

The catalog of elective disciplines

1. **Department of Neurology, Psychiatry, Rehabilitation and Neurosurgery**
2. **Residency**
3. **Educational program "Neurology (adult, children)"**
4. 2 course
5. **Discipline:** "Actual aspects of differential diagnosis, treatment and issues of social rehabilitation in epilepsy"
6. **Number of credits:** 4 credits
7. **The purpose of the discipline:** To study the etiology, pathogenetic factors, clinical manifestations, diagnostic criteria, modern principles of treatment of epilepsy and status epilepticus, as well as the quality of life for the social rehabilitation of patients with epilepsy.
8. **Contents of the discipline:** Neuropathophysiology and etiology of epilepsy. ILAE classification. Generalized, idiopathic epilepsies. Juvenile epilepsy with absence seizures, juvenile myoclonic epilepsy. Cryptogenic epilepsies. Focal nonspecific etiology. Clinic, electroencephalography. EEG and cognitive disorders. Drug treatment of epilepsy. Surgical treatment of epilepsy. Various syndromes designated by seizure type (MCEP). Biofeedback. Somatogenic attacks. Non-epileptic seizures (paroxysmal states). Depression in epilepsy. Epileptic psychoses.
9. **Tasks:**
 - Train residents to diagnose epilepsy and status epilepsy by clinical manifestations, additional research methods.
 - To train residents to differentiate epileptic from non-epileptic seizures, the clinic and treatment of various forms of epilepsy.
 - Train residents to provide emergency qualified medical care with status epilepticus.
 - Train residents to prescribe adequate differentiated treatment for various types of epilepsy.

10. Rationale for the choice of discipline: Epilepsy is the most frequent serious brain disorder in all countries and probably the most common of all diseases of the nervous system. Epilepsy affects all races and social classes. At least 40 million people worldwide suffer from epilepsy.

100 million will have epilepsy at some point in their lives. 6 million people in Europe suffer from epilepsy. 15 million will suffer from epilepsy at some point in their lives. The cost of epilepsy in Europe is 20 billion ECU per year - an amount that can be significantly reduced with effective action (From the European Declaration on Epilepsy-1998).

Of the 0.5% of the population suffering from epilepsy, 0.34%, i.e. 2/3, sick in childhood. Moreover, in 75% of cases, seizures appear before the age of 20. The variety of manifestations of epilepsy, sudden onset of seizures, severe impairment of consciousness and vital functions, suspicious of a sudden organic pathology with the danger of death, confront doctors of any specialty with it, which determines the continued relevance of this problem to healthcare.

Studying the discipline "Actual aspects of differential diagnosis, treatment and social rehabilitation in epilepsy", the resident acquires an understanding of the principles diagnostics, differential diagnosis, therapy of various forms of epilepsy and convulsive seizures, as well as on the quality of life and issues of social rehabilitation of patients with epilepsy. Attention is paid to the methods of preventing diagnostic, tactical and therapeutic errors made by neurologists.

11. Learning outcomes

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
Knows the issues of organizing neurological, inpatient care for an adult suffering from epilepsy.	Knows: clinical symptomatology and syndromology of epilepsy in adults and children, their	Able to establish the most trusting relationships with the patient, his relatives, colleagues, and other employees.

<p>Knows the anatomy and topographic anatomy of the central, peripheral, autonomic nervous system.</p> <p>Knows the basic issues of normal and pathological physiology of the nervous system.</p> <p>He has ideas about the etiology, classification of epilepsy, paroxysmal conditions, the mechanisms of their development, non-epileptic seizures, general and additional examination methods used in a neurological clinic, modern principles of the treatment of epilepsy in neurological practice in adults and children.</p>	<p>prevention, diagnosis and treatment;</p> <ul style="list-style-type: none"> - syndromological and topical diagnosis, clinical symptoms of borderline conditions in epilepsy; - differential diagnosis of epilepsy, paroxysmal conditions; - outcomes and prognosis of epilepsy; - the basics of pharmacotherapy, physiotherapy, therapeutic massage, and exercise therapy, acupuncture and other treatment methods used in the clinic of nervous diseases; - independent conduct and evaluation of diagnostic procedures (diet, alternative methods of treatment and prevention). 	<p>Applies knowledge in establishing professional, personal and corporate contacts.</p> <p>Strive to improve professional communication skills with students, teachers, patients, observing the rules of dentology and subordination.</p>
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12. Prerequisites: normal anatomy, path anatomy, normal physiology, path physiology, histology.

