WHAT IS CLAIMED IS:

1. A method of improving distance vision comprising administering to a subject in need thereof a composition comprising aceclidine at a concentration from about 0.25% to about 2.0 % w/v and a cycloplegic agent at a concentration from about 0.025% to about 0.1% w/v, wherein w/v denotes weight by volume.

2. The method of claim 1 wherein the subject has less than 20.20 distance vision prior to the administration of the composition.

3. The method of claim 3 wherein the distance vision of the subject after administration of the composition is 20.20 or better.

4. The method of claim 1 wherein the subject has less than 20.40 distance vision prior to the administration of the composition.

5. The method of claim 4 wherein the distance vision of the subject after administration of the composition is 20.40 or better.

6. The method of claim 1 wherein the composition further comprises a surfactant, a tonicity adjustor, optionally an antioxidant and optionally a viscosity enhancer.

7. The method of claim 6 wherein:

the cycloplegic agent is selected from pirenzepine, tropicamide, cyclopentolate hydrochloride, 4-diphenylacetoxy-N-methylpiperidine methiodide (4-DAMP), AF-DX 384, methoctramine, tripitramine, darifenacin, solifenacin, tolterodine, oxybutynin, ipratropium, oxitropium, tiotropium, otenzepad and a combination thereof;

the surfactant is selected from polyoxyl stearate, a gamma cyclodextrin, sulfobutylether β-cyclodextrin, 2-hydroxypropyl cyclodextrin, sodium lauryl sulfate, sodium ester lauryl sulfate, a poloxamer, a polysorbate, sorbitan monolaurate, sorbitan monopalmitate, sorbitan monostearate, sorbitan monooleate, a polyoxyl alkyl, a cyclodextrin and combinations thereof; and

the tonicity adjustor is selected from mannitol, sodium chloride, potassium chloride, glycerin and combinations thereof.

8. The method of claim 7 wherein:

the cycloplegic agent is tropicamide;

the surfactant is polyoxyl stearate; and

the tonicity adjustor is mannitol.

9. The method of claim 6 wherein the composition comprises a viscosity enhancer selected from guar gum, hydroxypropyl-guar, xanthan gum, alginate, chitosan, gelrite, hyauluronic acid, dextran, and a carbomer, and the viscosity is from about 1 to about 5000 centipoise ("cps") prior to topical topical instillation and from about 1 to about 50 cps upon topical topical instillation.

10. The method of claim 9 wherein the viscosity enhancer is selected from guar gum, carbomer 934 and carbomer 940 and the viscosity is from about 15 to about 35 cps upon topical topical instillation.

11. The composition of claim 6 comprising an antioxidant selected from citrate, ethylenediaminetetraacetic acid, disodium ethylenediaminetetraacetic acid, dicalcium diethylenetriamine pentaacetic acid and combinations thereof.

12. The composition of claim 11 wherein the antioxidant is citrate.

13. An ophthalmological composition for the treatment of presbyopia comprising:

aceclidine at a concentration from about 0.25% to about 2.0% w/v;

a polyol selected from mannitol, xylitol, sorbitol, isosorbide, and maltitol as a cryoprecipitate; and tropicamide at a concentration from about 0.025% to about 0.10% w/v,

wherein w/v denotes weight by volume.

14. The composition of claim 13 further comprising:

polyoxyl 40 stearate at a concentration of about 2.0% w/v or 10.0% w/v;

a buffer selected from acetate buffer, phosphate buffer and citrophosphate buffer at a concentration of about 3 millimolar;

optionally citric acid monohydrate at a concentration from about 0.1% to about 0.2% w/v;

optionally a viscosity enhancer selected from carbomer 934 and carbomer 940 at a concentration from about 0.01% to about 1.0% w/v; and

optionally benzalkonium chloride (BAK) at a concentration of about 0.02% w/v,

wherein the polyol is mannitol at a concentration from about 0.5% to about 6.0% w/v and the pH of the composition is from about 4.75 to about 5.0 and wherein the viscosity of the composition is from about 1 to about 5,000 centipoise (cps) at about 10 to about 30 °C and wherein w/v denotes weight by volume.

15. The claim of 14, further comprising from about 0.09% to about 1.0% w/v carbomer 940.

16. A method of treating a refractive error of the eye in a subject in need thereof comprising administering to a subject in need thereof a first composition comprising lyophilized aceclidine at a concentration from about 0.25% to about 2.5% w/v and a cryoprecipitate at a concentration from about 2.5% w/v to about 6.0% w/v and further comprising administering concurrently or sequentially a second composition comprising a cycloplegic agent at a concentration from about 0.025% to about 0.1% w/v and optionally one or more excipients selected from a nonionic surfactant at a concentration from about 0.25% to about 10% w/v, a viscosity enhancer, a buffer and a preservative, wherein w/v denotes weight by volume, wherein the refractive error of the eye is selected from presbyopia, myopia, hyperopia, astigmatism or a combination thereof.

17. The method of claim 16 wherein the aceclidine is at a concentration from about 1.45% to about 1.75% w/v, the cryoprecipitate is mannitol is at a concentration from about 2.5% to about

4.0% w/v, the cycloplegic agent is tropicamide at a concentration of about 0.042% w/v and wherein the second composition further comprises polyoxyl 40 stearate as a nonionic surfactant at a concentration of 5.5% w/v, carbomer 940 as a viscosity enhancer at a concentration from about 0.09% w/v to about 1.0% w/v, citrate as an antioxidant at a concentration of about 0.1% w/v, acetate as a buffer at a concentration of about 3 mM and benzalkonium chloride as a preservative at a concentration of about 0.02% w/v and wherein the pH is from about 4.75 to about 5.0.

18. The method of claim 16 wherein the first composition and the second composition are administered from one device with at least two chambers and wherein the first composition resides in a first chamber and the second composition resides in a second chamber and wherein the first composition first contacts the second composition at the time of administration.

19. The method of claim 16 wherein the first composition resides in a first vial and the second composition resides in a second vial and the first composition first contacts the second composition at the time of administration.

20. A method for treating a refractive error of the eye comprising administering to a patient in need thereof a pharmaceutically acceptable amount of a composition comprising aceclidine at a concentration from about 0.25% to about 2.0% w/v and a cycloplegic agent at a concentration from about 0.025% to about 0.1% w/v, wherein w/v denotes weight by volume, wherein the size of the pupil is reduced to from about 1.5 to about 2.5 millimeters and wherein the refractive error is selected from the group consisting of corneal irregular astigmatism, an ectasia induced corneal irregularity, a pellucid induced corneal irregularity, a higher order aberration and a refractive surgery induced higher order aberration.