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# TIME & LIGHT

Our body is attuned to the progression of time, taking its temporal cue from the sunlight's variation across the day. This influences our 'biological clock' that sends appropriate signals for mealtime, activity and rest. This chapter explores ways to work with this body clock.



# The “Dusk Crisis”

## CHALLENGES OF A SETTING SUN



Careers know the late afternoon as a time of unique challenges—and for many people living with dementia, a moment of acute discomfort. The term “sundown syndrome,” or “sundowning,” refers to this common phenomenon: when day turns to evening, exhaustion and lack of clarity in the time-sequence of the day can be unusually upsetting for those with various degrees of cognitive impairment. It is a phenomenon that has been oft-identified through clinical observation—including recent psychiatric investigation by the National Institute of Health in the United States (NIH).<sup>1</sup> It is associated with symptoms “such as agitation, confusion, anxiety, and aggressiveness in late afternoon, in the evening, or at night.” Ironically, the time that traditionally has been called “golden hour” can, for many of us, be the darkest.

<sup>1</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3246134/>

Although sundowning is not officially recognised as a psychiatric diagnosis—it is not in the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders)—medical practitioners are well aware that it can cause unhappy effects. It has, for example, been a frequent cause of institutionalisation. Not least, it has often been associated with severe symptomatic expressions, such as visual and auditory hallucinations.

*“Confusion as to the time of day can lead to sensations of panic; at dusk, time can seem especially ambiguous, and the darkness unsettling.”*

Sundown Syndrome might seem a fact of life, as inevitable as the passage from day to night. But are there design hacks that might bring a measure of relief?

It's tough. Late afternoon can be stressful for multiple reasons—and this is part of what makes these hours particularly trying. Nearly everyone, of all walks of life, is familiar with the sense of tiredness or irritability that sets in after a long day of stresses. This is a moment when the accumulated efforts of the many previous hours can take their toll. And especially for those with unusual burdens of stress!

As noted by the NIH study, sundowning can often appear as a merely exaggerated version of what many experience as, simply, the end of the day. Where cognitively-typical people can recognise and account for this, however, it is not so easy when some degree of impairment is present. In fact, quite the opposite: dusk hours are associated with *increased* impairment, which in turn reduces the ability to identify our daily rhythm as a cause.

### *A first approach is to introduce hacks to our living spaces that re-emphasise the time or rhythm of the day.*

Put more simply: this is a time associated with a lot of background noise. Likewise, the hormonal fluctuations of our diurnal cycle play a contributing role. The late afternoon is exhausting, in part, because the body's cortisol is waning—leading to an increased sense of tiredness and diminished emotional equanimity.<sup>2</sup> This is, in part, why our human cultures associate rage or insecurity (or plain sadness) with the end of the day. As the poet Dylan Thomas famously urged, “do not go gentle into that good night, old age should burn and rave at close of day”!

Certainly, however, dementia contributes a number

of its own factors to sundown syndrome. Confusion as to the time of day can lead to sensations of panic; at dusk, time can seem especially ambiguous, and the darkness unsettling. Mild to moderate dementia, in particular, can express in an increasing loss of sense of time, particularly in institutional environments—or more generally in settings where persons are not cognitively stimulated or challenged. Likewise, this can be a problem when daily routines of going out and returning home are no longer applicable. The passage of time is, for most of us, marked by the sequence of our activities. At the same time, reduced light and visibility can lead to heightened incidence of misrecognition, to the point of hallucination and panic.

So how might we (as Dylan Thomas put it) “rage against the dying of the light?”

