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Personal



# Professor Pavel Efremovich Tikhomirov. On the occasion of 125<sup>th</sup> anniversary of the birth

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In the article, data on creative activity and personality of the Professor in ophthalmology Pavel Efremovich Tikhomirov are presented. Under the guidance of Academician M.I. Averbakh in the Helmholtz Moscow research institute of eye diseases, Pavel Efremovich raised through the ranks from a medical extern to Senior research fellow, Professor, Vice-Director of the institute. From 1945 to the end of his life (1964), he was the Head of the Ophthalmology chair of the Leningrad Medical Institute of Sanitation and Hygiene (currently the North-Western State Medical University named after I.I. Mechnikov). P.E. Tikhomirov took part in two wars: in 1919–1922 served in the Red Army in the position of a regimental doctor, during the Great Patriotic War, he was a Head ophthalmologist of a Hospital Administration of the Ministry of Health of the Russian Federation (he organized and headed the military hospital department in Moscow, took multiple missions to evacuation hospitals of the country).

Main scientific activities of P.E. Tikhomirov: problems of the military ocular injuries, diagnosis and treatment of lacrimal system diseases, glaucoma, pre-glaucoma, and ocular tuberculosis. His writings include three monographies, two sections of the multi-volume edition on eye diseases, more than 100 scientific articles, a compendium of scientific articles “Glaucoma” (1960).

Pavel Efremovich was an experienced organizer and a good psychologist. He began teaching Ophthalmology in 1933 in two Moscow institutes of higher education. During 1945–1964, being the Head of the Ophthalmology chair of the Leningrad Medical Institute of Sanitation and Hygiene, excellent teacher and lecturer, very good clinician, Professor P.E. Tikhomirov prepared hundreds of ophthalmologists, 6 candidates of medical sciences, was a consulting specialist of three doctorate theses.

Real professional and clinician, outstanding ophthalmic surgeon, Professor P.E. Tikhomirov during 45 years of his medical career recovered the sight of many thousands of patients and was widely well-known not only in Leningrad, but in the whole country.

**Keywords:** ophthalmology; military eye injuries; blind spot; preglaucoma; Professor Pavel Efremovich Tikhomirov.

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Персоналия

## Профессор Павел Ефремович Тихомиров. К 125-летию со дня рождения

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В статье представлены сведения о деятельности и личности врача-офтальмолога профессора Павла Ефремовича Тихомирова. Под руководством акад. М.И. Авербаха в МНИИ ГБ им. Гельмгольца Павел Ефремович прошёл путь от врача-экстерна до старшего научного сотрудника, профессора, заместителя директора института. С 1945 г. и до конца жизни (1964) он руководил кафедрой глазных болезней Ленинградского санитарно-гигиенического медицинского института (ныне Северо-Западный государственный медицинский университет им. И.И. Мечникова). П.Е. Тихомиров участвовал в двух войнах: в 1919–1922 гг. служил в Красной армии в должности врача полка, в годы Великой Отечественной войны являлся главным офтальмологом Управления госпиталей МЗ РСФСР (организовал и руководил военно-госпитальным отделением в Москве, многократно выезжал в эвакогоспитали страны).

Основные направления научной деятельности П.Е. Тихомирова: вопросы боевых травм органа зрения, диагностика и лечение заболеваний слёзных органов, глаукома, преглаукома и туберкулёз глаз. Его перу принадлежат три монографии, два раздела многотомного руководства по глазным болезням, более 100 научных статей, тематический сборник научных статей «Глаукома» (1960).

Павел Ефремович был опытным организатором и хорошим психологом. К преподаванию офтальмологии он приступил с 1933 г. в двух вузах Москвы. За 1945–1964 гг., заведя кафедрой офтальмологии в Ленинградском санитарно-гигиеническом медицинском институте, отличный педагог и лектор, прекрасный клиницист, профессор П.Е. Тихомиров подготовил сотни врачей-офтальмологов, 6 кандидатов медицинских наук, являлся консультантом 3 докторских диссертаций.

