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# View Abstract

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**CONTROL ID:** 3711156

**SUBMISSION ROLE:** Abstract Submission

## **AUTHORS**

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**Commercial Relationships Disclosure:** Carly Lam: Commercial Relationship(s); Code F (Financial Support): Hoya Corporation, Essilor, Johnson & Johnson; Code P (Patent): co-own patents with Hoya Corporation | Wing Chun Tang: Commercial Relationship: Code N (No Commercial Relationship) | Han Yu Zhang: Commercial Relationship: Code N (No Commercial Relationship) | Dennis Tse: Commercial Relationship: Code N (No Commercial Relationship) | Chi-ho To: Commercial Relationship(s); Code F (Financial Support): Hoya Corporation, Essilor, Johnson & Johnson vision care; Code P (Patent): co-own patents with Hoya Corporation

**Study Group:** (none)

## **ABSTRACT**

**TITLE:** Myopia control in children wearing DIMS spectacle lens: 6 years results

### **ABSTRACT BODY:**

**Purpose:** To evaluate the changes in refraction and axial length for a period of 6 years in children who completed the two-year clinical trial of Defocus Incorporated Multiple Segment (DIMS) lenses.

**Methods:** Myopic children who had completed the 2-year randomized clinical trial of DIMS lens were included in this follow-up study. Their cycloplegic refraction and axial length (AL) were measured up to 6 years. Children who changed to other myopia control methods were excluded. Participants were divided into 4 groups - Group 1: wore DIMS spectacles for a total of 6 years (include first two years in RCT); Group 2 wore DIMS spectacles in the first 3.5 years and changed to wear SV spectacles afterward; Group 3: wore SV spectacles in the first 2 years of RCT and switched to wear DIMS spectacles afterward; Group 4: wore SV spectacles in the first 2 years of RCT and switched to wear DIMS spectacles in the 3rd year and then switched to wear SV spectacles lens till end of the 6<sup>th</sup> year. Changes in spherical equivalent refraction (SER) and AL over the 6 years were analyzed and compared.

**Results:** 90 children completed the data collection at for a period of 6 years. The children in Group 1 (n=36) wore DIMS lenses throughout the study had  $-0.92 \pm 1.15D$  of myopia progression and  $0.60 \pm 0.49mm$  of axial elongation. The mean annual changes were 0.15D and 0.10mm. Group 2 (n=14) stopped DIMS lens wear after the first 3.5 year and showed more myopia progression (mean differences: 0.2D) and axial elongation (0.07mm) than those in Group 1 between year 3.5 to year 6. Children in both Group 3 (n=22) and Group 4 (n=18) who wore the SV spectacles in the first two years and then switched to wear DIMS lens. Their rate of myopia progression and axial elongation decreased after switching to DIMS lens wear. Children in Group 4 exhibited faster myopic progression when they stopped the DIMS lens wear from year 3.5 to year 6.

**Conclusions:** DIMS lens maintained the effect on slowing myopia progression and axial growth in myopic children over a period of 6 years. When children stopped DIMS lens wear and wore single vision lenses, their myopia progression was faster than the children who continued with DIMS lens wear.

(No Image Selected)

**Layman Abstract (optional):** Provide a 50-200 word description of your work that non-scientists can understand. Describe the big picture and the implications of your findings, not the study itself and the associated details.: DIMS spectacle lens is found to be effective in slowing myopia control in a 2-years randomized clinical trial. When these children continued to wear the DIMS lens for a period of 6 years, the myopia control effect was sustained that both myopia progression and the axial length changes were similar to the findings in the 2 years RCT.

## **DETAILS**

**PRESENTATION TYPE:** #1 Paper, #2 Poster

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**CURRENT SECTION:** Clinical/Epidemiologic Research

**Clinical Trial Registration (Abstract):** Yes - <http://www.clinicaltrials.gov>

**Other Registry Site (Abstract):** (none)

**Registration Number (Abstract):** NCT02206217

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#### **TRAVEL GRANTS and AWARDS APPLICATIONS**

**AWARDS:**

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