AT this time, an erisophake **26** is used to remove the lens **22** totally from the capsule. The squeezing pressure on the tweezer body **52** of the removal tool **50** is slightly released to keep the capsule open. The interior of the lens capsule is then irrigated with sterile saline solution. Thereafter, any capsular plaque is removed by means of suction.

A new lens **22'** may then be implanted well into the capsule with an erisophake **26**. The lens implant **22'** should be a suitable transparent, flexible, biologically inert, non-toxic, non-irritating material which is not susceptible to absorption by body fluids. Once the new lens **22'** is seated well into the capsule, the removal tool **50** can be withdrawn.

The superior capsule flap is then repositioned, as well as the iris **16**. The anterior chamber of the eye is then irrigated. The corneal incisions and the conjunctival flaps are closed by means of sutures. Thereafter, distention of the anterior chamber takes place by means of air or fluid.

It will be appreciated by those skilled in the art that post-operative medication such as neo-decadron ophthalmic ointment should be used to counteract infection and to promote healing. Additionally, a cycloplegic such as cyclopentolate should be instilled before the effects of local or general anesthesia wear off. The cyclopegic should be continued for a period of approximately one to two weeks.

It will be appreciated that, with the procedure just described, it is possible to implant a natural human or animal lens within the human lens capsule, which will be totally surrounded by the lens capsule. The capsule, is turn, is held in position by the natural zonular fibers attached to the ciliary muscle. The change in contour and focus of the lens is accomplished by the natural constriction and relaxation of the ciliary muscles applying pressure to the lens implant.

The present invention may also be used with an artificial lens and, in particular, a soft or flexible lens. Such a flexible lens can be made of the same type of material presently being used for external contact lenses such as HEMMA (hydrophilic plastic), M.M.A. (soft plastic), silicone (hard and soft plastic) and P.M.M.A. (hard plastic), with M.M.A. being the preferred material.

It should also be appreciated that the implanted lens **22'** of the present invention, whether flexible (and thus having a variable focus) or rigid (and thus having a fixed focus) may have a variety of sizes and shapes. Thus, FIG. **5** and **6** illustrate a convex lens **70** in plan view and in cross-sectional view respectively. FIG. **7** illustrates a plano convex lens **72**; FIG. **8** illustrates a modified plano-convex lens **74**; and FIG. **9** illustrates a bi-convex lens **76**. The lens **22'** should be approximately nine millimeters to thirteen millimeters in diameter and have a thickness of approximately 3.0 to 4.5 millimeters, all of which dimensions are variable depending upon the lens power required, the material used and the physical and anatomical limitations of the particular eye and the lens capsule.

It will thus be appreciated that the present invention provides virtually complete and natural vision performance of the human or animal eye, since it utilizes the natural lens capsule (rather than destroy it or mutilate it), as well as the surrounding ciliary muscles and natural zonular fibers. It totally avoids the use of sutures, wedges, prongs and riveting devices which have a tendency to apply constant pressure and trauma to the surrounding tissue, thus causing irritation and inflammation.

As will be readily apparent to those skilled in the art, the invention may be used in other specific forms without departing from its spirit or essential characteristics. The present embodiments are, therefore, to be considered as illustrative and not restrictive, the scope of the invention being indicated by the claims rather than the foregoing description, and all changes which come within the meaning and range of equivalence of the claims are therefore intended to be based therein.

What is claimed is:

1. A method of replacing a lens comprising:

(a) displacing the cornea and the conjunctiva to provide access to the iris;

(b) positioning the iris to provide access to the anterior lens capsule;

(c) performing a generally horizontal capsulotomy incision in the anterior lens capsule;

(d) folding back the superior portion of the capsular incision to expose the apex of the lens;

(e) inserting a first portion of a removal tool between the anterior lens capsule and the anterior surface of the lens while inserting a second portion of said removal tool between the posterior lens capsule and the posterior surface of the lens;

(f) grasping the lens with said first and second portions of said removal tool and rotating the lens to dislodge it from the capsule and partially remove it from the capsule;

(g) removing the lens while keeping the capsule open;

(h) inserting a replacement lens into the capsule;

(i) withdrawing said removal tool from the capsule; and

(j) repositioning the superior capsule flap, the iris, the cornea and the conjuctiva.

2. A method according to claim **1** wherein said displacement step consists of a 10 o'clock to 2 o'clock superior corneal incision and conjunctival flap.

3. A method according to claim wherein said positioning step consists of a 12 o'clock complete iridectomy.

4. A method according to claim **1** wherein said positioning step consists of a dilation of the iris.

5. A methoid according to claim **1** wherein said capsulotomy is from the 10 o'clock position to the 2 o'clock position.

6. A method according to claim **1** wherein said capsulotomy is performed approximately three millimeters from the apex of the capsule.

7. A method according to claim **1** wherein said removing step is done with an erisophake

8. A method according to claim **1** or claim **7** wherein during said removing step the capsule is kept open with said removal tool.

9. A method according to claim **1** further comprising the step of irrigating the lens capsule after said removing step.

10. A method according to claim **1** further comprising the step of removing subcapsular plaque after said removing step.

11. A method according to claim **1** wherein said replacement lens is a human lens transplant.

12. A method according to claim **1** wherein said replacement lens is an animal lens transplant.

13. A method according to claim **1** wherein said replacement lens is an artificial lens transplant.

14. A method according to claim **13** wherein said artificial lens has a variable focus.

15. A method according to claim **14** wherein said lens is made of flexible material.

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