

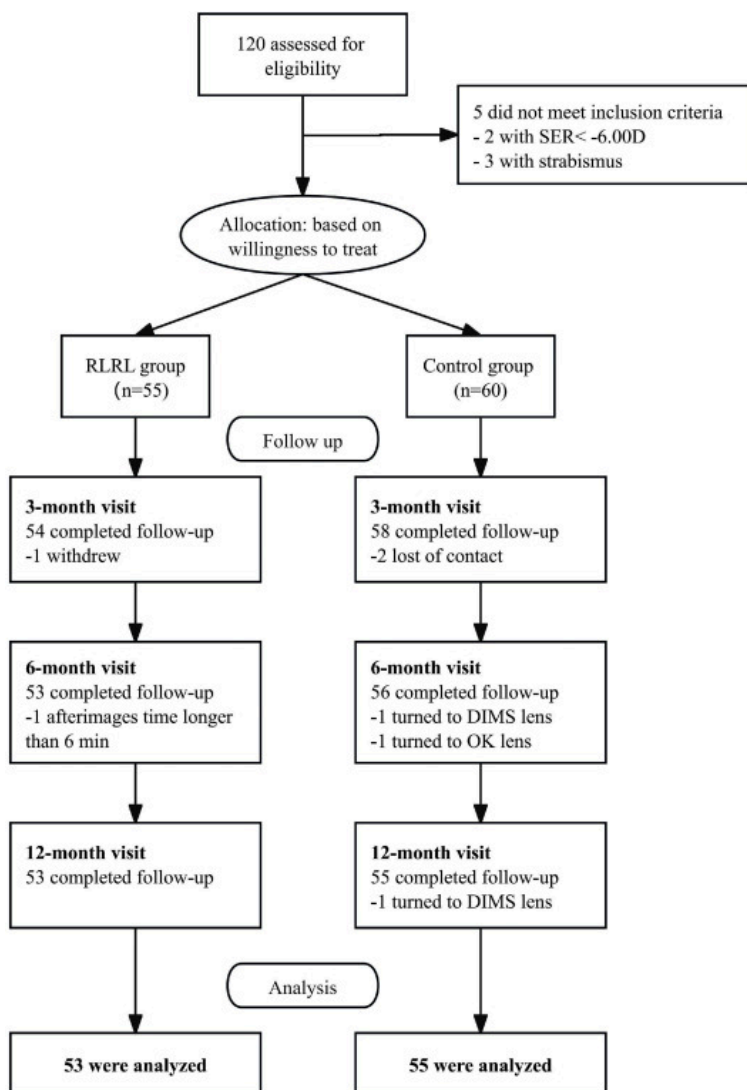
Safety of Repeated Low-Level Red-Light Therapy for Children with Myopia

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Purpose:

To investigate the safety of RLRL in children with myopia in terms of retinal function and structure, including through multifocal electroretinography.

Method:



Results:

After 3, 6 and 12 months, AL was shorter and SER less myopic than in the control group.

The response density and amplitude of the P1 wave of the first ring in the multifocal electroretinogram increased significantly at 6 months, suggesting improved retinal function after RLRL.

Furthermore, the relative reflectance of the ellipsoid zone increased significantly at 6 months, possibly related to the enhancement of photoreceptor cell mitochondrial function and improved retinal function.

The relative reflectance of the photoreceptor outer segment also increased at 6 and 12 months, and this increase was associated with greater AL regression. This may indicate increased photoreceptor outer segment renewal by red light with retinal pigment epithelium cells requiring a longer time to clear the excessively shed discs, leading to their greater accumulation with increased myopic efficacy.

