

# BRIGHT LIVING

**Benefits of Daylight  
and Fresh Air**

Vol. 1 – Healthier Mind and Body

**VELUX®**

Skylights

# TABLE OF CONTENTS

- 6** VELUX Unlocks Your Home's Health Potential
- 8** Health Benefits of Daylight and Fresh Air
- 10** Better Sleep for your Entire Family
- 14** Reducing Anxiety and Depression Naturally
- 18** Recover from Illness Faster
- 22** Improving Focus & Grades
- 26** Daylighting Options to Improve Health and Focus
- 28** Skylight Planning Resources

## Let the Light Back In

Everyone knows daylight and fresh air are good for them. Yet, many of us live almost entirely indoors. Work happens in your office. Entertainment streams through personal devices. Exercise is even done inside a home gym.

Mainstream media and medical experts reinforce these indoor habits. We are regularly warned about the dangers of too much sun and outdoor air pollution. A recent study found that 38% of adults aged 18 to 60 can't fully relax in the sun and 41% worry about skin damage\*. Researchers have named this feeling "sunxiety."

We spend so much time protecting ourselves from the outdoors that our bodies are starved of essential daylight and fresh air. For many, this has resulted in disrupted sleep cycles, low energy levels, and poor mood regulation.

\*McAllister, Rachel. "Study Uncovers Growing 'Sunxiety' and Demand for Multi-Functional Sunscreen." Veylinx. June 2024.



# VELUX Unlocks Your Home's Health Potential

VELUX was founded on the mission to transform homes with daylight and fresh air. We offer powerful, practical options that optimize indoor spaces, promote healthy living, and reconnect you with nature.

VELUX Skylight Systems provide twice as much daylight as a traditional window. Exposure to this level of natural light helps align your family's circadian rhythms, which can improve sleep, mood, and healing. Each skylight is equipped with factory-installed, room-darkening shades to block excessive heat and glare.

Our venting skylights usher in fresh air, reducing indoor air pollutants that contribute to poor sleep and anxiety. The shades and vent are remotely operated, or they can be paired with VELUX Active as part of a smart home integration.



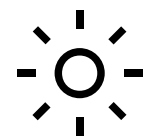
# Health Benefits of Daylight and Fresh Air

Today, science is catching up to what our ancestors knew intuitively. Several studies and surveys have been completed highlighting the effectiveness of daylight and fresh air. Many show how both promote deeper sleep, better mood, and improve recovery from illness.

Studies also show that there is an increase in negative outcomes when we don't get enough daylight and fresh air. Those who have not received enough are more susceptible to hypertension, cardiovascular disease, metabolic syndrome, asthma, type 1 diabetes, and myopia\*.



Healthier Indoor Air Quality



More Natural Light



Stronger Connection to Outdoors



Improved Cognitive Health

\*Alfredsson L et al. Insufficient Sun Exposure Has Become a Real Public Health Problem. Int J Environ Res Public Health. July 2020.



# Fact

When exposed to early morning sunlight, the body produces melatonin sooner and helps people to fall asleep more easily\*\*.

## More Daylight Means Better Sleep

Our circadian rhythms consist of a self-sustained 24-hour rhythm that relies heavily on daylight\*. Every morning, our eyes process the available light to signal the production of serotonin. The body uses serotonin to regulate hormones and energy. In the evening, serotonin switches to our natural production of melatonin. This eases your body into a relaxed state, increases the production of growth hormones, and rinses the brain of toxins.

This process is optimized when you are exposed to early morning sunlight. This gets your body to produce melatonin sooner at night and helps you to fall asleep more easily\*\*. In fact, exposure to high daylight levels can increase sleep at night by 46 minutes according to a case-control study conducted on office workers\*\*\*.

According to the Circadian House report, an appropriate light signal during the day and at night is critical in maintaining key aspects of our overall health\*\*\*\*. If your circadian rhythm is not properly regulated, it can lead to poor sleep and result in various negative outcomes, including impaired cognitive function, increased stress, depression, and cardiovascular diseases.

\*Hall J, Rosbash M, Young M. Discoveries of Molecular Mechanisms Controlling the Circadian Rhythm. Nobel Prize in Physiology or Medicine. 2017.

\*\*Fauteck, Dr. Jan-Kirk. The Magic of Melatonin. Skyhorse Publishing. 2017.