13. Post requisites: nervous diseases, neurosurgery, rehabilitation.

14. Literature

Primary:

1. Mukhin K.Yu., Petrukhin A.S., Glukhova L.Yu. Epilepsy. Atlas of electroencephalographic diagnosis. M. 2004; 440p
2. Badalyan O.L. Pharmacotherapy of epilepsy: history and modernity. Clinician School. 2011; 559p.
3. Karlov V.A. Epilepsy in children and adult women and men. A guide for doctors. M. 2010; 144p
4. Avakyan G.N., Anisimova A.V., Gusev E.I. Management tactics and additional treatment options for patients with epilepsy. A manual for doctors. M. 2005.

Additional:

5. Neznanov N.G., Gromov S.A., Mikhailov V.A. et al. Epilepsy, quality of life, treatment. SPb. 2005; 294p
10. Novik A.A., Ionova T.I. Guide to the study of quality of life in medicine. 2nd edition. M. 2007; 315p

1. Department of Neurology, Psychiatry, Rehabilitation and Neurosurgery

2. Residency

3. Educational program "Neurology (adult, children)"

4. 2 course

5. Discipline: " The problem of acute disorders of cerebral circulation: diagnosis, treatment "

6. Number of credits: 4 credits

7. The purpose of the discipline: training doctors in the specialty of a neurologist to independently provide qualified care to patients with acute cerebrovascular accident, primary and secondary prevention of stroke.

8. Contents of the discipline: classification of vascular diseases of the brain. Relevance of the problem of cerebral strokes in Kazakhstan. Transient cerebrovascular accidents. Ischemic

cerebral stroke. Thrombolytic therapy. Primary, secondary prevention of cerebral strokes. Early rehabilitation therapy (drug, non-drug) for patients with hemorrhagic parenchymal stroke. Subarachnoid hemorrhage. Arteriovenous malformations and cerebral aneurysms. Neurosurgical treatment of hemorrhagic stroke. Innovative methods of diagnosis and treatment of hemorrhagic cerebral strokes.

9. Tasks:

- Prepare a neurologist who has modern theoretical and practical knowledge of diagnosis, prevention, prognostic assessment of strokes, emergency, emergency care for patients with acute cerebrovascular accident.
- To teach residents the knowledge, skills and practical skills for performing intensive care manipulations necessary for patients with acute cerebrovascular accident.
- Train residents in conducting rehabilitation therapy in patients with acute cerebrovascular accident at an early stage of rehabilitation in an inpatient and outpatient setting.

10. Justification of the choice of discipline:

According to the WHO, 33 million people undergo stroke annually, and 6 million 700 thousand die. About 40 thousand people are hospitalized in Kazakhstan every year with a stroke. Five thousand of them die on the first day, another five thousand within a month. At risk are patients aged 40 to 60 years. More often men are prone to stroke. Stroke is a leading cause of disability in the world and imposes special obligations on family members of the patient, significantly reducing their labor potential and, putting a socio-economic burden on society.

Studying the discipline "The problem of acute cerebrovascular accident: diagnosis, treatment", the resident acquires an understanding of the etiology, pathogenesis and clinical manifestations of acute cerebrovascular accident, diagnosis, the principles of its emergency treatment. Great attention was paid to the methods of prevention, primary and secondary prevention of strokes, early and late rehabilitation of stroke patients, tactical and therapeutic errors made in hospitals, outpatient conditions.