A first approach is to introduce hacks to our living spaces that re-emphasise the time or rhythm of the day. We might distribute more clocks—a cheap and easy method for making time more visible (at least for those with milder experiences of dementia). Clocks can be positioned to sit



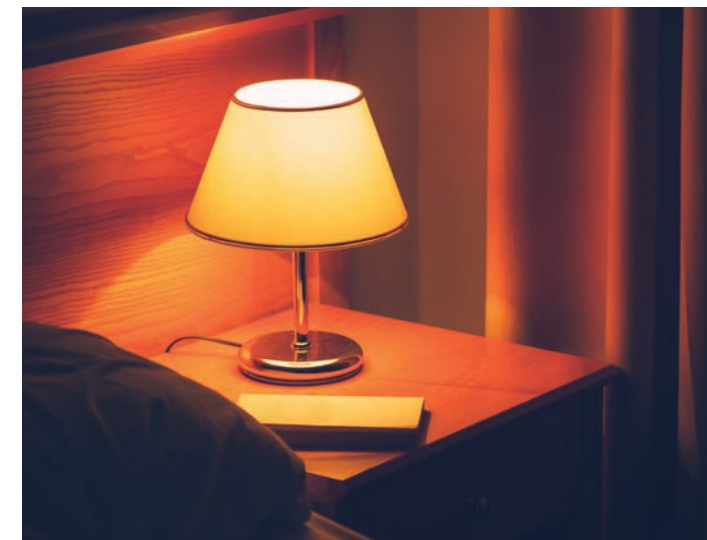
2 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3475279/>

### *Lamps might help to prevent our spaces from lingering for too long in the gloomy light of dusk*

within the eyeline of favourite chairs, activity areas, or seating clusters. A simple nail or screw drilled at multiple locations in a flat could allow clocks to be moved as needed to a variety of positions.

In other cases, a daily rhythm can be reinforced using other indicators. A regular regime of turning lights on at a consistent hour, or a visible change to the environment such as drawing of blinds or curtains that underscore (and accelerate) the transition from day to night—minimizing the “gloaming” effect of transitory lighting. Pre-verbal indicators such as smells also hold promise for reinforcing time sequence: for example, the scent of cooking or of coffee at regular intervals. Research has shown that odours “speak” to areas of the brain that are independent from the frontal cortex, and may be unconsciously registered.

Another tip is to pay renewed attention to the day and evening lighting of our living spaces. Many in high-rise apartments live with light predominantly from one side—the one at the building's external façade. Such singular, powerful



sources of illumination raise the potential hazard of glare, silhouetting, and other effects that can be disorienting or uncomfortable. We may wish to add extra light fixtures toward the “inside” areas of our flats, redistributing the light to make sure that our environments are balanced and offsetting glare from windows. Lamps might help to prevent our spaces from lingering for too long in the gloomy light of dusk, and help to make a noticeable event of lighting the room for the evening to begin.

These changes need not be onerous. Use of a set schedule helps to simplify the routine, and timer switches are available from most hardware outlets—allowing us to automate, even, the turning on and off of light sources.

While sundown syndrome may be unavoidable—for all humans—we are lucky to now have a certain control over the lighting of our lives. We can use this power to ease the transitions, and hopefully illuminate the gloom of that difficult time of day.



Reinforcing our natural rhythm of the day is helpful for everyone in maintaining a healthy lifestyle. Read on for more tips and tricks!



# Rhythm of the day

The circadian rhythm in our bodies regulates our sleep-wake cycle. It responds to the sunlight as the day progresses from light to dark. By pairing and sequencing activities in sync with the daylight cycle, we reinforce this natural rhythm. This improves sleep quality and also enhances daytime wellness.

## 1 Wake up

Wake up at first light. It ensures more energy for the rest of the day.



## 2 Mealtimes

Lunch signals mid-day and should take place in day-lit spaces where the sun's presence is perceptible.



## 3 Wind down for sleep

Prepare for bedtime through a gradual wind-down process. Dim the lights 2 hours before bedtime. Quiet rituals help the process.



## 4 Daytime Activities

Sunlight exposure reinforces care recipients' circadian rhythm and improves their sleep.



# A daily dose of sunlight

30 minutes of daily sunlight exposure allows the body to differentiate day from night. Engage in outdoor activities like walks around the neighbourhood. They lead to better sleep at night.

Participating in heritage walks is a good way to get out of the house while triggering and reinforcing past memories.



**REMINISCENCE WALK**  
Guided heritage walks for seniors.

By the National Heritage Board (NHB)  
and Sage Counselling Centre

Try checking out a new park every month to keep the relationship fresh and exciting. This creates new memories too.



Sit them by a bright window in the morning if they cannot leave home. If there are no windows, try using light therapy lamps instead.