Опытнейший клиницист и выдающийся офтальмохирург профессор П.Е. Тихомиров за 45 лет врачебной деятельности вернул зрение многим тысячам пациентов и был широко популярен не только в Ленинграде, но и по всей стране.

**Ключевые слова:** офтальмология; боевые повреждения глаз; слепое пятно; преглаукома; профессор Павел Ефремович Тихомиров.

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Pavel Efremovich Tikhomirov was born on December 30, 1895 in the Smolensk governorate, in a poor peasant family. In 1919, he graduated from the medical faculty of the First Moscow University. In 1919–1922, he served in the Red Army as a regiment doctor. During the following 23 years, he worked at the Moscow Scientific Research Helmholtz Eye Institute, where, under the aegis of Academician M.I. Averbakh, he rose through the ranks from the non-resident doctor to senior research fellow, vice-director of the Institute. From 1945 and up to the end of his life (1964), Professor P.E. Tikhomirov worked as the Head of the Ophthalmology Chair of the Leningrad Medical Institute of Sanitation and Hygiene (at present – the North-Western State medical university named after I.I. Mechnikov) (see figure).

During the Great Patriotic War, P.E. Tikhomirov worked as a Head Ophthalmologist of the Hospital Administration of the Ministry of Healthcare of the Russian Federation and was also a Head of the Military Hospital Department at the Moscow Scientific Research Helmholtz Eye Institute, (at present – Helmholtz National Medical Research Centre of Eye Diseases), which he converted to a methodological center for combat ophthalmic injuries. He undertook visits to many hospitals of the country, organized two Republic conferences for ophthalmologists of evacuation hospitals, and made several research publications.

Pavel Efremovich Tikhomirov was a great, distinguished scientist. Key priorities of his research work were problems of ophthalmic combat injuries, diagnosis and treatment of the lacrimal system diseases, glaucoma, and ocular tuberculosis. His writings include three monographies, two sections of the multi-volume edition on ocular diseases, more than 100 scientific articles published in central journals, mainly without any co-authors. In 1960, under his guidance, a thematic compendium of scientific articles "Glaucoma".

In the monography "Clinical presentation and therapy of combat eye injuries", the results of studies are summarized on treatment of combat eye injuries during the Great Patriotic War, which were accomplished in the resource center of the Moscow Scientific Research Helmholtz Eye Institute and in military hospitals of our country.

The doctorate thesis of P.E. Tikhomirov, two monographies and two sections of the multi-volume edition on ocular diseases, are dedicated to the methods of lacrimal system's diseases treatment. For the monography "Pathology and therapy of lacrimal passages" (1947), in 1950, the Academy of Medical Sciences of the Soviet Union awarded him a prize named after Academician M.I. Averbakh.

Pavel Efremovich published articles on tuberculous-allergic eye diseases, and under his guidance, two Ph.D. defenses were passed on hematogenously disseminated ocular tuberculosis (E.Y. Daktarvichene and M.D. Kovalenko). Different aspects of ocular tuberculosis diagnosis and treatment found their continuation in works of one more of his pupils – E.I. Ustinova.



**Figure.** Head of the Ophthalmology chair of the Leningrad Medical Institute of Sanitation and Hygiene, Honored Scientist, Professor Pavel Efremovich Tikhomirov

**Рисунок.** Заведующий кафедрой офтальмологии Ленинградского санитарно-гигиенического медицинского института заслуженный деятель науки, профессор Павел Ефремович Тихомиров

P.E. Tikhomirov revealed a blind spot enlargement in glaucoma after ingestion of 500 ml of water and proposed a water-drinking campimetric test for early glaucoma diagnosis (1940). Later on, under his guidance, E.I. Ustinova specified the optimal loading volume (200 ml of water) and proved high efficacy, specificity for glaucoma, and safety of this test. Obtained investigation results allowed in a well-argued manner excluding the vascular permeability impairment (systemic one and that of intraocular vessels) as a reason for blind spot enlargement. Based on the investigation results and taking into consideration the literature data on the intraocular pressure rise at the ingestion of 1000 ml of water (Schmidt's experiments) and on the early impairment of the optic disc structures in glaucoma, one may suggest that in the mechanism of the blind spot enlargement at this test is based on the intraocular pressure rise due to the water load and its action on optic nerve fibers.