The teachers provide an opportunity to study the provision of intensive, emergency, emergency therapy at the hospital stage in hospitals for patients with acute cerebrovascular accident, management tactics at the prehospital, hospital and outpatient levels.

11. Learning outcomes

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Knows the organization of neurological care for patients with acute cerebrovascular accident.</p> <p>Knows the anatomy and topographic anatomy of the central, peripheral, autonomic nervous system.</p> <p>Knows the basic issues of normal and pathological physiology of the nervous system.</p> <p>Knows:</p> <ul style="list-style-type: none"> - classification - etiology of vascular diseases of the brain, - mechanisms for the development of acute cerebrovascular accidents, - general and additional examination methods used in a neurological clinic, 	<p>Able to identify:</p> <p>Symptoms and syndromes of acute cerebrovascular accident.</p> <p>Knows:</p> <ul style="list-style-type: none"> - methods of diagnosis and treatment, prevention; - differential diagnosis of acute cerebrovascular accident; - rehabilitation of patients in the early recovery period. - outcomes and prognosis of strokes; - the basics of pharmacotherapy, physiotherapy, therapeutic massage, and exercise therapy, acupuncture and other treatment methods used in the rehabilitation of 	<p>Able to establish the most trusting relationships with the patient, his relatives, colleagues, and other employees.</p> <p>Applies knowledge in establishing professional, personal and corporate contacts.</p> <p>Strive to improve professional communication skills with students, teachers, patients, observing the rules of dentology and subordination.</p>

- modern principles for the treatment of strokes.	patients with acute cerebrovascular accident. - independent conduct and evaluation of diagnostic procedures (diet, alternative methods of treatment and prevention).	
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12. Prerequisites: normal anatomy, path anatomy, normal physiology, path physiology, histology.

13. Post requisites: nervous diseases, neurosurgery, rehabilitation.

14. Literature:

Primary:

1. Suslina Z.A., Varakin Yu.Ya. Clinical guide for early diagnosis, treatment and prevention of vascular diseases of the brain / Z.A. Suslina, Yu.A. Varakin.-2nd ed. – M.: MEDpress – inform, 2017. -352 p.: ill.
2. Neurology [Text] / comp. A. S. Dementiev, N. I. Zhuravleva, S. Yu. Kochetkov [and others]. - 2nd ed., add. - Moscow: GEOTAR-Media, 2017. - 824 p.
3. Clinical Protocol of the Ministry of Health of the Republic of Kazakhstan Protocol No. 22 of 05/25/2017. "Intracerebral hemorrhage (non-traumatic intracerebral hemorrhage).
4. Clinical protocol of the Ministry of Health of the Republic of Kazakhstan No. 10 dated 04.07.2014. "Prevention of acute cerebrovascular accidents".Клинический протокол МЗ РК №18 от 27.12. 2016г. «Ишемический инсульт».
5. Vlasova, A. V. Theoretical aspects of the technology of rehabilitation of patients after acute cerebrovascular accident [Text] / A. V. Vlasova, A. I. Kuznetsov // Nurse. - 2018. - No. 8. - S. 31-37.
6. Gorbachev, V. I. On the issue of respiratory support for patients with severe strokes at the prehospital stage [Text] / V. I. Gorbachev, A. V. Lokhov, S. M. Gorbacheva // Ambulance. - 2018. - No. 3. - S. 56-61.

