

# Effect of Tinted Lenses on Near Contrast Sensitivity

## Abstract

Tinted lenses are known to influence contrast sensitivity by interfering with light transmission. The aim of this study was to investigate the effect of different gradings of grey tinted lenses such as 15% and 25% on near contrast sensitivity. Forty-four healthy individuals including sixteen males and twenty-eight females participated in this study. The mean age was  $22.09 \pm 1.84$  years with mean spherical equivalent of  $-2.22 \pm 1.71$ D. Contrast sensitivity was measured by using near FACT chart with only 6cpd spatial frequency was measured. The contrast sensitivity without any tinted lenses and with the 15% tinted lens followed by the habitual state and a reduction was also found with the 25% tinted lens. Therefore, to conclude, it is of utmost importance to consider the spatial aspects of tasks and the effect of tints on contrast sensitivity before prescribing them.

**Keywords:** Grey tinted lenses; Near contrast sensitivity

## Introduction

Tinted lenses are known to influence contrast sensitivity by interfering with light transmission. The aim of this study was to investigate the effect of different gradings of grey tinted lenses such as 15% and 25% on near contrast sensitivity. Forty-four healthy individuals including sixteen males and twenty-eight females participated in this study. The mean age was  $22.09 \pm 1.84$  years with mean spherical equivalent of  $-2.22 \pm 1.71$ D. Contrast sensitivity was measured by using near FACT chart with only 6cpd spatial frequency was measured. The contrast sensitivity without any tinted lenses and with the 15% tinted lens followed by the habitual state and a reduction was also found with the 25% tinted lens. Therefore, to conclude, it is of utmost importance to consider the spatial aspects of tasks and the effect of tints on contrast sensitivity before prescribing them.

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## Materials and Methods

Forty-four healthy individuals including sixteen males and twenty-eight females participated in this study. The mean age was  $22.09 \pm 1.84$  years with mean spherical equivalent of  $-2.22 \pm 1.71$ D. Contrast sensitivity was measured by using near FACT chart with only 6cpd spatial frequency was measured.

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29.00, -1.00DS, -6.00DS, N5, 06/6, COBRA HD, (CSO, S, Fi, FACT, 46, 06, CA, B, 15%, (HO AT, F-15F), 25%, (HO AT, G, Ri, F-25F), 25%, 15%, A, B, (t), R, C (6), 9, FACT, A, O, 2.03, 0.13, 2.08, 0.11, 1.96, 0.15, T, 2, FAC, 15%, 25%, 15%, 25%

**Results**

I, 44, 22.09, 1.84, O, 44, 16, (36%), 28, (64%), Fi, 3, -2.22, 1.71D, (TB, T), 7.41, 0.79, T, 1, 15%, 25%, 15%, 25%

15%, 25%, I, 2.03, 0.13, 2.08, 0.11, 1.96, 0.15, T, 2, FAC, 15%, 25%



35%, 10%, 15%, 6, 3, 13, 25%, 15%, 6, 9, 14, A, N, N, 3, 2, 7%, 11, 15.

B i , I i , i i i C B , S , 3918K, 4141K , 4305K , i i i C 15 .

**Conclusion**