# I'M WALKING ON SUNSHINE



**These shoes are made for walking.**

Good shoes walk a long way. Ensure that these are comfortable, durable and have a good grip to prevent falls.

**Walking shoes** From Lazada.

# Dawn to dusk

Where possible, match the interior spaces to outdoor light conditions. For dim spaces, use artificial lights to mimic outdoor brightness — brighter lights at mid-day, warm lights at sunset, and soft lights in the evening.

## NATURAL LIGHT

7 AM

10 AM

1 PM

3 PM

## ARTIFICIAL LIGHT

- 01 ÖSTANÄ wall lamp** Additional wall lightings help to brighten up the house, making it visually accessible.
- 02 NOT floor lamp** Avoid sundowning by having floor lamps in dark corners.
- 03 NYFORS table lamp** Wind down and relax with a soft, warm night lamp.

← Lampshades provide soft ambient lighting, creating a visually relaxing environment. This helps with winding down for bedtime.

9 PM

7 PM



### 01 Maintain even and soft lighting in the evening.

Mimic the evening sun with warm lights that are visually relaxing. This prepares everyone for bedtime.

**TRÅDFRI dimming kit** FROM IKEA.



### 02 Set timers for lights.

Timers help to ensure that rooms will never be dark, even after the sun sets.



### 03 Install motion sensors for night wandering.

When care recipients wander into dark rooms, motion sensors can turn lights on to create a safe, illuminated space.

**TRÅDFRI motion sensor** FROM IKEA.



## Are you afraid of the dark?

At dusk, waning light and increasing shadows can cause confusion and anxiety. This condition is known as "sundowning" or "late-day confusion", which can trigger fear and aggression. We suggest ways to mitigate its worst effects.

### 04 Curtains or blinds to diffuse shadows.

Shadows can be long and dark at sunset. Use curtains or blinds to diffuse the shadows. Be sure to turn on the indoor lights at the same time.



### 05 Hold the person's hand or sit close by.

Comfort them with soothing voices. Give them the assurance of touch by holding their hands.



### 06 Play soothing music.

Let them relax to their favourite tunes. Familiar music can calm them and reduce agitation.

**ENEBY bluetooth speaker** FROM IKEA.





Avoid having a television in the bedroom as it may be overly stimulating. Instead, enjoy the view outside the window before turning in.



If the lamps are motion-activated, ensure that they turn on gradually so as to not shock and scare with sudden illumination.

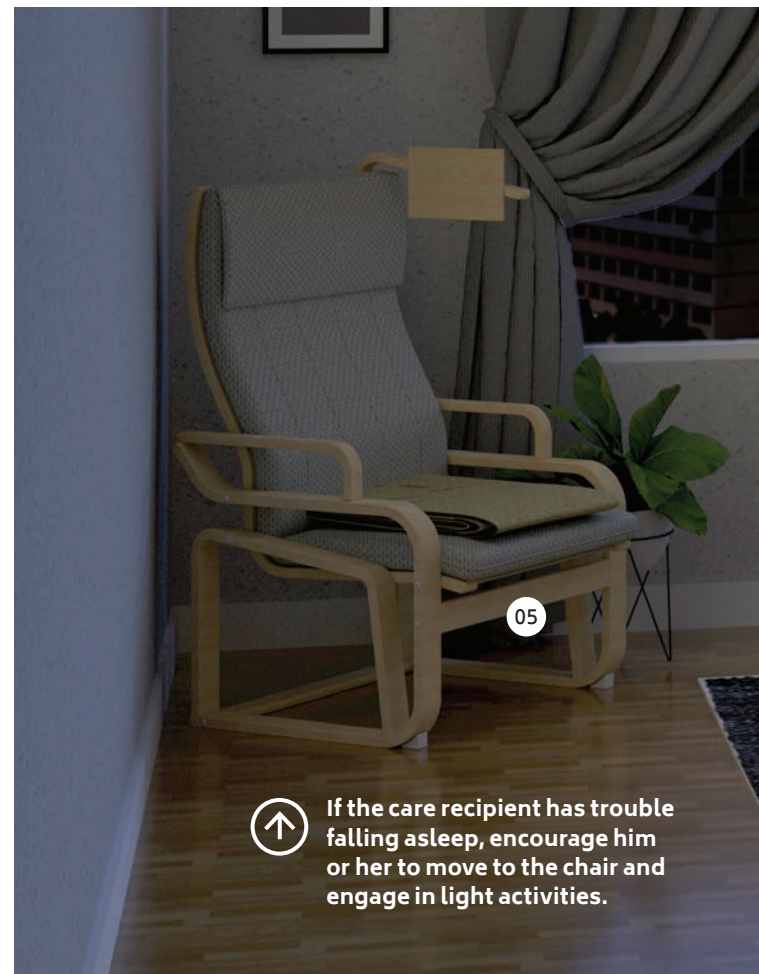
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05



