



BY



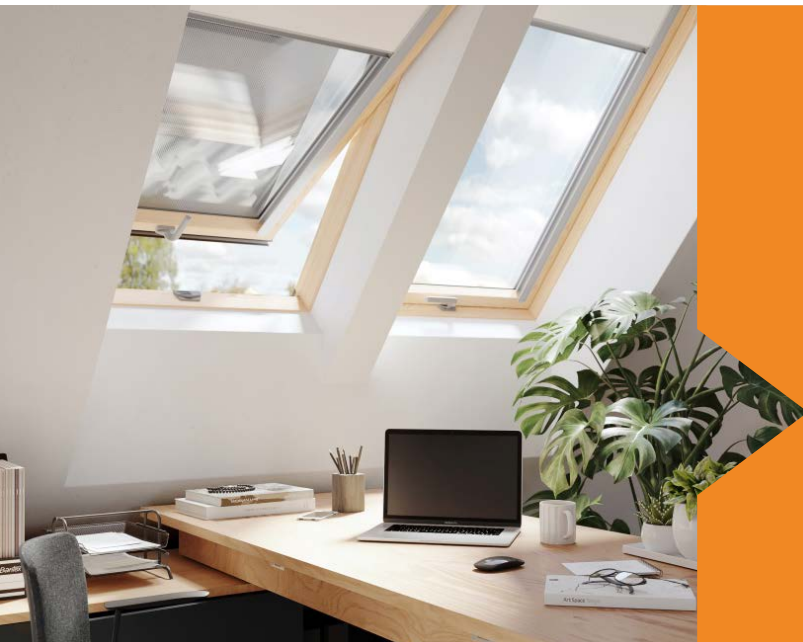
LOOK UP FOR HEALTHY INSPIRATION!

IT'S ON THE HOUSE
WITH DAKEA

LOOK UP FOR HEALTHY INSPIRATION!

A healthy environment has been defined by global health organisations as one that is safe, supportive of healthy lifestyles, and free of hazards*.

But such definitions fail to factor in the complexity of what it means for an environment to be perceived as 'healthy', factors such as the mental, not just physical, health effects on citizens.

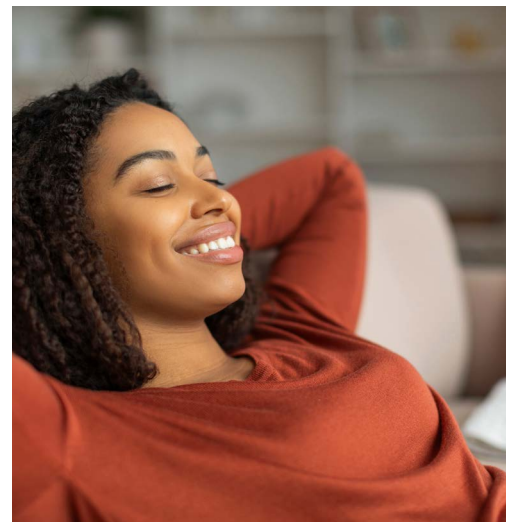


In researching this article, a few sources made reference to fresh air being both a physical and mental factor. And roof windows enable occupants to easily access this benefit. But while much mention was made of clean air, water, food, shelter and security, very little if any mention was made of natural light.

In fact, in their "Lighting in the Home and Health: A Systematic Review"⁹ by Oluwapelumi Osibona, Bethlehem D. Solomon, and Daniela Fecht, while the authors felt that "one key aspect of housing quality is lighting" they also admitted that "one of the less studied housing quality factors is lighting in the home".

Light impacts human health and performance by enabling performance of visual tasks, controlling the body's circadian system, affecting mood and perception, and by enabling critical physiological reactions in the body. So, any developer not building light into their project might soon realise this shortfall, especially when faced with a compensation claim for a fall or injury caused by inadequate light.

Studies show that higher light levels are linked with better performance of complex visual tasks, and light requirements increase with age. By controlling the body's circadian system, light impacts outcomes in for example, healthcare settings by reducing depression among patients, decreasing length of stay in hospitals, improving sleep and circadian rhythm, lessening agitation among dementia patients, easing pain, and improving adjustment to night-shift work among staff.



In schools, studies show a conclusive link between the provision of natural light and academic success – with one study** showing that students working in classrooms with higher levels of daylight achieve 7-18% higher test scores. Another – Clever Classrooms# – suggests that classroom design has a circa 25% impact, positive or negative, on students' academic progress.

The presence of windows in the workplace and access to daylight have been linked with increased satisfaction with the work environment. Further, exposure to light is critical for vitamin D metabolism in the human body. Light exposure also is used as a treatment for neonatal hyperbilirubinaemia (jaundice).



A combination of daylight and electric light can meet these needs in residential properties but natural light is delivered at no cost and in a form that most people prefer. And in these days of increasing use of attics and home extensions that cannot necessarily use vertical windows, roof windows have come into their own.

Open roof windows were used in ancient Roman architecture, such as the oculus of the Pantheon, and glazed 'closed' roof windows have been in use since the Industrial Revolution, when advances in glass manufacturing made them practical.

Now they are not only functional but full of form, and full of potential for developers looking to maximise their investments by converting attic space or building large kitchen/snug extensions onto properties.

Roof windows contribute to an occupant's healthy living environment by giving them access to natural light and clean, fresh air, all the while being sheltered and safe and secure. Roof windows probably being more secure than vertical ones due to their location in less accessible places.

Contemporary roof windows have a host of performance or functional criteria to meet in the areas of ventilation, UV and thermal efficiency (to also reduce a building's reliance on heating) and security, as well as resistance to noise, weather, humidity, and even dirt. Some even help to vent smoke in the event of a fire, and give a means to escape a fire or give access to the roof for other purposes, while others are specially designed to maximise views and privacy.

And after all that, they still manage to deliver form, with roof windows in various colours, styles and materials.

Developers need only look up for inspiration!

* Paul B. Tchounwou, Academic Editor, National Library of Medicine, August 2022

§ January 2021

** Daylighting Impacts on Human Performance in School. Lisa S Heschong, University of California, Santa Cruz. Journal of the Illuminating Engineering Society 31 (2) 2013.

Clever Classrooms. Professor Peter Barrett Dr Yufan Zhang, Dr Fay Davies, Dr Lucinda Barrett. (University of Salford). 2015.

KEY TAKE OUTS

One of the less studied housing quality factors is lighting in the home.

Developers not building light into their project could be faced with compensation claims for a fall or injury caused by inadequate light.

Natural light is delivered at no cost and in a form most people prefer.

Roof windows contribute to an occupant's healthy living environment and provides another option for natural light source.

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