\*\*\*Boubekri M et al. Impact of windows and daylight exposure on overall health and sleep quality of office workers: a case-control pilot study. J Clin Sleep Med. June 2014.

\*\*\*\*Circadian House report/ Circadian House - Principles and Guidelines for Healthy Homes. VELUX report. 2013.

# Fresh Air Creates Better Sleep

Your nose cannot detect the most harmful indoor air pollutants. These include carbon dioxide, water vapor, radon gas, mold, fungi, pollen, dust mites, and volatile organic and inorganic chemicals. These can come from humans, building materials, and other outdoor sources\*.

These pollutants can irritate your airways, trigger respiratory issues, and even affect your brain's sleep patterns, leading to difficulty falling asleep and experiencing restful sleep. It is imperative to cycle the air in these spaces to minimize pollutants. A reduction in indoor air pollutants creates a better quality of sleep while making you less susceptible to respiratory diseases\*.



# Fact

A reduction in indoor air pollutants creates a better quality of sleep while making you less susceptible to respiratory diseases\*.

# Daylight Improves Mood

Anxiety and depression have been on the rise in America since 2007, especially in teens and young adults\*. Several factors can contribute to anxiety and depression, but there is no single source that can be pointed out as the cause. This has left parents and caregivers routinely asking what can be done to improve their family's mental health.

According to a global survey, 69% of people feel that more access to nature, daylight, and fresh air has a positive effect on their mental wellbeing\*\*. Multiple studies reaffirm this survey. One study interviewed 787 nurses who self-reported on daylight exposure, less than an hour a day in some cases, and mental health issues.

It was found that these nurses suffered from poor mental health linked to sleep regularity issues\*\*\*.

Another study analyzed data from 444 people from the US and India. This study found that direct daylight was found to reduce anxiety, while indirect daylight depressed the mood\*\*\*\*. When you bask in direct sunlight any time of day, it has been shown to release serotonin. These higher serotonin levels help regulate sleep and boost energy levels. Both of which can have an indirect effect on reducing anxiety.



# Fact

According to a Global Survey, 69% of people feel that more access to nature, daylight, and fresh air has a positive effect on their mental wellbeing\*\*.

\*Forrest CB et al. Trends in US Children's Mortality, Chronic Conditions, Obesity, Functional Status, and Symptoms. JAMA. Published online July 2025.

\*\*VELUX. New Global Survey Finds We're Lacking Fresh Air and Natural Light, as We Spend Less Time in Nature. VELUX America. June 2019.

\*\*\*Wang J et al. Association Between Sunlight Exposure and Mental Health: Evidence from a Special Population Without Sunlight in Work. Risk Manage Health Policy. June 14.

\*\*\*\*Mihyang An et al. Why We Need More Nature at Work: Effects of Natural Elements and Sunlight on Employee Mental Health and Work Attitudes. PLOS One. May 2016.

# Fact

Research done by the University of Essex found that mood and self-esteem are elevated by fresh air\*\*.

## Fresh Air Boosts Mood Higher

According to the EPA, the air inside your home is 2 to 5 times more polluted than the air outside. This kind of poor indoor air quality also leads to disrupted sleep, a leading cause of anxiety and depression issues. Studies have shown that an increase in indoor pollutants can exacerbate conditions such as major depression and bipolar disorder\*. Flushing these toxins out of the air helps to reduce negative effects.

Fresh air also increases the amount of oxygen available. This increase allows more oxygen into the brain, which increases serotonin production.

Research done by the University of Essex found that mood and self-esteem are elevated by fresh air\*\*.

Refreshing the air in a house requires as little as two 20-minute periods of open skylights and windows, depending on the building. This creates a stack effect that reduces pollutants in your home's interior air environment\*\*\*. Venting skylights were found to dilute contaminant concentration to normal levels in 3 hours compared to 1.75 days for a home without skylight ventilation\*\*\*.

\*Torres G, Subbaiah R, Sood R, Leheste J. From air to mind: unraveling the impact of indoor pollutants on psychiatric disorders. *Psychiatry*. Jan. 2025.

\*\*Gladwell VF, Brown DK, Wood C, Sandercock GR, Barton JL. The great outdoors: how a green exercise environment can benefit all. *Extrem Physiol Med*. Jan. 2013.

\*\*\*VELUX AMERICA COMMISSIONED STUDY SHOWS SKYLIGHTS CONTRIBUTE TO HOME ENERGY SAVINGS. VELUX America. Press release. May 2016.

