



The IOL Story

Cataract blindness occurs when the natural lens of the eye becomes cloudy, causing gradual loss of vision and ultimately blindness. It is like looking through a mirror in a bathroom that has become fogged up with steam.

Cataract is the most prevalent form of blindness in the world. It is much more common as a person's age increases; however in developing countries the onset of cataract blindness can often be much earlier.

The main risk factors for the onset of cataract include aging, exposure to ultraviolet light, injury, diabetes and smoking.

Fortunately, cataracts can be treated and sight is very often restored.

In the early days, most cataract operations in developing countries involved removing the whole lens from the eye, including the thin capsule which contained it. Because the natural lens of the eye had been removed, the patient was then left with no focusing mechanism and needed thick 'coke bottle' glasses. This solution provided poor quality vision and was often temporary.

Today, this method is no longer used; instead an intraocular lens (IOL) is inserted. Sir Harold Ridley a British doctor was the first person to successfully implant an IOL in 1949. The idea of using an IOL came after one of his students asked why the lens removed during cataract surgery was not replaced.

The very first IOLs were made of glass, which made them heavy and prone to shattering.

He then began to make them from polymethyl methacrylate (PMMA) which is like perspex, after noticing that soldiers who sustained eye injuries from shattered

windshields during World War II did not show any reaction to the material.

The intraocular lens did not find widespread acceptance in cataract surgery until the 1970s. They were also very expensive. Until the mid-1990s these tiny lenses cost around US\$150 each, pushing cataract surgery well out of reach of people in developing countries.

Following the initiative of the late Professor Fred Hollows, The Foundation helped establish factories in Nepal and Eritrea to produce IOLs at a much cheaper cost.

Today the factories are producing and exporting high quality lens for just US\$8 each, significantly reducing the cost of cataract surgery in more than 40 countries. The factories are now fully independent and commercially successful businesses, generating local employment opportunities as well as earning export income.

Through Fred's vision, the factories are helping to reduce poverty for people in Nepal and Eritrea, as well as countless numbers of people throughout the world.

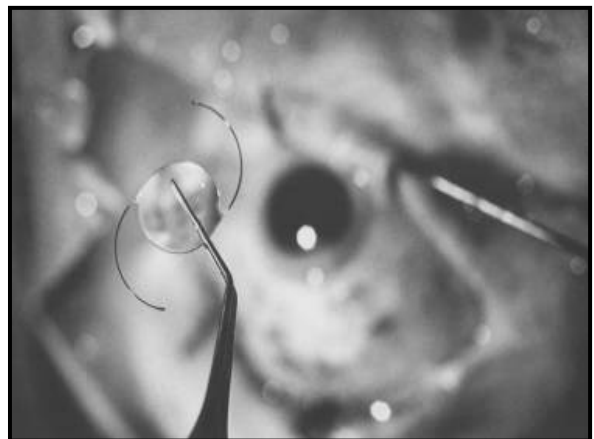


Photo | An intraocular lens ready for implantation during surgery. Photo courtesy of www.michaelamendolia.com