Moving Through Transitions in Lighting

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IMPACT OF LIGHTING CONDITIONS ON TRAVEL
TYPE & SOURCES OF GLARE

• Type
  • Discomfort
  • Disability

• Sources
  • External
  • Internal

• Direct
  • Indirect
ENVIRONMENTAL IMPACT OF GLARE

• Decreased impact in areas of higher illumination

• Increased impact in areas with low illumination
LIGHT ADAPTATION

• Dark or dim to light
  • Day
  • Night

• Light to dark or dim
  • Day
  • Night

• Reflections of glare
STRATEGIES FOR REDUCING GLARE

• Environmental modifications

• Non-optical accessories
  • Visors, hats, umbrellas

• Filters
  • Acetate Filters
  • Sun lenses
LOOKING TO IMPROVE

• Comfort
• Clarity
• Contrast
• Confidence
FILTER FEATURES

• Transmission level
  • The amount of light allowed to pass through the lens

• Absorptive filters
  • The amount of light blocked by the lens
FILTER FEATURES

- Transmission level
- Absorptive filters
- Color
FILTER FEATURES

- Transmission level
- Absorptive filters
- Color
- Frame
FILTER EVALUATION

• Start in a familiar area
• Assess transmission level using Gray tint
• Assess lens color with selected transmission level
• Address “Four C’s”
• Walk in and out of dark/shadowy areas
• Compare adaptation time with & without lenses
• Select frame
INSTRUCTIONAL TIPS & CONSIDERATIONS

• Have student:
  • Wear sun lenses prior to dark/light transition areas
  • Close eyes or turn away from bright lights if changing lenses outside
  • At night
    • Look down or to the side of headlights facing you
    • Walk with, not against the traffic flow
    • Wear a brimmed hat to tilt head to block glare source
INSTRUCTIONAL TIPS & CONSIDERATIONS, CONT’D.

• For areas with lighting transitions have student:
  • pause and step out of pedestrian flow while waiting for adaptation period to end
  • before going into a darkened area, advise students to close their eyes to shorten the adaptation time while moving into the darkened area

• Student may need more than one pair
  • Indoors, outdoors, bright, dim/dark

• Combine with additional glare remediation strategies
  • Prescription sunglasses or tinted contacts
  • Long cane use
LiveBinder with you:

• Moving Through Transitions in Lighting
  • http://www.livebinders.com/play/play/2223126
  • Access key: glare control
REFERENCES


FILTER RESOURCES

• Irlen
  • http://irlen.mybigcommerce.com/colored-overlays/

• NoIR
  • http://www.noir-medical.com/

• Live Eyewear
  • http://www.liveeyewear.com/

• Eschenbach
QUESTIONS?