

# **High Performance Sports Vision**

**1 hour**

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## **Description**

This lecture serves to discuss aspects of an optometrist's role in optimizing human performance. We will cover both assessment and evaluation and discuss therapy and training strategies. This course is applicable to a wide range of athletes ranging from youth to amateur to professional athletes. This course will also be applicable for the individual athlete and a group or team of athletes.

## **Learning Objectives**

- Understand an optometrist's role in peak athletic performance
- Be familiar with therapy and training strategies for sports performance excellence
- Be familiar with differences in testing and training based on age and ability of the athlete

## **COURSE OUTLINE**

### Introduction

- Families spending on sports performance enhancement
  - leagues
  - shoes and equipment
  - training camps
  - group and private training
- What about vision?
- Demographics nationally?
- Sports vision definition

### Visual demands of specific sports

- Static versus non-static
- Dynamic versus non-dynamic
- Distance versus near
- Contrast
- Depth
- Gaze angles
- Body position and balance

- Visual attention
- Stress

#### Types of therapy

- Optometric vision therapy
- Physical therapy
- Occupational therapy
- Neuro-vision rehabilitation
- Biofeedback

#### Vision performance evaluation

- Case 1
  - Collegiate women's softball player
  - Case history
- Visual acuity
  - Static
  - Dynamic
- Contrast sensitivity
- Depth perception
  - Near
  - Distance
- Ocular alignment
- Dominance
  - Eye
  - Hand
  - foot
- Refractive status
- Vergence
- Accommodation
- Oculomotor function
  - Fixation
  - Pursuits
  - Saccades
- Visual motor
  - Coordination
  - Reaction time
- Anticipation timing
  - Speed
  - Localization
- Peripheral awareness
- Vision and balance
- Visualization
- Visual information processing
  - Visual spatial skills
  - Visual motor integration
  - Visual analysis

- Auditory skills
- Executive function
- Ocular health

#### Prescribing for the athlete

- Refraction
- Lens options
- Protective eyewear
- Filters
- Tints
- Performance eyewear
- Contact lenses
  - Soft
  - Specialty Tints
- Refractive surgery

#### Sports-related ocular injuries

- Sports-specific prevalence
- Examples

#### Vision therapy/training

- Introduction of therapy/training
- Cases
  - Case 2:
    - Professional Jai-Alai Athlete
  - Case 3:
    - Collegiate Baseball player

#### Special considerations amongst athlete's level

- Youth
- Amateur
- Collegiate
- Professional
- Technology

#### Conclusion / Q&A