Emergencies

In case of emergencies outside working hours, patients can call this number (emergency room of the Department of Neurology):

+49 (0)9131 85-34338

Department of Neurology
Epilepsy Centre
Spokesman: Prof. Dr. med. Hajo M. Hamer, MHBA

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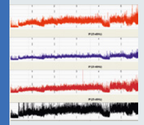
Science
For increased knowledge about epilepsies and improved therapy

Apart from the clinical care of patients, some of the most important tasks of the Erlangen Epilepsy Centre are the research of the causes of epilepsy and the advancement of diagnostic and therapeutic methods. This also includes participation in studies on new antiepileptic drugs.

The development and refinement of therapeutic and diagnostic procedures constitutes a further focus area of the Epilepsy Centre's scientific activities: it has a magnetoencephalogram (MEG), state-of-the-art electroencephalography devices (EEG) and high-performance 3-Tesla magnet resonance imaging systems at its disposal. Special emphasis is placed on the detection and characterisation of epileptic foci.



Research of the causes of epilepsy is another area of study, the main focus being on inflammatory changes, electrophysiological markers of difficult-to-treat epilepsies and their genetic background.

The Epilepsy Centre's health services research focuses on the social contacts and quality of life of its patients. Numerous projects of the neuropsychological working group are concerned with the cognitive and emotional aspects of epilepsy. In all these research projects, the Centre maintains interdisciplinary collaborative ties with other clinics and research institutions at FAU and other universities.

Unit of Neuropaediatrics
Close cooperation in epilepsy in children and adolescents

Children and adolescents with all forms of paediatric epilepsy and other paroxysmal neurological disorders are treated at the Unit of Neuropaediatrics outpatient clinic (recognised by the German Society for Epileptology). Focal points of outpatient care are diagnostics, initiation and monitoring of treatment, process analysis and, if necessary, multidisciplinary care. The team carries out ambulant wake- and sleep-EEG as well as long-term video-EEG monitoring. Furthermore, EEG and neurofunctional diagnostics are used in cooperation with the Epilepsy Centre to determine whether epilepsy surgery is indicated.

The Centre specialises in the ambulatory treatment of children and adolescents with difficult-to-treat epilepsies. Patients may take advantage of interdisciplinary treatment at the unit of neuropaediatrics, ensuring comprehensive care by an interdisciplinary team of experts for the patients themselves as well as their families. One particular advantage of the Erlangen Centre is the close collaboration with the inpatient department of the Department of Paediatrics and Adolescent Medicine, the Epilepsy Centre, the Division of Paediatric Radiology and many other operating departments of the university hospital.

Consultation hours of the Epilepsy Centre

Epilepsy outpatient clinic
Monday – Friday
Reception: Neurology outpatient clinic/Kopfkliniken
Phone: +49 (0)9131 85-32025 (or -34455)
ambulanz.epilepsie@uk-erlangen.de

Private consultation
Prof. Dr. med. Hajo M. Hamer, MHBA
Reception: Office
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sekretariat.epilepsie@uk-erlangen.de

Inpatient treatment
Coordination:
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Study Nurses
Phone: +49 (0)9131 85-34429
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Department of Paediatrics and Adolescent Medicine
Socialpaediatrics Centre
Spokeswoman: Prof. Dr. med. Regina Trollmann
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If you would like to support our scientific research with a donation:

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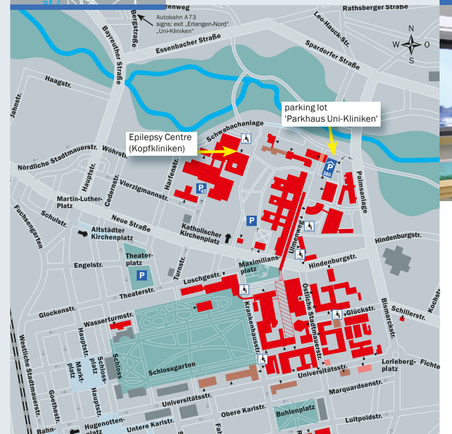
Reason for transfer: Epilepsy research, Reference No. 36612063

Directions

By car
From the A 73 exit 'Erlangen-Nord', follow the signs saying 'Parkhaus Uni-Kliniken'. There is a limited number of short-term and single-day parking spaces near the clinics. Please use the multi-storey car park 'Parkhaus Uni-Kliniken' at Schwabachanlage (vehicle access via Palmsanlage). Long-term parking spaces can be found at the large car park west of the railway station.

By train
Hauptbahnhof Erlangen (reachable by ICE train) is located approximately 1000 metres from the Epilepsy Centre. Take the 288 bus to the stop 'Maximiliansplatz' and walk to the 'Kopfkliniken' from there.



Epilepsy Centre

at the Department of Neurology

Spokesman: Prof. Dr. med. Hajo M. Hamer, MHBA

Universitätsklinikum Erlangen

With its 50 departments and institutes, Universitätsklinikum (university hospital) Erlangen covers all areas of modern medicine. The majority of buildings of the University Hospital are located centrally by the Schlossgarten and house more than 1300 beds. Teaching, research and patient care are interconnected on a highly sophisticated level. Patients benefit from state-of-the-art treatment methods that are often not yet available at other facilities. Comprehensive quality assurance systems ensure optimal patient care from arrival to discharge. More than 7500 employees in interdisciplinary teams are committed to this goal. They are united in what they strive to achieve: to alleviate suffering and to heal diseases.

