

Effect of soft contact lens wear on tear level and subjective comfort level

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Purpose: The purpose of this study was to determine the effect of three months of soft contact lens (CL) wear on Schirmer score and tear break-up time (TBUT). We also evaluated the effect of change in tear level on subjective comfort level.

Methods: This was a longitudinal prospective study conducted in normal myopic subjects who had never worn CL before. Schirmer I test and fluorescein TBUT were measured in each subject. Subjects were fitted with a daily disposable (Nelfilcon A or Stenofilcon A) in one eye and a monthly disposable (Lotrafilcon B or Comfilcon A) in the other eye. Level of comfort was subjectively evaluated two times a day (after commencing lens wear and before taking out the lens) every day in a 100 division scale. The average values were used in the analysis. Level of comfort on first month was compared with the comfort on third month. Tear level tests were repeated after three months of lens wear.

Results: Schirmer score reduced by 5.8 ± 9.3 mm ($p = 0.000$) and TBUT reduced by 2.8 ± 7.9 secs ($p = 0.009$) after three months of CL wear. The changes in Schirmer score and TBUT were not associated with the lens materials (One way ANOVA, $p > 0.05$). Subjective comfort level during first month and third month remained same ($p = 0.272$). There was no correlation of tear Schirmer score and TBUT with subjective comfort level ($p > 0.05$).

Conclusion: Three months of soft contact lens wear reduced tear level; however, it did not reduce the subjective comfort level.