



## HealWell - A new lighting solution for patient rooms

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Enhancing the healing environment in hospitals,  
using the natural power of light

**PHILIPS**

# The natural power of light

Light has an amazing effect on people. Used effectively in healthcare facilities, it can enhance the healing environment and play a key role in promoting the well-being of patients and staff.



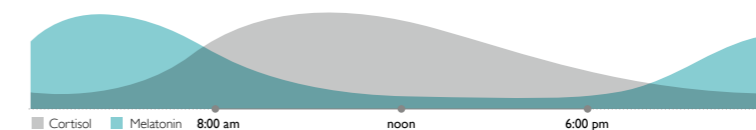
As humans, light influences our health and well-being much more than we realise. Independent research has shown that there is a clear and positive relation between exposing patients to sufficient light during the day and their health and well-being.

The more time patients spend in daylight, or artificial light that mimics natural daylight, the better it is for them. In fact, light can improve patient satisfaction, comfort, mood and quality of sleep.

The effect of light on our biological clock is also important as it influences many aspects of our physical and emotional well-being. This biological clock is regulated by light and darkness, by the daily cycles of night and day and the time we spend asleep and awake.

In the morning, when the sun comes up and light levels increase, we wake up and become active and alert. In the evening, when the sun goes down, we unwind, relax and prepare for sleep. Our body's hormone levels rise and fall with these light cycles. Cortisol production increases with morning light and decreases throughout the course of the day. Melatonin levels increase as darkness sets in and decrease as morning approaches.

In our modern society, we spend much of our time indoors - at home, in a school, office, shop or hospital. Those who have to stay indoors for significant parts of their time, like hospital patients, can be particularly at risk of getting insufficient light during the day to set their biological clock properly.



