

NatureConnect

by  Signify

The Role of NatureConnect to Enhance Hospital Workspaces

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The Challenge

Hospitals are closed spaces that require high-quality lighting to support medical procedures and promote a healing environment. Proper lighting is essential for visibility, reducing errors, and enhancing both the comfort and well-being of patients and healthcare staff. Due to the nature of the building, hospitals have a lot of workspaces without windows.



Daylight plays a crucial role in enhancing both physical and mental well-being. Exposure to natural light helps individuals feel more energetic and supports the body's natural circadian rhythm, which promotes staying active during the day and improving sleep quality at night. Additionally, daylight has been shown to boost creativity and contribute to more vibrant, joyful atmospheres, stimulating positive emotions.

These benefits are well-documented in various studies, including those by Steven MacGregor in his Chief Wellbeing Officer (2018), the Snowball Effect of Healthy Offices report by CBRE (2017), and research by E. van Someren et al. published in *Biological Psychiatry* (1997). Another significant study conducted by L.J.M. Schlangen and B.M.I. van der Zande, detailed in *The Power of Healthy Daytime Lighting in Indoor Settings: Melanopic Lighting Advances and Office Applications* (2023), highlights the vital role of daylight in human health and well-being. The research shows that light significantly impacts various aspects of health, including sleep, mood, cognitive performance, and circadian rhythms. Light acts as a crucial signal for the brain's internal clock, influencing both visual and non-visual responses, such as hormone regulation and behavior. The study emphasizes that adequate retinal daytime exposure is essential for maintaining good vision, boosting vitality, reducing stress, improving mood, regulating sleep-wake cycles, and supporting overall daytime body functions.

The NatureConnect Advantage

NatureConnect is an innovative solution designed to simulate natural light cycles indoors, improving human well-being. Built on proven Biophilic Design principles, it reconnects people to the outside world, transforming indoor spaces into productive and inspiring environments. NatureConnect enhances staff performance by boosting alertness, reducing the feeling of missing daylight, and supporting overall well-being. Several studies support this.

Real-World Application: Catharina Hospital

A study is performed at Catharina hospital, located in Eindhoven, Netherlands. At Catharina hospital, two NatureConnect products are placed on the ceiling at the CT control room. In total, 21 control room personnel participants attended this study, where participants under two groups worked in 2 different rooms using under different lighting solutions. On a full day from 08.30-17.00 one room had standard lighting setup, while the other room had NatureConnect with the day rhythm feature turned on, which creates a circadian rhythm by automatically adjusting the brightness and colors throughout the day. Both rooms had no access to natural daylight and were only illuminated by the lighting solutions mentioned above. Both in the morning and the afternoon, participants filled in a questionnaire. Moreover, a one-time questionnaire on appreciation of the room/luminaire was conducted on the participants.



Figure 1. Room with standard lighting

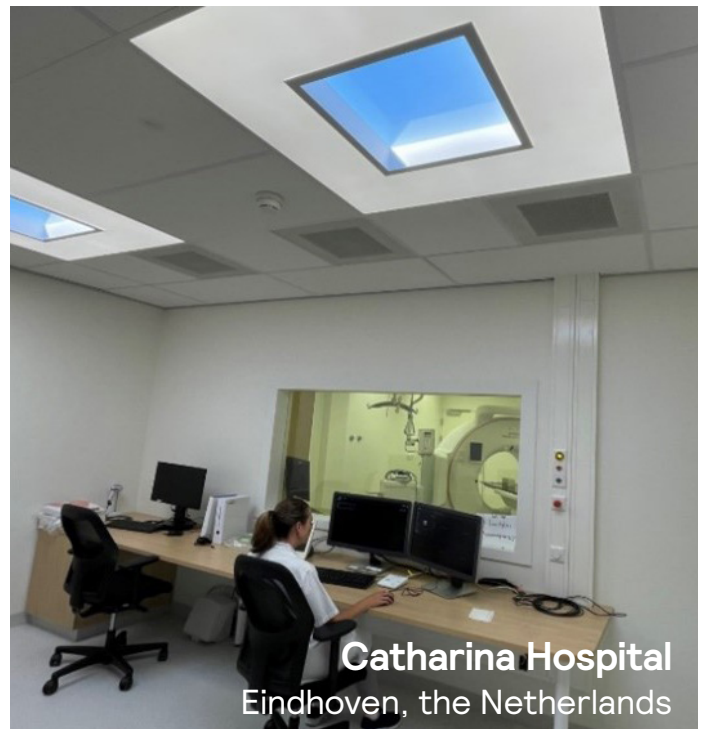


Figure 2. Room with NatureConnect

According to the study results, all participants found NatureConnect an effective substitute for daylight, outperforming the control condition. The average score of the NatureConnect room was 4.125 out of 5. For the control conditions room, the score was 2.64 out of 5.