P.E. Tikhomirov attached importance to the preglaucoma problem investigation. P.E. Tikhomirov's report in 1954 at the World ophthalmology congress in New York. The question on preglaucoma being the earliest stage of glaucoma was discussed as well in his introduction to E.I. Ustinova monography "Methods of glaucoma early diagnosis" (1966).

Professor P.E. Tikhomirov was also interested in many other ophthalmology sections. He was the first in our country to use iridenkleisis surgery in glaucoma, the erizophag instrument – in cataract extraction; for the first time in ophthalmology; he was the first to use the drop analysis method for chemical examination of the anterior chamber fluid for

copper content (when there was a suspicion about the copper intraocular foreign body). For the first time ever, he confirmed the existence of the rhinogenic retrobulbar neuritis and found the therapeutic benefit of a long-term nasal mucous anemization. Pavel Efremovich published several papers in neuroophthalmology and fundus changes in pregnancy; he was the first in our country to write an article on Marfan's disease.

P.E. Tikhomirov began his teaching activities at higher educational institutions in 1933 in Moscow (on-the-job in the Helmholtz institute): he was an assistant (1933–1936) and senior teacher (1942–1945) of the ophthalmology chair of the Central Institute for continued medical education, senior assistant (1936–1941) of the ophthalmology chair of the Third Moscow medical institute.

From 1945 to the end of his life (during almost 20 years), being perfect educator and lecturer, excellent clinician, professor P.E. Tikhomirov run a chair of eye diseases of the Leningrad Medical Institute of Sanitation and Hygiene. Here, he taught thousands of students the bases of ophthalmology, prepared hundreds ophthalmology specialists, 6 candidates of medical sciences; he was a consultant of three doctorate theses. During these years, professor Pavel Efremovich Tikhomirov was granted a title "Honored Scientist of the Russian Federation".

Pavel Efremovich was an experienced organizer and a good psychologist, he was able to correctly distribute duties between team members, rising adequate demands taking into account their capacities. He was hard on himself and attentive towards every co-worker. Everybody learned from him an attentive and caring attitude towards people, and in particular to our patients. It was possible to seek his advice about everything. When revealing any defects in the work of staff members, he made his remarks kindly, sometimes with a humorous undertone, without raising his voice and humiliating human dignity.

Pavel Efremovich celebrated big holidays together with his team, took part in excursions to beautiful Leningrad suburbs, was a great lover of classical music, played violin, guitar, sang well.

During troubled and difficult-to-understand period 1952–1953, when in relation with the so-called Doctors' plot teachers of Jewish nationality were dismissed, he courageously defended the assistant Berta Matveevna Eidelman, preserved an efficient team of his chair and clinic.

Professor P.E. Tikhomirov took an active part in extracurricular activities. During 15 years, he was the Head ophthalmologist of the Leningrad health department and President of the managing board of the Leningrad (at present – Saint Petersburg) scientific society of ophthalmologists, from 1925 to the end of his life – a permanent member (secretary, deputy editor-in-chief) of the "Vestnik oftalmologii" editorial board, in 1957, he was one of the most active organizers of the All-Union conference of ophthalmologists in Leningrad.

Experienced clinician and outstanding ophthalmic surgeon, professor P.E. Tikhomirov during 45 years of his career as a physician, returned sight to many thousands of patients, was widely popular not only in Leningrad, but in the whole country. Pavel Efremovich was a talented educator of students and of ophthalmologists, remarkable example of sensitive and caring attitude towards patients and all people, had deserved authority with doctors and patients.

The work of honored scientist professor Pavel Efremovich Tikhomirov was honored with many government awards, including Orders of Lenin and of the Red Banner of Labour.

Ophthalmologists of the city and the country, pupils and team members, patients – everybody, who studied, worked, met Pavel Efremovich Tikhomirov or was his patient, remembers him as a talented scientist and a remarkable personality, extremely modest and compassionate.

## ADDITIONAL INFORMATION

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