## Night

Have a good night sleep

- Lowest light levels
- Undisturbed sleep

## Dawn

A good start in the morning

- Cool increasing light levels
- Raise the energy level

## Day

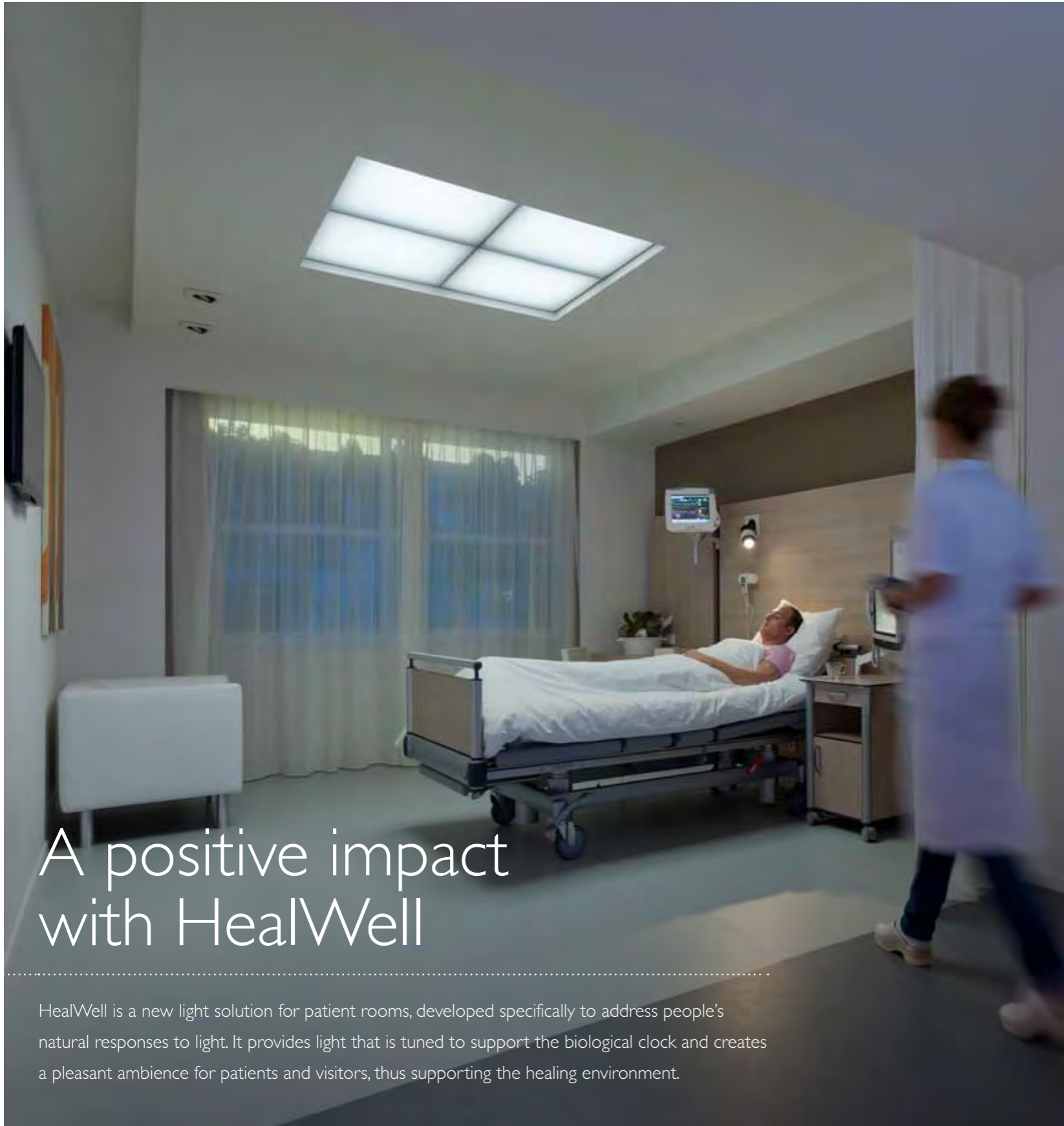
Have a break and refresh

- Cool to warm light decreased light levels

## Dusk

Relax and unwind

- Warm light, decreased light levels
- Start melatonin production



# A positive impact with HealWell

HealWell is a new light solution for patient rooms, developed specifically to address people's natural responses to light. It provides light that is tuned to support the biological clock and creates a pleasant ambience for patients and visitors, thus supporting the healing environment.

In the past, scientific research has proven that light can improve parameters like sleep, mood, depression and length of stay in a hospital environment.

As part of the Philips Lighting initiative to develop and validate the HealWell lighting solution for patient rooms,

a field study was carried out at the Maastricht University Medical Centre (MUMC) in the Netherlands. This study was performed in co-operation with the Clinical Trial Centre Maastricht and Maastricht University as research partners.



Rooms at Cardiology Dept, Maastricht UMC, the Netherlands (during the field study)

The study took place at the cardiology department of MUMC, where various outcome parameters of patients were monitored during their stay in hospital. In the study, the results of patients in control rooms (with existing lighting) were compared with those of patients in intervention rooms (with HealWell lighting).

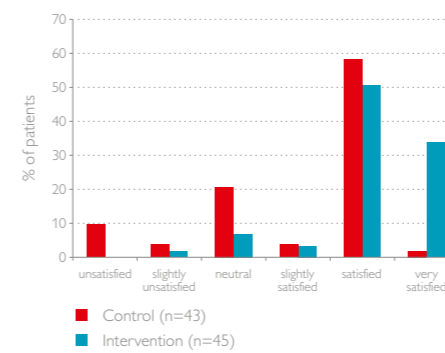
The results were striking:

HealWell was shown to have beneficial effects for patients and staff, thus confirming the positive impact that light can have, as shown in previous studies.

