1. A method for controlling axial length of a user's eye, the method comprising:

applying a dose of white light to the user's eyelid;

detecting an effect of the applied white light on the user's eye; and

adjusting the applied white light based on the detected effect.

2. The method of claim 1, wherein applying the dose of white light to the user's eyelid applies a dose red light to the user's eye having a wavelength in a range from 600 nm to 650 nm.

3. The method of claim 1, wherein the detected effect of the applied white light is the axial length of the user's eye.

4. The method of claim 1, further comprising applying a white light with a ramped-up intensity prior to applying the dose of white light.

5. The method of claim 1, further comprising applying a white light with a ramped-down intensity subsequent to applying the dose of white light.

6. The method of claim 1, further comprising:

detecting a diameter of a pupil of the user's other eye as the white light is applied to the user's eye; and, optionally

adjusting the applied white light based on the detected pupil diameter of the user's eye.

7. The method of claim 1, further comprising:

detecting pressure applied to the user's eye from a white light source during the application of the white light; and, optionally

adjusting a tightness of a strap configured to retain the white light source on the user's head in response to the detected pressure.

8. The method of claim 1, wherein the white light is applied to the user while the user is in a sleeping state.

9. The method of claim 1, wherein the applied dose of white light has an illuminance in a range from 30,000 lux to 35,000 lux.

10. The method of claim 1, wherein the applied dose of white light is applied for a duration in a range from 2 minutes to 3 minutes.

11. A system configured to apply red light to a user's eye through the user's eyelid, the system comprising:

a white light source;

a sensor configured to detect an axial length of a user's eye; and

a controller configured to vary the white light source based on the detected axial length of the user's eye.

12. The system of claim 11, wherein the sensor uses at least one of optical low coherence reflectometry or optical coherence tomography (OCT) to detect the axial length of the user's eye.

13. The system of claim 11, wherein the sensor is configured to direct infrared light towards the user's eye.

14. The system of claim 11, further comprising:

a device housing that houses the white light source, the sensor, and the controller; and

a strap configured to retain the system on the user's head.

15. The system of claim 11, further comprising a pressure sensor configured to detect pressure applied by the device housing to the user's eyes, wherein the strap is adjustable based on the pressure detected by the pressure sensor.