient care is provided by

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**Coordinator:** Romana Lipinová, BSc.

**Nurses of the Inpatient ward I.**