

## **The History of Cataract Surgery**

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Until the mid-17th century people thought that a cataract (Gr. 'waterfall') formed by opaque material flowing into the eye. The earliest standard method at about 2000 BC was couching, recorded in The Bible, Dead Sea Scrolls and early Hindu records from Susruta's time. The pre-modern era dates from Daviel's extracapsular operation (1748). A London Ophthalmologist, Harold Ridley (later knighted), pioneered lens implants. During the Battle of Britain, when treating pilots with intra-ocular injuries, he noted that Perspex fragments from the canopies of Spitfires and Hurricanes were relatively inert and well-tolerated. Alongside Ridley, an optician, John Pike and a chemist, John Holt developed a Perspex lens replacement. On November 29<sup>th</sup>, 1949, when prosthetic surgery was almost unknown, Ridley performed the first successful Intraocular lens (IOL) implantation at St. Thomas Hospital.

In 1964 Charles Kelman of New York developed a method to remove a cataract through a small incision. In 1967 he performed the first human phacoemulsification with the self-designed Cavitron/Kelman Phaco Emulsifier. This stimulated research into new materials to preserve a small cataract incision. In 1984 the first foldable IOL was implanted. In 1977, Hemant Mehta from C&A Hospital, Bangor, pioneered day-case cataract surgery, which today is the commonest elective operation in the UK with approximately 350,000 cases per year. Anaesthetic techniques developed concurrently; virtually all routine cataract surgery is nowadays under local or regional anaesthesia. Important advances in the 1980s included viscoelastics, biometry, Yag laser and capsulorhexis. Future developments include new incisions and chopping techniques, improved phacoemulsification equipment and lens technology.

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