# Bright light helps people with dementia

Summarized by Susan Aldridge, PhD, medical journalist
July 4, 2008

## Summary

Dementia appears to be associated with a disturbance of circadian rhythms, which leads to problems with mood, sleep and daily activities. A new study shows how exposure to daily bright light can improve these symptoms. Melatonin at night helps with sleep but impairs mood, so needs to be given with the bright light therapy.

## Introduction

The cognitive decline of dementia is often accompanied by disturbances of mood, behavior, sleep and activities of daily living. This increases the burden on the caregiver and also the risk of institutionalization of the person with dementia. It is possible that these symptoms are linked to a lack of synchronization of the circadian rhythms - the body's 'day and night'. Light therapy and melatonin - the 'darkness hormone' - have been shown to work with other patients whose rhythms are out of sync, so they may be worth trying with those who have dementia.

## What was done

Researchers in Amsterdam worked with 189 people in 12 nursing homes, who had an average age of 86 years. Ninety per cent were female and 87 percent had dementia. Six of the homes had bright lighting installed in ceiling-mounted fixtures and this was switched on between 9am and 6pm. The participants received either melatonin or placebo at bedtime. The trial lasted for an average of 15 months, with a maximum time of 3.5 years.

## What was found

Exposure to bright light reduced cognitive decline by five per cent, depression by 19 percent and problems with daily activity by 53 percent. Melatonin reduced the time to fall asleep and increased total sleep duration. But caregivers said that those on melatonin tended to become withdrawn and moody. Best results were when bright light and melatonin were combined.

## What this study means

Increasing the illumination levels in nursing homes is a simple and obvious way of helping residents resync their daily rhythms. The light has to be very bright - 1,000 lux

- and used for the whole day. Melatonin also has a role to play, particularly when bright light is used as well. The 2.5 mg dose used in this study might be a bit too high, because it was linked to side effects of depression which were overcome by using bright light as well.

**Source**


- *Effect of bright light and melatonin on cognitive and noncognitive function in elderly residents of group care facilities* RF. Riemersma-van der Lek , DF. Swaab, et al., Journal of the American Medical Association, June 11 2008, vol. 299, pp. 2642--2655


>

---

http://www.healthandage.org

---