# Daylight Reduces Recovery Time

Making a complete recovery can be very lengthy. Without daylight and fresh air, it can take you even longer. This is due to disruptions in your circadian rhythm. This leads to difficulty falling asleep at night, which is vital for recovery, and fatigue during the day.

Negative psychological and physiological effects can be felt during recovery under electric light with no windows. Feelings of isolation, claustrophobia, and decreased sense of well-being have all been noted. As a result, higher levels of stress, depression, and anxiety can develop. You can recover from an illness or surgery under artificial light, but it can take much longer than is needed\*\*\*\*.

One study has indicated that patients in sunlit rooms have a 16%-41% shorter

stay than those in dimly lit rooms\*. Another study found that gall-bladder surgery patients with landscaped views had fewer negative evaluations from nurses, took less pain medication, and had fewer minor post-surgical complications\*\*. A third study found that patients on the sunnier side of a cardiac intensive care ward showed lower mortality rates than those on the less sunny side\*\*\*.

Findings like these prompted the German government to ban all cool-white fluorescent lighting in hospitals. The U.S. requires a window in any room where a patient will stay for more than 23 hours. Some U.S. hospitals require a window in every room with a bed\*\*\*\*.

\*Safaa alzubaidi et al. Survey of Hospitals Lighting: Daylight and Staff Preferences. International Journal of Energy Engineering 2013.

\*\*Pierson, J. "If Sun Shines In, Workers Work Better, Buyers Buy More." The Wall Street Journal. Nov. 1995.

\*\*\*Beauchemin KM, Hays P. Dying in the dark: sunshine, gender and outcomes in myocardial infarction. J R Soc Med. July 1998.

\*\*\*\*Edwards L, Torcellini P. A Literature of the Effects of Natural Light on Building Occupants. National Renewable Energy Laboratory. July 2002.



# Fact

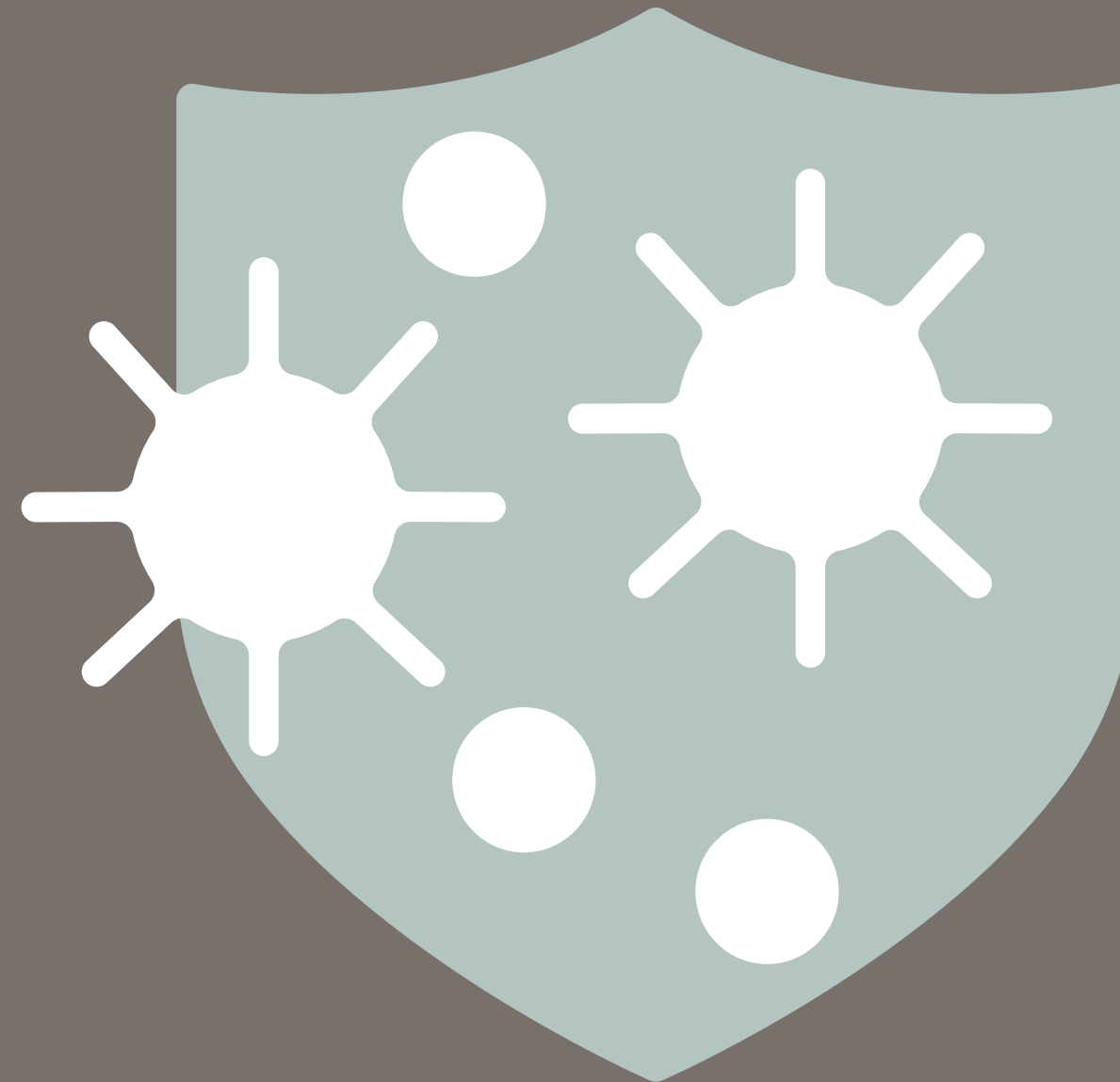
One study indicated that patients in sunlit rooms have a 16%-41% shorter stay than those in dimly lit rooms\*.

