

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ
КАФЕДРА ІНОЗЕМНИХ МОВ
ЛІНГВІСТИЧНИЙ НАВЧАЛЬНО-МЕТОДИЧНИЙ ЦЕНТР**

**МАТЕРІАЛИ
VIII МІЖВУЗІВСЬКОЇ НАУКОВО-ПРАКТИЧНОЇ
КОНФЕРЕНЦІЇ
ЛІНГВІСТИЧНОГО НАВЧАЛЬНО-МЕТОДИЧНОГО ЦЕНТРУ
КАФЕДРИ ІНОЗЕМНИХ МОВ**

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INVENTION OF CONTACT LENSES

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Contact lenses is a great invention which is intended for people with a sight problem. They have changed the lives of millions of people around the world. It was estimated that 125 million people (2%) used contact lenses in 2004. A contact lens is a thin lens placed directly on the surface of the eye and it is considered a medical device and may be worn to correct vision or for cosmetic or therapeutic reasons. They might seem like a new, modern invention, but the idea has actually been around for hundreds of years. So, the history of contact lenses development is long and rich.

Artist and inventor Leonardo da Vinci sketched a concept for improving vision with a contact lens in 1508 and he is considered the first inventor of contact lenses. But in his Codex of the Eye, he described the principles of a contact lens without describing something we would actually recognize as a contact lens as a method to directly modify the corneal power by submerging in water.

More than a century later, in 1636, Rene Descartes, proposed another idea, in which a glass tube filled with liquid was attached to the eye. This was hardly a contact lens, but again the principle of corneal neutralization was clear.

In 1801 Thomas Young made a basic pair of contact lenses on the basis of the Rene Descartes' model. He used wax to affix water-filled lenses to his eye. This neutralized his own refractive power. He then corrected for it with another pair of lenses.

The first written description of a device approximating a contact lens is believed to date to 1823. Sir John Herschel, an English astronomer, proposed "some transparent animal jelly contained in a spherical capsule of glass applied to the surface of the eye" to correct irregular astigmatism. He also suggested that a mold of the cornea might be taken and impressed on some transparent medium. He thought it possible that "a temporary distinct vision" might be obtained through one of these methods, but it is not known whether Herschel ever tried to put his ideas into practice.

But only in 1887 the first contact lenses were actually developed by the German physiologist and ophthalmologist, Eugene Adolph Fick. He first tried his lens out on animals. These lenses were made from blown glasses or ground and polished glass, and were primarily sclera designs that covered much of the eye. Although they were effective, the wearer could only tolerate them for a few hours because of their weight. Nevertheless, the improvement on visual acuity that a piece of glass on the eye could provide was encouraging.

In 1889, a German glassblower named F.A. Muller improved upon the glass lens by making it thinner and lighter. Then in 1929, a Hungarian physician named Joseph Dallos perfected a method of taking molds from living eyes so that lenses could be made to more closely conform to the ocular curvatures.

Contact lenses as we know them today, were developed in 1936 by a New York optometrist William Feinbloom, fabricated the first American made contact lenses and introduced the use of plastic lenses.

In 1948, a California optician Kevin Tuohy began making contact lenses entirely of plastic. They were still bigger than the cornea, but smaller than previous lenses.

The soft contact lenses were invented by Otto Wichterle in 1961. This Czech chemist has developed the first hydrogel to produce contact lenses really comfortable. And this soft, hydrophilic (water absorbing) plastic now is known as polymacon. These lenses allow the oxygen to reach the eye even when the user is wearing them.

In 1998, an important development was the launch of the first silicone hydrogels onto the market by Ciba Vision in Mexico.

Technology continues to improve making the contact lens more exciting than ever before. Many people still do not like the idea of putting a little piece of film into their eyes. They believe contacts will be uncomfortable and cause all sorts of eye irritations. Although this may have been true in the beginning, it is no longer the case. Today's contact lenses are very comfortable. New users find that within minutes they can't even feel that they have them in at all.