If the care recipient has trouble falling asleep, encourage him or her to move to the chair and engage in light activities.



## No more counting sheep to sleep

The bedroom environment influences sleep quality. Avoid clutter and keep the space free of distractions like the television. An armchair for them to rest before bedtime reserves the bed just for sleep — this reinforces the association between them. A cooler temperature encourages deeper slumber.

**01 TRÅDFRI motion sensor** Motion-activated night lamps make the environment safer, even when the carer is not present.

**02 Table clock** Simple bedside clocks are helpful for telling the time.

**03 RIBBA photo frame** Personalise the bedroom with photographs and familiar items, but be sure to keep the space tidy and free of clutter.

**04 TERESIA curtains** Use curtains to diffuse long and harsh morning or evening shadows. This minimises confusion triggered by changing sunlight.

**05 HACKED POÄNG arm chair** The armchair is useful place to rest, especially when it is not yet time for bed. Use the bed only for sleeping.



# Build a better bedtime

A good night's sleep elevates mood and improves mental ability. Here are some tips to fall asleep quickly and slumber deeply.



## 01 Wear comfy pajamas to bed.

Changing into sleepwear is a way to prepare for bedtime. It signals the body to relax and unwind.

**Soft Stretch Pajamas** FROM UNIQLO.

02

## Stick to a consistent sleep-wake schedule.

Go to bed and wake up at a fixed time each day. This helps to reinforce the body clock.

**TRÅDFRI smart light system** FROM IKEA.



03

## No physical activities past 5pm.

Limit physical exercises to daytime. Avoid strenuous activity in the 2 to 3 hours before bedtime. This helps to prepare the body for rest.



04

## Unwind slowly before bedtime.

Take time to relax before bedtime. A relaxing shower or bath could help to ease the body into slumber.

**ROCKÅN bath robe** FROM IKEA.



05

## No naps past 3pm.

Avoid taking naps late in the afternoon. Doing so makes it harder to fall asleep later in the evening.



# FANCY A NIGHTCAP?



Eating and drinking habits can affect sleep quality. Here are some suggestions for a good night's rest:

1. Avoid late dinners. They come too close to bedtime and interfere with sleep.
2. Always opt for a light dinner over a heavy meal. It makes digestion easier.
3. Consume less carbohydrates and sugar after 5pm.
4. Avoid caffeine or alcohol.
5. Replace your nightcap with a glass of milk. It contains melatonin, which encourages deeper sleep.
6. Drink teas like chamomile or lavender. They soothe the nerves.





## Tell time with scents

It is easy for persons with dementia to lose track of time. Scents and aromas are a sensory way to acquaint one with the time of the day — they can even elevate moods. How about a whiff of freshly brewed coffee to perk up their mornings, or a savoury aroma to coax a hearty appetite? In the evening, try some soothing essential oils to create a relaxed environment before bedtime.



## SMELL YOU LATER

**Olfactory stimulation as cognitive stimuli.**  
Diffuse their favourite scent around the room to trigger joy and delight.  
**Aroma diffuser** From various lifestyle shops.



# HOUSE OF HUES

The colour of our surroundings can affect our mood. Colour your world accordingly. Rather than painting the walls, hack your lamps by colouring the lampshades. Changing the atmosphere of the room, and your mood – it's that easy!



Get creative with lampshades. Use coloured cellophane to change the light colour. It's also reminiscent of their good ol' disco days.