# Fresh Air Boosts the Immune System

High indoor humidity is one of the leading causes of occupant sickness. According to British Standards, the activities of a family of four typically add ten liters of water to the indoor air – per day\*. Besides what naturally occurs, human activity, such as cleaning, cooking, and bathing, adds moisture to indoor air\*.

This moisture attracts insects and increases the number of dust mites. Buildings with an increased humidity are labeled as having Sick Building Syndrome (SBS). Occupants of a sick building have reported symptoms including headaches, dry cough, itchy skin, fatigue, and irritation of the eye, nose, or throat. A review of air-conditioned office buildings showed there is a 30%-200% prevalence of SBS over naturally ventilated buildings\*\*.

When nothing is done to mitigate high humidity issues, immune systems can be compromised. Long-term health issues like allergies and asthma can develop or get worse. Opening your windows and skylights for 20-minute sessions twice a day reduces humidity. Fresh air further boosts immune functions by detoxifying your lungs and reducing exposure to indoor pollutants.



## Fact

According to British Standards, the activities of a family of four typically add ten liters of water to the indoor air – per day\*.

\*BS ISO 16000-40:2019+A1:2024. Indoor air – Indoor air quality management system. Mar. 2024.

\*\*Seppanen O, Fisk W.J. Relationships of SBS-symptoms and ventilation system type in office buildings. Lawrence Berkeley National Laboratory. Mar. 2002.

# Daylight and Fresh Air Enhance Focus

Electric light and a lack of natural light have been shown to affect work productivity. One study examined the health of office workers based on subjective well-being, sleep quality, and light exposure. Workers in a windowless environment reported poorer overall well-being scores, attributed to physical problems and reduced vitality\*\*.

Research by Cornell University found that office employees exposed to natural light experienced 51% less eyestrain, 63% less headaches, and 56% less drowsiness\*\*\*. Several studies have shown there can be up to a 15% increase in productivity when buildings are lit by natural light\*.

Access to fresh air also helps boost productivity. Investigations on the mental performance of occupants in office buildings have shown that poor air quality reduces mental performance, while good air quality improves it. Cognitive scores were 61% higher in a vented building compared to an unventilated office and 101% higher in a building with doubled ventilation efforts\*\*\*\*.



# Fact

Several studies have shown there can be up to a 15% increase in productivity when buildings are lit by natural light\*.

\*Edwards L, Torcellini P. A Literature of the Effects of Natural Light on Building Occupants. National Renewable Energy Laboratory. July 2002.

\*\*Boubekri M et al. Impact of windows and daylight exposure on overall health and sleep quality of office workers: a case-control pilot study. J Clin Sleep Med. June 2014.

\*\*\*Hedge A, Nou D. Worker Reactions to Electrochromic and Low e Glass Office Windows. Cornell University. Medwin Publishers. July 2018.

