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## Comparison between retina sensitivity of the peripheral visual field of professional soccer players and non athletes

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**Purpose:** To compare the sensibility of the peripheral visual field of professional soccer players and age-gender matched non athlete population.

**Methods:** All of the participants were men between 18 to 35 years of age. In Group one there were 29 professional soccer players. In Group two there were 26 non athletes. The participants had to go through an eye exam before the visual field. The ones with normal exam could go through the study. Participants went through automated peripheral visual field exam using achromatic protocol 60-4 from the Humphrey automated perimetry. Participants who had in the visual field exam more than 20% of loss of eye fixation, 30% of false negative and 30% of false positive were excluded from the study. The visual field analysis was done with the best location model. This prediction model is based on the highest sensitivity between eyes at each visual field location integrating the corresponding visual field quadrants of each eye resulting in a unique integrated visual field. The binocular visual field was divided in four quadrants (Left Superior Q1, Right Superior Q2, Left Inferior Q3 and Right Inferior Q4).

**Results:** The average of retina sensibility in quadrants Left Inferior Q3 and Right Inferior Q4 was higher in the group of athletes compared to non-athletes (Athletes Q3  $27, 29 \pm 1,18$  dB and Q4  $27, 09 \pm 1,44$  dB; non athletes Q3  $26, 1 \pm 1, 97$  dB and Q4  $25, 58 \pm 2,15$  dB respectively;  $p=0,0118884$  e  $p=0,0043267$ ).

**Conclusion:** The study demonstrated that soccer players have higher retina sensibility in the inferior quadrants compared to non-athlete age matched population.

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