Chart 1. Daylight Experience

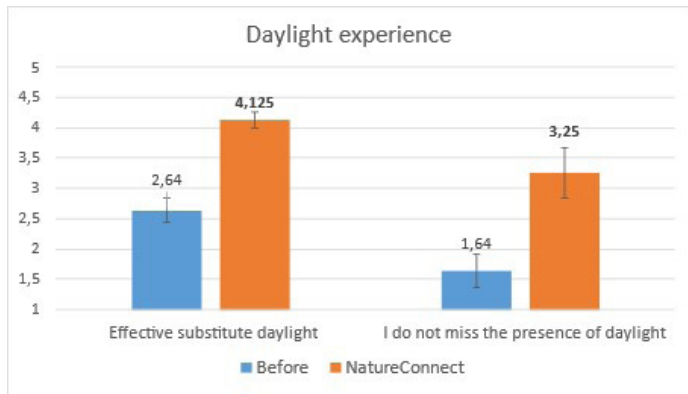
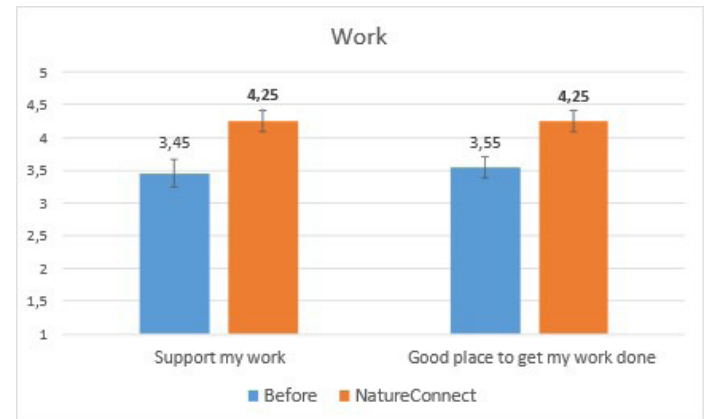
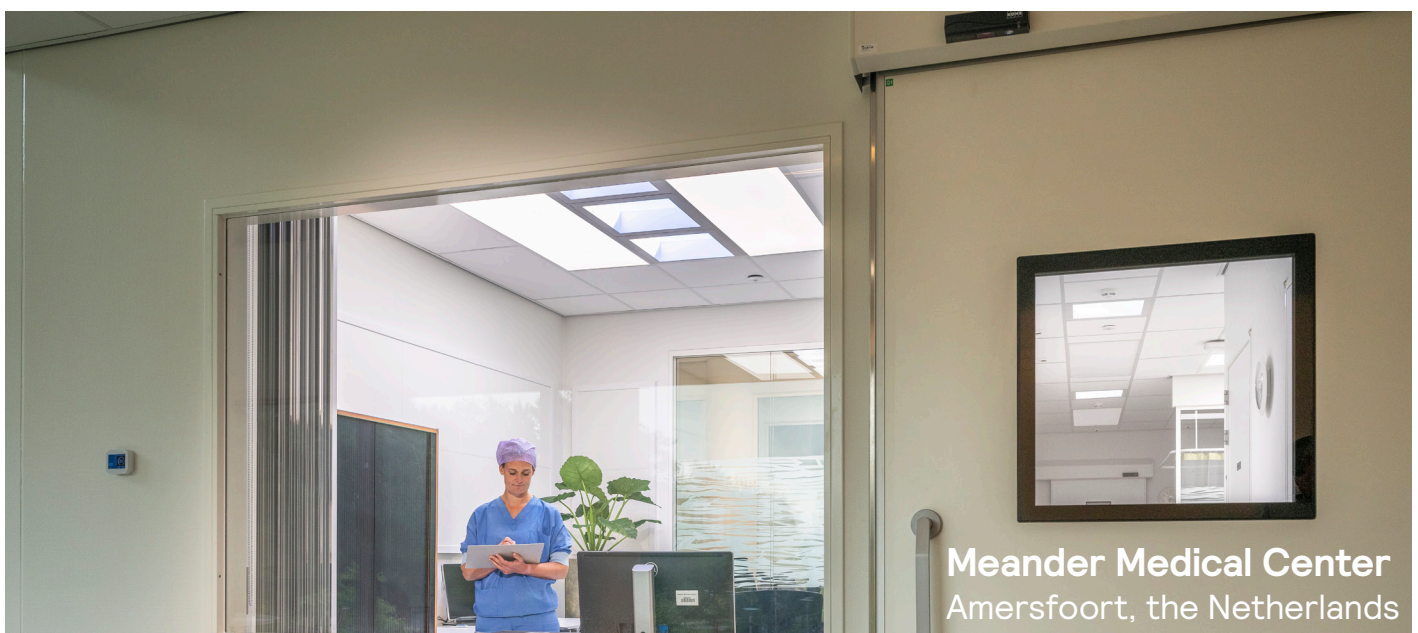