\*\*\*\*Allen J et al. Associations of Cognitive Function Scores with Carbon Dioxide, Ventilation, and Volatile Organic Compound Exposures in Office Workers: A Controlled Exposure Study of Green and Conventional Office Environments. Environmental Health Perspectives. Oct. 2015.



# Fact

Studies show Students regularly exposed to daylight during school had an increase of 7%-18% on standardized tests\*.

## Improving Academic Performance

In Johnson County, California, A new Four Oaks Elementary school was built with a focus on increased daylight. During reconstruction, Johnson County's test score average increased by 7%. After completion, Four Oaks Elementary tested 9% above this new average\*\*. Other studies show that students regularly exposed to daylight during school had an increase of 7%-18% on standardized tests\*.

While daylight can improve academic performance, teachers need control over the windows and shades for it to be truly effective. In fact, classrooms that diffused the light and allowed teachers to control the amount of daylight improved 19% - 20% faster\*\*.

Increased ventilation can improve the academic performance of your family further. A Harvard study confirmed this link between students and indoor air quality. It concluded that an increased ventilation rate would improve school performance\*\*\*. Other studies on the occupants in office buildings and schools have shown that poor air quality reduces mental performance\*.

\*Heschong L. Daylighting and Human Performance. ASHRAE Journal. June 2002.

\*\*Edwards L, Torcellini P. A Literature of the Effects of Natural Light on Building Occupants. National Renewable Energy Laboratory. July 2002

\*\*\*Dedesko S et al. Associations between indoor air exposures and cognitive test scores among university students in classrooms with increased ventilation rates for COVID-19 risk management. Journal of Exposure Science & Environmental Epidemiology. Apr. 2025.

# Daylighting Options to Improve Health & Focus

## Solar-Powered Fresh Air Skylight System

The VELUX Solar-Powered Fresh Air Skylight is a powerful daylighting and ventilation solution. The small solar panel continuously charges a hidden battery. This innovative skylight comes with a pre-paired remote to operate the vent and the shade.



## The VELUX Sun Tunnel with Solar Night Light

VELUX Sun Tunnels, also known as light tubes, are an efficient and cost-effective way to channel daylight into any room. Available as a light-capturing dome or flat glass on the roof, they connect to a highly reflective tunnel to direct the daylight.



## Manual Skylight Fresh Air Skylight System

Embrace the best of nature with the VELUX Manual Fresh Air Skylight System. This skylight is equipped with a solar-powered skylight shade for total daylight control. A handle comes standard for skylights within reach, and an extendable rod is available for those out of reach.



## Fixed Skylight with Room Darkening Solar Shade

The VELUX Fixed Skylight is perfect for filling any room with abundant daylight while maintaining total control over light levels. This energy-efficient, eco-friendly home upgrade comes with a factory-installed room-darkening solar-powered shade controlled by a remote.



# Skylight Planning Resources

## Expert Guidance

Our Design & Product Advisors are available for virtual consultations or by phone. They provide skylight advice and design assistance, including best placement for a skylight and how to maximize natural light. Each consultation lasts approximately thirty minutes. We also recommend a local installer in your area to complete your skylight project.



## Find an installer

Some homeowners are already committed to bringing more daylight and fresh air into their homes. VELUX can recommend certified installers in just about every area of the country. These professionals have received in-depth instruction on how to properly install skylights and sun tunnels, ensuring each one is weathertight.

Transforming spaces since 1941. For over 80 years, VELUX has helped people envision and achieve the transformation of spaces using daylight and fresh air through the roof. Our product program includes skylights, Sun Tunnel® skylights, decorative shades and roof windows, as well as installation and smart home solutions. By creating brighter, healthier, more sustainable places to live, work, learn, and play we enable a better everyday life for people around the world.

We work globally with sales and manufacturing operations in more than 40 countries and around 11,500 employees worldwide. The VELUX Group is owned by VKR Holding A/S, a limited company wholly owned by non-profit, charitable foundations (THE VELUX FOUNDATIONS) and family.

For more information, visit [veluxusa.com](https://veluxusa.com).

VELUX America LLC  
215 Puckett Ferry Road  
PO Box 5001  
Greenwood, SC 29648-5001  
Tel. 1-800-888-3589

[veluxusa.com](https://veluxusa.com)