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Vision, Cognition, and Functioning in Older Adults
Outline

• Epidemiology and definitions
• Cognitive and vision impairments impact functioning
• Functioning impacts well-being
• Implications for optimal aging
Epidemiology

9%  14%  4%

Vision impairment
Cognition

- Learning & memory
- Language
- Executive function
- Complex attention
- Perceptual motor
- Social cognition

Functioning

Self-Care

Social Activity

Daily Activities

Mobility

Perceptual Ability

Cognitive Ability

Physical and Motor Capacity

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Optimal aging

✗ Successful aging

✗ Healthy aging

✓ Optimal aging
Cognition and functioning

Self-Care & Mobility (ADLs)
- Affected later in dementia
  - bathing, dressing
- Attention, visuospatial function

Life Activities (IADLs)
- Affected earlier
  - managing finances
- Executive function

Cognition and functioning

Vision and functioning

Salisbury Eye Evaluation

- Visual acuity, contrast sensitivity, visual fields matter
- Gradual performance declines (no threshold)
- Mobility disability with severe vision loss

Vision and functioning

Salisbury Eye Evaluation

• 8 years follow-up
• Worse vision → worse function
• Supports causality

Vision and functioning

National Health and Aging Trends Study (NHATS)

Fully-able  Successful accommodation  Difficulty  Assistance or does not do
Vision and functioning

National Health and Aging Trends Study (NHATS)

Self-Reported Vision Impairment
- Mobility Limitations
- Household Activity Limitations
- Self-Care Limitations
- Participation Restrictions

Vision, cognition, and functioning

- Less evidence on impact of **comorbid** vision-cognitive impairment

Vision, cognition, and functioning

Implications for Optimal Aging

- Activity limitations affect health-related quality of life and well-being
- Not all activity limitations have the same impact

- Walking and bathing
- Bathing and dressing
- Walking and transferring

Implications for Optimal Aging


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Implications for Optimal Aging

- Assistance/Unable
- Difficulty
- Successfully accommodating
- Fully-able

✓ Frequent, repetitive sessions
✓ Simplified training
✓ Companion involvement

A Low-Vision Rehabilitation Program for Patients With Mild Cognitive Deficits

Heather E. Whitson, MD, MHS; Diane Whitaker, OD; Guy Potter, PhD; Eleanor McConnell, RN, PhD; Fay Tripp, OT; Linda L. Sanders, MPH; Kelly W. Muir, MD, MHS; Harvey J. Cohen, MD; Scott W. Cousins, MD

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