Chart 2. Workplace Evaluation



Another finding of the study was that NatureConnect participants reported missing the daylight less than the participants in the control condition. NatureConnect participants had an average score of 3.25 for not missing daylight, compared to a score of 1.64 among control group participants.

When evaluating both rooms based on the work being done, participants showed a preference for the room with NatureConnect, giving it a score of 4.25 compared to the control room's score of 3.55.



Testimonials and Feedbacks

The staff from Catharina hospital have enhanced experience with NatureConnect products. The staff who attended the study mentioned the negative impact of the lack of daylight during working hours in the alternative room. They also pointed out these with positive quotations related to the room with NatureConnect.

One staff member stated the satisfaction by saying “The lighting makes you feel awake: I also feel a bit happier, especially now that the weather outside is getting worse (dark and rainy) “. Another statement from another staff member supported this view, which was “It’s beautiful lighting, clear and keeps me awake without a headache”. Another quotation from a staff member was “It’s nice, sufficient light, my energy level goes up”.



Meander Medical Center
Amersfoort, the Netherlands

Real-World Application

The top clinical hospital Meander Medical Center Eye Clinic in the Netherlands chose NatureConnect as their lighting solution in their new clinic, as their departments lacked natural light. The clinic, with its busy outpatient environment and patients undergoing intensive treatments in short timeframes, required a solution that prioritized minimal stress and optimal performance for both patients and staff. NatureConnect provided the perfect solution by simulating natural daylight, enhancing well-being in the facility. The staff found it beneficial for the staff energy levels. A staff member described her experience, stating, “Sometimes I feel like the sun is shining and daylight is coming in. NatureConnect gives me energy all day long

Supporting Study Alertness and Vitality

Another study for NatureConnect, conducted by researchers at Signify, Samantha Peeters and Dzmitry Aliakseyeu (2020), examined the positive impact of NatureConnect on the alertness and vitality of office workers. In this study, participants were exposed to both NatureConnect lighting and standard office lighting. Results indicated that participants evaluated NatureConnect as more activating compared to standard office lighting. 90% of the study participants had a positive response, with 48% perceiving the skylight product as a window and 31% as the sun. Additionally, 52% of participants mentioned terms associated with increased alertness when exposed to NatureConnect Skylight (Peeters & Aliakseyeu, 2020).



Conclusion: NatureConnect Enhances Performance & Well-Being

NatureConnect's innovative lighting solutions are more than just a design feature—they are a game-changer for healthcare environments. By simulating natural light, NatureConnect enhances alertness, offers good substitute for lack of daylight, and improves overall well-being. The studies at Catharina Hospital and other research clearly demonstrate the positive impact of NatureConnect. As healthcare facilities continue to prioritize well-being and performance, NatureConnect offers a powerful, evidence-backed solution to foster a healthier, more productive workforce.



Bibliography

1. Peeters, S., & Aliakseyeu, D. (2020). The positive impact of NatureConnect on alertness and vitality of office workers. Signify.
2. Schlangen, L. J. M., & van der Zande, B. M. I. (2022). The power of healthy daytime lighting in indoor settings: Melanopic lighting advances and office applications. Signify Research.
3. MacGregor, S. (2018). Chief Wellbeing Officer: Change your company's wellbeing culture and create a happier, healthier workforce. Pearson.
4. CBRE. (2017). The snowball effect of healthy offices: How healthy workplaces drive business performance. CBRE.
5. Van Someren, E. J., Kessler, A., & Mirmiran, M. (1997). The biological clock and the regulation of sleep. *Biological Psychiatry*.



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