

Appendix C.—Glossary of Terms and Acronyms

Glossary of Terms

Aphakia: The absence of the crystalline lens of the eye, commonly due to the surgical removal of lens cataracts. Aphakia is usually an age-related condition in which the lens transparency is lost. The resulting opaque quality of the lens may diminish vision to light perception only, necessitating surgical intervention.

Astigmatism: A defect of vision usually caused by irregular conformation of the cornea of the eye, because of which light rays fail to meet at a single focal point, resulting in a lack of sharpness or evenness of focus.

Bifocal lenses: Eyeglass or contact lenses divided into two separate focal lengths for near and far vision.

Contact lens: A ground or molded lens of glass or plastic that fits over the corneal portion or more of the scleral surface of the eye, for the purpose of correcting vision problems or for protection.

Cornea: A clear, central portion of the sclera, which serves as the first element in the light focusing system of the eye.

Corneal ulcers: Pits, perforations, or other lesions of the cornea.

Gas-permeable lenses: Contact lenses made of materials through which gases can penetrate so that oxygen can reach the underlying cornea.

Extended-wear lenses: Contact lenses that can be worn for an extended period (e.g., 1 month) because of being made of gas-permeable materials or otherwise constructed so that oxygen can reach the underlying cornea.

Hard lenses: Contact lenses made of rigid, non-gas-permeable plastic materials.

Hydrogel (hydrophilic material): Highly water-absorbent, plastic material from which most soft lenses are made. The most commonly used of these materials is hydroxyethylmethacrylate (HEMA).

Hypermetropia: Same as *hyperopia*.

Hyperopia: Farsightedness; a condition in which visual images come to a focus behind the retina, resulting especially in defective vision of near objects.

Intraocular lens: A lens implanted in the eye to replace the natural lens removed during cataract surgery.

Keratoconus: A pathological condition of the eye in which the cornea becomes distended into a conical or nipple shape.

Monovision: A sight difficulty in one eye only.

Myopia: Nearsightedness; a condition in which the visual images come to a focus in front of the retina, resulting especially in defective vision of distant objects.

Photo-chromatic lenses: Eyeglass lenses that brighten

or darken in response to changes in the available surrounding light.

Polymer: A large molecule consisting of a chain of small molecules. Most contact lenses are made from polymer plastics.

Presbyopia: Inelasticity of the lens, which causes difficulty in the viewing of near objects. The condition usually is age related, beginning normally around 45 and continuing until about 70, when it levels off.

Refractive disorders: Conditions of the eye in which the light-bending properties do not provide for clear focusing. Most common among these conditions are myopia (nearsightedness), hypermetropia (farsightedness), and astigmatism.

Retina: A thin tissue consisting of several layers of cells, which contains the light-receptor cells that allow the sense of sight.

Sclera: The elastic coating of connective tissues that covers the eye, including the “white” of the eye.

Single-vision disorder: Hypermetropia, myopia, and other disorders that involve only one type of vision difficulty, rather than presbyopia, which involves difficulties with both near and far vision.

Soft lenses: Contact lenses made of water-absorbing materials. They are more comfortable to wear because of flexibility and gas-permeability, but relatively more difficult to handle and of poorer optical quality than hard lenses.

Spin-casting: A technique for manufacturing contact lenses, in which the lens material, in soft form, is placed in a cup-like mold, and the desired lens curvatures are achieved by spinning the mold at an appropriate speed.

Toric lenses: Contact lenses used to correct for uneven focusing of the eye due to corneal abnormalities.

Trachoma: A chronic, contagious conjunctivitis characterized by the presence of inflammatory granulations on the conjunctival surfaces (the mucous membrane covering the inner surface of the eyelid). These granulations eventually are replaced by scar tissue.

Glossary of Acronyms

CAB	—cellulose acetate butyrate
FDA	—Food and Drug Administration, U.S. Department of Health and Human Services
FTC	—Federal Trade Commission
HEMA	—hydroxyethylmethacrylate
IDE	—investigational device exemption by FDA
NPD	—National Patent Development Corp.
PMMA	—polymethylmethacrylate