Secondary:

1. Neurology: national leadership / Ed. E.I. Guseva, A.N. Konovalova, V.I. Skvortsova, A.B. Hecht. – M.: GEOTAR-Media, 2010. 1040 p.
2. Zamergrad M. V. Practical aspects of rehabilitation in post-stroke balance disorders [Text] / M. V. Zamergrad, S. E. Khatkova // Medical Council. - 2018. - No. 12. - S. 36-38.
3. Brain-computer interface in post-stroke rehabilitation: a clinical and neuropsychological study [Text] / R. Kh. Lyukmanov [et al.] // Journal of Neurology and Psychiatry. S. S. Korsakov. - 2018. - No. 8. - S. 43-51.
4. Komarova I. B. The significance of factors associated with thrombosis for the development and prognosis of arterial ischemic stroke in children [Text] / I. B. Komarova, V. P. Zykov, L. V. Ushakova // Pediatrics. Journal them. G. N. Speransky. - 2018. - No. 4. - S. 100-109.

1. Department of Neurology, Psychiatry, Rehabilitation and Neurosurgery

2. Residency

3. Educational program "Neurology (adult, children)"

4. 2 course

5. Discipline: " Geriatric aspects of diseases of the nervous system "

6. Number of credits: 4 credits

7. The purpose of the discipline: raining of doctors in the specialty of a neurologist to provide qualified assistance to elderly and senile patients with various diseases of the nervous system.

8. Contents of the discipline: morphophysiological characteristics of the aging nervous system. Geriatric service. Features of the course of cerebral strokes, chronic cerebrovascular accidents, rehabilitation in elderly and senile patients. Pain syndromes, sleep and wakefulness disorders, diseases of the peripheral nervous system, cognitive impairment, vitamin B12 deficiency, epilepsy, falls, autonomic disorders, syncope, neurodegenerative diseases in elderly and senile patients. Pharmacotherapy for elderly and senile patients.

9. Tasks:

* To train a neurologist who has modern theoretical and practical knowledge of providing qualified care to elderly and senile patients with neurological diseases.

* To train residents in the knowledge, skills and practical skills for carrying out the manipulations necessary for elderly and senile patients with severe disorders of the nervous system.

* Train residents in providing emergency care to elderly and senile patients with urgent neurological conditions in a hospital.

10. Justification of the choice of discipline:

Geriatrics (gr. Geron - elder plus iftreia - treatment) is the science of diseases of the elderly. It studies the features of the development, course, treatment and prevention of diseases in the elderly.

Geriatrics is part of gerontology.

The most important manifestations of human aging are associated with age-related changes in the central nervous system. However, this often retains a high level of intellectual activity, the ability to generalize, to concentrate. In addition, the long-term maintenance of intellectual activity is based on the ability to cope with a wide range of tasks based on rich life experience.

Studying the discipline "Geriatric Aspects of Diseases of the Nervous System", the resident acquires an idea of providing assistance to elderly and senile patients with impaired functions of the nervous system, the features of the development, course, treatment and prevention of neurological diseases.

Teachers provide an opportunity to study the provision of qualified care to elderly and senile patients with neurological disorders in acute cerebrovascular accidents, pain syndrome, vegetative dysfunctions, syncope, falls, vitamin B12 deficiency, sleep and wakefulness disorders, epilepsy.

11. Learning outcomes

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
Knows the issues of organizing neurological care for patients in the elderly. Knows the anatomy and topographic anatomy of the central, peripheral, autonomic nervous system. Knows the features of normal and pathological physiology of the nervous system in the elderly. Knows: - classification, etiology of diseases of the nervous system in the elderly; - mechanisms of development of diseases of the nervous system in the elderly; - general and additional examination methods used in the neurological clinic;	Can identify: - symptoms and syndromes in the elderly. Knows: - methods of prevention, diagnosis and treatment; - differential diagnosis of diseases of the nervous system in the elderly; - outcomes and prognosis of diseases of the nervous system in elderly patients; - the basics of pharmacotherapy, physiotherapy, therapeutic massage, and exercise therapy, acupuncture and other methods of treatment used in the clinic of nervous diseases in the elderly; - independent conduct and evaluation of diagnostic procedures (diet, alternative methods of treatment and prevention).	Able to establish the most trusting relationships with the patient, his relatives, colleagues, and other employees. Applies knowledge in establishing professional, personal and corporate contacts. Strive to improve professional communication skills with students, teachers, patients, observing the rules of dentology and subordination.

