

Oculomics: Hidden Narratives to Systemic Disease from a Comprehensive Eye Exam

by

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Duration: 60 min

Course Description

Oculomics is the intersection of systemic diseases and eye health. Opticians, contact lens practitioners, and optometric technicians must understand the most common systemic diseases that can affect ocular health and vision. Topics include 14 systemic systems, diabetes, lupus, multiple sclerosis, and their ocular implications, prevention strategies, and the importance of interdisciplinary collaboration in improving patient care and outcomes.

Learning Objectives

Upon completion of this course, students should be able to:

1. Describe the 14 systemic systems.
2. Identify the most common systemic diseases affecting ocular health.
3. Understand how the most common systemic diseases can affect vision.

Timed Outline

I. Overview (10 minutes)

1. Objective: Understanding the connection between systemic diseases and eye health.
2. Define the 14 systemic systems.
3. Overview of the most common systemic diseases to be discussed.
4. Importance of interdisciplinary knowledge in eye health for opticians, contact lens practitioners and optometric techs.

II. Diabetes and Eye Health (10 minutes)

1. Overview of Diabetes
 - a) Types of diabetes (Type 1, Type 2, Gestational)
2. Diabetic Eye Diseases
 - a) Diabetic Retinopathy
 - b) Diabetic Macular Edema
3. Prevention and Management
 - a) Regular eye exams

- b) Glycemic control (blood sugar) and effects on prescription Rx

III. Autoimmune Disorders and Eye Health (10 minutes)

1. Lupus
 - a) Ocular manifestations (e.g., dry eyes, retinal vasculitis)
2. Rheumatoid Arthritis
 - a) Impact on eye (scleritis, dry eye syndrome)
3. Vasculitis
 - a) Ocular complications (e.g., uveitis, retinal artery occlusion)

IV. Gastrointestinal and Metabolic Disorders (10 minutes)

1. Crohn's Disease
 - a) Association with eye conditions (e.g., uveitis)
2. Hypertension
 - a) Hypertensive retinopathy
3. Hyperlipidemia
 - c) Impact on retinal health
4. Management and Monitoring
 - d) Lifestyle changes and regular screening

V. Neurological and Genetic Disorders (10 minutes)

1. Multiple Sclerosis
 - a) Optic neuritis and visual impairment
2. Neurofibromatosis
 - a) Eye tumors and associated complications
3. Importance of Neurological Assessment
 - a) Coordination with neurologists for comprehensive care

VI. Infectious Diseases and Eye Health (5 minutes)

1. Overview of Infectious Diseases
 - a) Common infections affecting the eyes (e.g., herpes, syphilis)

VII. Conclusion and Q&A (5 minutes)

1. Recap of Key Points