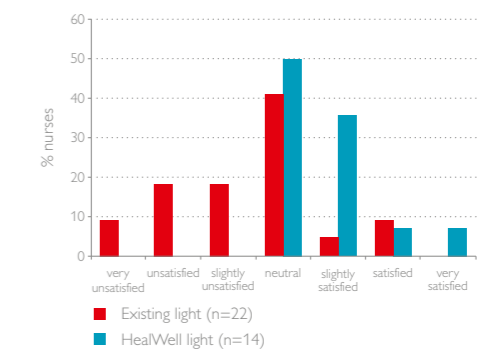
The HealWell lighting solution resulted in:

- Improved patient and staff satisfaction
- Longer sleep duration for patients
- Shorter time to fall asleep for patients
- Enhanced mood of patients, as derived from the HADS (Hospital Anxiety and Depression Scale) depression scores

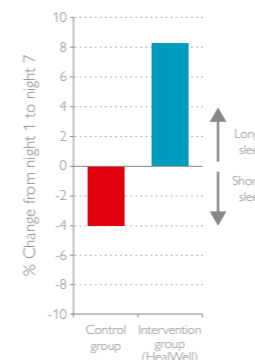
### Increased patient satisfaction



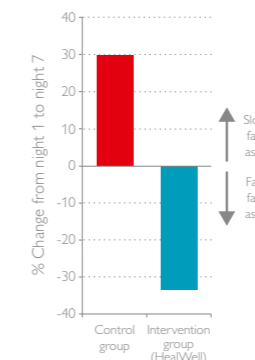
### Increased medical staff satisfaction