- modern principles of treatment in the elderly.		
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12. Prerequisites: normal anatomy, path anatomy, normal physiology, path physiology, histology.

13. Post requisites: nervous diseases, neurosurgery, rehabilitation.

14. Literature:

Primary:

1. 1. Brilman, J. Neurology [Text] / J. Brilman, S. Cohen; per. from English. P. P. Tikhonova. - 3rd ed. - Moscow: MEDpress-inform, 2015. - 224 p.
2. 2. Bogdanov, A. N. Neurology for general practitioners [Text]: guide / A. N. Bogdanov, E. V. Korneeva. - Rostov n / a : Phoenix, 2015. - 286 p. - (Library of the practitioner).
3. 3. Nikiforov, A. S. Neurology [Text]: textbook / A. S. Nikiforov. - Rostov-on-Don: Phoenix, 2017. - 446 p.

1. Department of Neurology, Psychiatry, Rehabilitation and Neurosurgery

2. Residency

3. Educational program "Neurology (adult, children)"

4. 2 course

5. Discipline:« Diseases with a primary lesion of the extrapyramidal system»

6. Number of credits: 4 credits

7. The purpose of the discipline: to train physicians with a degree in neurology to independently provide qualified assistance to patients with extrapyramidal disorders of the nervous system.

8. Contents of the discipline: Wilson-Konovalov disease. Parkinson's disease. Huntington's chorea. Minor chorea, benign hereditary chorea, Lesch-Nyhan syndrome, progressive supranuclear palsy (Steele-Richardson-Olszewski syndrome), Refsum's disease, myoclonus, Hallerwarden-Spatz disease, epileptic myoclonus, Recklinghausen's neurofibromatosis, primary torsion dystonia. Drug-induced movement disorders. Calcification of the basal ganglia. Gilles de Tourette's syndrome. Essential tremor.

9. Tasks:

- To train a neurologist who has modern theoretical and practical knowledge of diagnostics, prevention, prognostic assessment, provision of qualified, effective care to patients with extrapyramidal disorders of the nervous system.
- To train residents in knowledge, skills and practical skills for intensive care manipulations necessary for patients with extrapyramidal disorders of the nervous system.
- Train residents on rehabilitation therapy for patients with extrapyramidal disorders of the nervous system at an early stage of rehabilitation in inpatient and outpatient settings.

10. Justification of the choice of discipline:

"Extrapyramidal disorders" includes extrapyramidal syndromes (parkinsonism, tremor, dystonia, chorea, etc.) and extrapyramidal diseases, in which the basal ganglia and their main connections predominantly suffer, and certain extrapyramidal syndromes are an obligate and dominant manifestation.

"Extrapyramidal disorders" includes extrapyramidal syndromes (parkinsonism, tremor, dystonia, chorea, etc.) and extrapyramidal diseases, in which the basal ganglia and their main connections predominantly suffer, and certain extrapyramidal syndromes are an obligate and dominant manifestation.

Since neurodegenerative diseases are linked to aging, an increase in the proportion of older people in the population structure is accompanied by an increase in the prevalence of extrapyramidal disorders, which increases the disability associated with them.

Currently, the cure of extrapyramidal pathology, as a rule, is impossible, however, with timely diagnosis, adequate treatment of patients with ER, it is possible to prolong their active life and household independence, and sometimes increase their survival.

The polymorphism of the clinical picture of extrapyramidal disorders, the lack of knowledge by doctors of the criteria for diagnosing extrapyramidal disorders, complicate the management of patients.

In addition to errors in diagnosis, there are often errors in the treatment of extrapyramidal disorders, which is due to the complexity of individual selection and evaluation of the effectiveness of therapy, the high cost of treatment.

