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The following is a list of physicians who have significantly contributed to the field of ophthalmology:

18th–19th centuries

Theodor Leber (1840–1917) discovered Leber's congenital amaurosis, Leber's hereditary optic neuropathy, Leber's miliary aneurysm, and Leber's stellate neuroretinitis

Carl Ferdinand von Arlt (1812–1887), the elder (Austrian), proved that myopia is largely due to an excessive axial length, published influential textbooks on eye disease, and ran annual eye clinics in needy areas long before the concept of volunteer eye camps became popular; his name is still attached to some disease signs, e.g., von Arlt's line in trachoma and his son, Ferdinand Ritter von Arlt, the younger, was also an ophthalmologist.

Jacques Daviel (1696–1762) (France) claimed to be the founder of modern cataract surgery in that he performed cataract extraction instead of needling the cataract or pushing it back into the vitreous; he is said to have carried out the technique on 206 patients in 1752–53, of which 182 were reported to be successful, however, these figures are not very credible, given the total lack of both anaesthesia and aseptic technique at that time.

Franciscus Donders (1818–1889) (Dutch) published pioneering analyses of ocular biomechanics, intraocular pressure, glaucoma, and physiological optics and he made possible the prescribing of combinations of spherical and cylindrical lenses to treat astigmatism.

Joseph Forlenze (1757–1833) (Italy), specialist in cataract surgery, became popular during the First French Empire, healing, among many, personalities such as the minister Jean-Étienne-Marie Portalis and the poet Ponce Denis Lebrun; he was nominated by Napoleon "chirurgien oculiste of the lycees, the civil hospices and all the charitable institutions of the departments of the Empire",^[41] and he also was known for his free interventions, mainly in favour of poor people.

Albrecht von Graefe (1828–1870) (Germany) probably the most important ophthalmologist of the nineteenth century, along with Helmholtz and Donders, one of the 'founding fathers' of ophthalmology as a specialty, he was a brilliant clinician and charismatic teacher who had an international influence on the development of ophthalmology, and was a pioneer in mapping visual field defects and diagnosis and treatment of glaucoma, and he introduced a cataract extraction technique that remained the standard for more than 100 years, and many other important surgical techniques such as iridectomy. He rationalised the use of many ophthalmically important drugs, including mydriatics and miotics; he also was the founder of one of the earliest ophthalmic societies (German Ophthalmological Society, 1857) and one of the earliest ophthalmic journals (Graefe's Archives of Ophthalmology).

Allvar Gullstrand (1862–1930) (Sweden) was a Nobel Prize-winner in 1911 for his research on the eye as a light-refracting apparatus, he described the 'schematic eye', a mathematical model of the human eye based on his measurements known as the 'optical constants' of the eye; his measurements are still used today

Hermann von Helmholtz (1821–1894), a great German polymath, invented the ophthalmoscope (1851) and published important work on physiological optics, including colour vision.

Julius Hirschberg (1843–1925) (Germany) in 1879 became the first to use an electromagnet to remove metallic foreign bodies from the eye and in 1886 developed the Hirschberg test for measuring strabismus.

Peter Adolph Gad (1846 – 1907), Danish-Brazilian ophthalmologist who founded the first eye infirmary in São Paulo, Brazil

Socrate Polara (1800–1860, Italy) founded the first dedicated ophthalmology clinic in Sicily in 1829, entirely as a philanthropic endeavor; later he was appointed as the first director of the ophthalmology department at the Grand Hospital of Palermo, Sicily, in 1831 after the Sicilian government became convinced of the importance of state support for the specialization[42]

Herman Snellen (1834–1908) (Netherlands) introduced the Snellen chart to study visual acuity.

20th–21st centuries.

Vladimir Petrovich Filatov (1875–1956) (Ukraine) contributed the tube flap grafting method, corneal transplantation, and preservation of grafts from cadaver eyes and tissue therapy; he founded the Filatov Institute of Eye Diseases and Tissue Therapy, Odessa, one of the leading eye-care institutes in the world

Shinobu Ishihara (1879-1963) (Japan), in 1918, invented the Ishihara Color Vision Test, a common method for determining Color blindness; he also made major contributions to the study of Trachoma and Myopia.

Ignacio Barraquer (1884–1965) (Spain), in 1917, invented the first motorized vacuum instrument (erisophake) for intracapsular cataract extraction; he founded the Barraquer Clinic in 1941 and the Barraquer Institute in 1947 in Barcelona, Spain

Ernst Fuchs (1851-1930) was an Austrian ophthalmologist known for his discovery and description of numerous ocular diseases and abnormalities including Fuchs' dystrophy and Fuchs heterochromic iridocyclitis[43].

Tsutomu Sato (1902-1960) (Japan) pioneer in incisional refractive surgery, including techniques for astigmatism and the invention of radial keratotomy for myopia

Jules Gonin (1870–1935) (Switzerland) was the "father of retinal detachment surgery".

Sir Harold Ridley (1906–2001) (United Kingdom), in 1949, may have been the first to successfully implant an artificial intraocular lens after observing that plastic fragments

in the eyes of wartime pilots were well tolerated; he fought for decades against strong reactionary opinions to have the concept accepted as feasible and useful.

Charles Schepens (1912–2006) (Belgium) was the "father of modern retinal surgery" and developer of the Schepens indirect binocular ophthalmoscope whilst at Moorfields Eye Hospital; he was the founder of the Schepens Eye Research Institute, associated with Harvard Medical School and the Massachusetts Eye and Ear Infirmary, in Boston, Massachusetts

Tom Pashby (1915–2005) (Canada) was Canadian Standards Association and a sport safety advocate to prevent eye injuries and spinal cord injuries, developed safer sports equipment, named to the Order of Canada, inducted into Canada's Sport Hall of Fame[44].

Marshall M. Parks (1918–2005) was the "father of pediatric ophthalmology"[45].

José Ignacio Barraquer (1916–1998) (Spain) was the "father of modern refractive surgery" and in the 1960s, he developed lamellar techniques, including keratomileusis and keratophakia, as well as the first microkeratome and corneal microlathe.

Tadeusz Krwawicz (1910–1988) (Poland), in 1961, developed the first cryoprobe for intracapsular cataract extraction

Svyatoslav Fyodorov (1927–2000) (Russia) was the "father of ophthalmic microsurgery" and he improved and popularized radial keratotomy, invented a surgical cure for cataract, and he developed scleroplasty.

Charles Kelman (1930–2004)(United States) developed the ultrasound and mechanized irrigation and aspiration system for phacoemulsification, first allowing cataract extraction through a small incision.

Helena Ndume (b.1960) (Namibia) is a renowned ophthalmologist notable for her charitable work among people with eye-related illnesses.

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