Impact of Dynamic Lighting Schedules on Circadian Adaptation to Shift Work

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Light affects diverse physiologic functions

Rueger et al., J Sleep Res 2005
NIF visual responses are preferentially sensitive to blue light

Melatonin suppression

Circadian phase shift

Lockley et al., J Clin Endocrinol Metab 2003
NIF visual responses are preferentially sensitive to blue light
Effects of depleting blue light on NIF visual responses

Rahman et al., *Am J Physiol Endocrinol Metab* 2011
Van de Werken et al., *Chronobiol Int* 2013
Temporal dynamics in auditory reaction time

Rahman et al., *SLEEP* 2015
Effects of blue light enrichment in an applied setting

Viola et al., Scand J Work Environ Health 2008
Effects of blue light depletion in an applied setting

Rahman et al., Chronobiol Int 2013
Effects of blue light depletion in an applied setting

Rahman et al., Chronobiol Int 2013
## Effects of lighting in clinical care

- Reduces depression
- Decreases length of stay
- Improves sleep and circadian rhythm
- Lessens agitation
- Abates pain
- Improves adjustment to shiftwork among care providers
Dynamic lighting schedules facilitate circadian adaptation

Rahman et al., Unpublished
Dynamic lighting schedules facilitate circadian adaptation

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