All this makes the problem of organizing care for patients with extrapyramidal disorders particularly relevant. Incorrectly prescribed therapy leads to misuse of funds from budgets of different levels, as well as personal funds of citizens.

Studying the discipline: "Diseases with a primary lesion of the extrapyramidal system", the resident acquires an understanding of the etiology, pathogenesis and clinical manifestations of diseases with a predominant lesion of the extrapyramidal system and, diagnosis, principles of rehabilitation therapy.

Much attention is paid to methods of prevention, primary and secondary prevention of extrapyramidal lesions, rehabilitation of patients with movement disorders, as well as tactical and therapeutic errors made in hospitals and outpatient settings.

Teachers provide an opportunity to study the provision of effective therapy and management tactics, both at the hospital stage in hospitals and outpatient conditions, for patients with motor disorders due to damage to the extrapyramidal system.

11. Learning outcomes

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Knows the issues of organizing neurological care for patients with extrapyramidal disorders.</p> <p>Knows the anatomy and topographic anatomy of the central, peripheral, autonomic nervous system.</p> <p>Knows the features of normal and pathological physiology of the nervous system in the elderly.</p> <p>Knows:</p> <ul style="list-style-type: none"> - classification, - etiology of extrapyramidal lesions of the nervous system, - mechanisms of development of extrapyramidal lesions of the nervous system, - general and additional examination methods used in the neurological clinic, - modern principles of treatment of movement disorders as a result of damage to the extrapyramidal system. 	<p>Can identify:</p> <ul style="list-style-type: none"> - symptoms and syndromes of lesions of the extrapyramidal system. <p>Knows:</p> <ul style="list-style-type: none"> - methods of diagnostics and treatment, prevention; - differential diagnosis of extrapyramidal disorders; - rehabilitation of patients with extrapyramidal disorders; - outcomes and prognosis of extrapyramidal disorders; - the basics of pharmacotherapy, physiotherapy, therapeutic massage, and exercise therapy, acupuncture and other methods of treatment used in the rehabilitation of patients with extrapyramidal movement disorders - independent conduct and evaluation of diagnostic procedures (nutrition, non-traditional methods of treatment and prevention). 	<p>Able to establish the most trusting relationship with the patient, his relatives, colleagues, and other employees.</p> <p>Applies knowledge in establishing professional, personal and corporate contacts.</p> <p>Strive to improve professional communication skills with students, teachers, patients, observing the rules of dentology and subordination.</p>

12. Prerequisites: normal anatomy, path anatomy, normal physiology, path physiology, histology.

13. Post requisites: nervous diseases, neurosurgery, rehabilitation.

14. Literature:

Primary:

1. Extrapyrarnidal disorders yesterday, today, tomorrow [Sat. Art.] / ed. prof. O. S. Levina. - M., 2013. - 328 p.
2. Nikiforov A. S. General neurology [Electronic textbook]: textbook / A. S. Nikiforov, E. I. Gusev. - Moscow: GEOTAR-Media, 2015. Access mode: <http://www.studmedlib.ru/book/ISBN9785970433850.html>
3. Gusev, E. I. Neurology and neurosurgery. T. 1: Neurology [Electronic resource]: textbook / E. I. Gusev, A. N. Konovalov, V. I. Skvortsova. - Moscow: GEOTAR-Media, 2015. Access mode: <http://www.studmedlib.ru/book/ISBN9785970429013.html>

Secondary:

1. Katunina E.A., Titova N.V. Diagnosis and treatment of early stages of Parkinson's disease. – M.: 2015. – 40 p.
2. Epifanov V. A. Rehabilitation in neurology [Electronic textbook]: textbook / V. A. Epifanov, A. V. Epifanov. - Moscow: GEOTAR-Media, 2015. Access mode: <http://www.studmedlib.ru/book/ISBN9785970434420.html>