Prof. Dr. med. Hajo M. Hamer, MHBA
Spokesman of the Epilepsy Centre

The most important goal of modern epilepsy treatment is seizure freedom

Epilepsies are among the most common diseases of the central nervous system. Approximately 1 % of the German population are affected. As a centre providing the highest level of care, the Epilepsy Centre at the Department of Neurology of Universitätsklinikum Erlangen is a leading institution in the therapy and research, especially of difficult-to-treat epilepsies. All recognised methods are available for diagnostics and treatments.

The individual therapy of epilepsy is guided by the latest scientific findings and guidelines. In addition our patients have access to the latest medication which is so far available only for use in pharmaceutical studies.

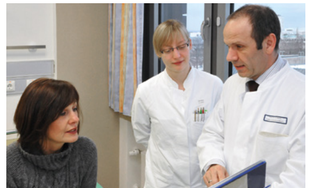
One particular focus area is the preoperative evaluation and surgical therapy of patients who cannot be helped sufficiently with medication. Epilepsy surgery is planned and carried out in one of the most modern neurosurgical operating theatres. Furthermore, we have many years of experience with therapeutic stimulation procedures such as vagus nerve stimulation.

At the Epilepsy Centre, we provide care for approximately 2500 outpatients and 300 inpatients per year. Children and adolescents are treated in cooperation with the University hospital's Department of Paediatrics and Adolescent Medicine. In interdisciplinary teams, hailing from many different professions, we work towards the central goal of epilepsy therapy: seizure freedom and preserving quality of life.

Clinical priorities
Successfully treating epilepsy with modern methods

- Differential diagnosis (Determining whether the patient suffers from epilepsy)
- Syndrome diagnosis (Determining which kind of epilepsy the patient has)
- Aetiological diagnosis (Determining the cause of epilepsy)
- Preoperative evaluation (Determining surgical options)
- Therapy of difficult-to-treat epilepsies
- Comprehensive counselling: neuropsychology, clinical social service

The Epilepsy Centre is embedded in the Department of Neurology (Head: Prof. Dr. Dr. h. c. Stefan Schwab) and has a modern, digital video-EEG monitoring unit and magnetence-phalography (MEG) at its disposal. Furthermore, all other important diagnosis procedures (e.g. MRI, PET/SPECT, neuropsychology, Wada test) are offered in close cooperation with the Department of Neuroradiology (Head: Prof. Dr. Arnd Dörfler) and the Department of Nuclear Medicine (Head: Prof. Dr. Torsten Kuwert). The planning and execution of epilepsy surgeries is carried out in cooperation with the Department of Neurosurgery (Head: Prof. Dr. Michael Buchfelder). The histopathological appraisal of the operated brain tissue is carried out at the Institute of Neuropathology (Head: Prof. Dr. Ingmar Blümcke).



Basic diagnostics
Comprehensive examinations for optimal therapy

Patients who may be eligible for surgical epilepsy therapy are admitted as inpatients and examined thoroughly within the following few days. This includes diagnostic imaging procedures (MRI, PET and SPECT) and neuropsychological and functional tests.

If the first results are promising, video-EEG monitoring is carried out. For this purpose, the patient's behaviour is recorded on camera. At the same time, the brain waves are recorded via surface EEG electrodes attached to the scalp. In difficult cases, magnetencephalography is carried out in addition. At the end of the diagnostic procedure, an interdisciplinary conference consisting of medical professionals from all relevant fields and psychologists recommend the optimal therapeutic method for every patient.

Neuropsychology
Preserving mental and psychological performance

Neuropsychological examinations play an important role at the Erlangen Epilepsy Centre. They include examinations of mnemonic and speech functions, among many other abilities. Apart from controlling seizures, the aim is to locate the epilepsy focus and to preserve the patient's mental and psychological faculties.

Video-EEG monitoring
Safe and comfortable diagnosing with modern digital technology

Video-EEG monitoring is at the core of any (preoperative) epilepsy centre. It involves recording both the patient's behaviour during a seizure with video cameras and measuring the brain waves via EEG day and night. This allows the treatment team to gather important information about what happens during a seizure. The aim of this so-called 'double image recording' is the accurate pinpointing of the brain regions that are the source of the epileptic seizures. One special feature of the video-EEG system in Erlangen is that patients can move around the unit freely during the diagnostic procedure.

Moreover, the Erlangen Epilepsy Centre has state-of-the-art digital technology at its disposal. The high accuracy of data processing and the possibility of incorporating further diagnostic imaging procedures into the process lead to a particularly high level of diagnostic accuracy.

Social work
Solving multi-layered problems

Epilepsy often results in multiple, overlapping problems for the sufferer. The Epilepsy Centre's social work unit supports patients before and after epilepsy surgery, providing counselling on all questions regarding social life, work, passes for persons with severe disabilities and medical and professional rehabilitation. The Centre closely cooperates with specialist integration services, counsellors for persons with disabilities, employers and regional epilepsy counselling centres. In addition, the Counselling Centre for Middle Franconia offers consultation hours at the Erlangen Epilepsy Centre once a month.

Magnetoencephalography (MEG)
Pinpointing seizure foci in the brain

Magnetoencephalography records magnetic signals that are emitted due to the activity of neurons in the brain.

MEG, like EEG, is a purely diagnostic procedure without side effects. It is used to determine which brain structures cause seizures or play a part in the seizures. Due to the technical complexity of executing this examination method and evaluating the results, only very few clinics worldwide have MEG systems at their disposal.