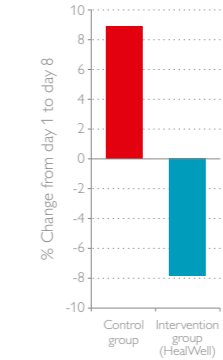
### Longer sleeping time



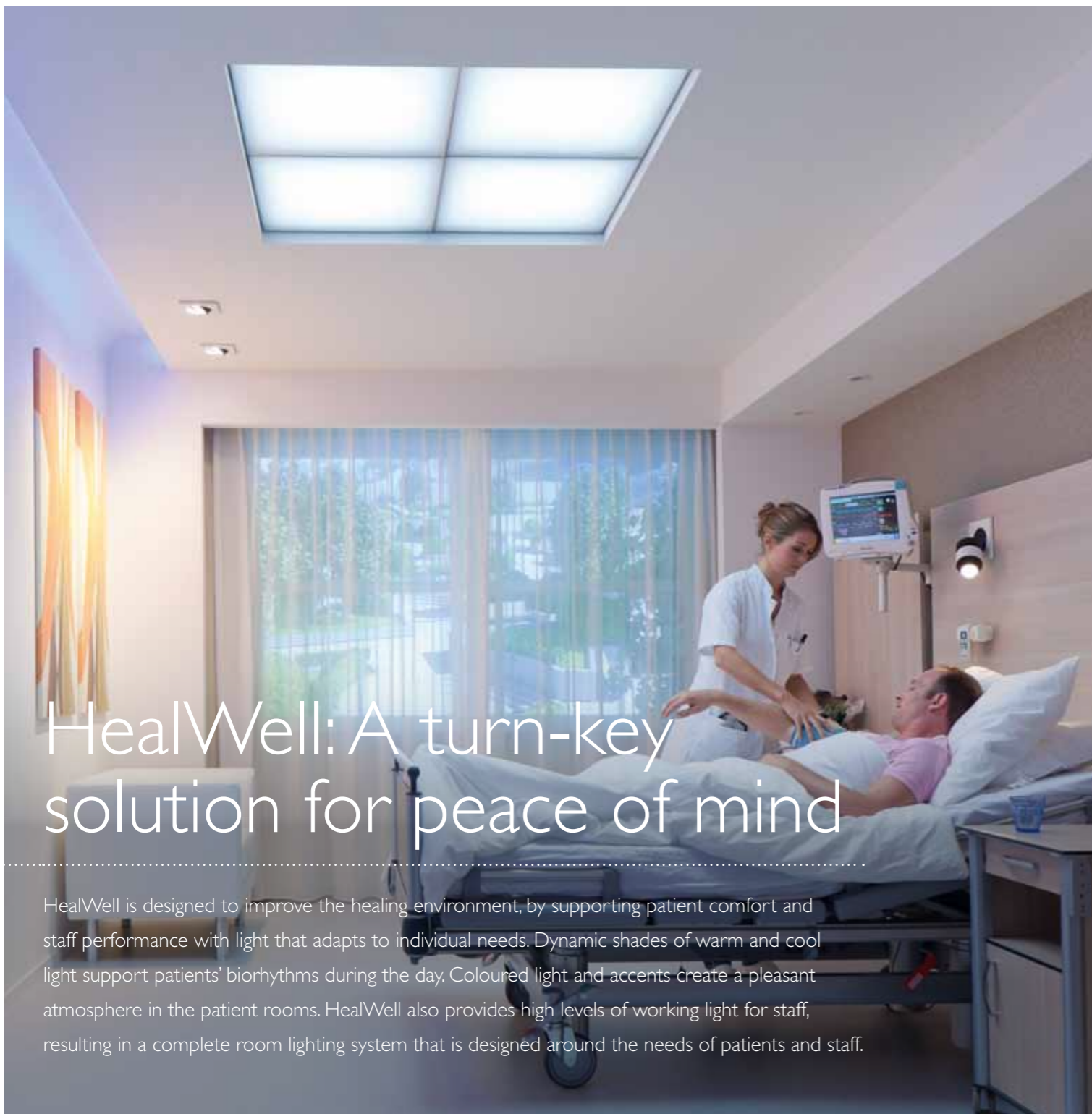
### Faster falling asleep



### Enhanced Mood: Decreased HADS depression scores



Results based on publication of first analysis: Gimenez et al., Annual Proceedings of the NSWO Volume 22, 2011, p. 56-59



# HealWell: A turn-key solution for peace of mind

HealWell is designed to improve the healing environment, by supporting patient comfort and staff performance with light that adapts to individual needs. Dynamic shades of warm and cool light support patients' biorhythms during the day. Coloured light and accents create a pleasant atmosphere in the patient rooms. HealWell also provides high levels of working light for staff, resulting in a complete room lighting system that is designed around the needs of patients and staff.

HealWell uses an intelligent networked control system. It automatically manages a rhythm of dynamic daylight as well as allowing patients and staff to control settings individually.

The total lighting system can be implemented in your hospital as a turnkey solution. Philips will provide a complete service on project management, lighting design, installation and training for staff. The resulting HealWell experience will create a unique and differentiating healing environment in your hospital.

At Philips we take people's needs as the starting point for new lighting solutions. We focus on the health and well-being of patients as well as staff, and we understand the business challenges that hospital management face.

By combining state-of-the-art technology, scientific knowledge and end-user insights, we can transform the experience for everyone in your hospital by having a positive impact on the healing environment.

## The HealWell solution features defined pre-sets and includes:

### Ambient light



#### Atmospheric light

- LED based coloured light line in cove opposite to bed

#### Accent light

- LED spots in ceiling to shine on wall opposite to bed

### Dynamic-natural / examination light



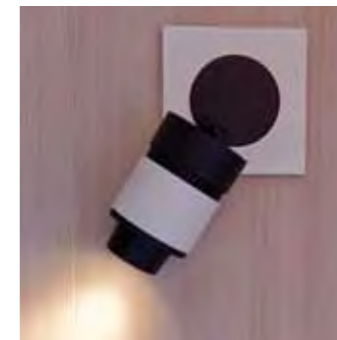
#### Dynamic light modules

- Like natural daylight ceiling modules provide daylight rhythm, with varying light levels and warmer or cooler light according to the time of day

#### Intelligent light

- Daylight rhythm (special protected lighting curve)
- Central control over all lighting
- Working light for examinations and emergencies

### Reading & orientation light



#### Personal reading light

- LED spot, providing dimmable reading light per bed

#### Orientation light

- Dimmed soft light line in the cove along the wall at night

### Empowerment of patient & staff



#### Patient remote control

- Choice of atmosphere light (coloured cove and spots)

#### Staff working light control

- Wall mounted control per bed for examination/emergency light

#### Full room control for staff

- Daylight curve
- Working light
- Orientation light



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