

Solatube International

Daylighting Facts & Figures

Health & Safety

Patients with access to sunlight require 20% less pain medication

A 2004 University of Pittsburgh study showed that patients with access to sunlight required 20% less pain medication, leading to lower medical costs.

Katz, A. (2011, July). Healthy and green with LEED For healthcare. *FacilitiesNet*. Retrieved from <http://www.facilitiesnet.com/green/article/Healthy-And-Green-With-LEED-For-Healthcare-Facilities-Management-BOM-Feature--12542>

Blood pressure in nurses reduced, moods improved with access to daylight, resulting in improved patient care

For the health and happiness of nurses – and for the best care of hospital patients – new Cornell research suggests exposure to natural light may be the best medicine. In a forthcoming Cornell study published in the journal *Health Environments Research and Design*, Rana Zadeh, assistant professor of design and environmental analysis, discovered nurses who had access to natural light enjoyed significantly lower blood pressure, communicated more often with their colleagues, laughed more and served their patients in better moods than nurses who settled for large doses of artificial light.

Maximizing access to natural daylight and providing quality lighting design in nursing areas may be an opportunity to improve safety through environmental design and enable staff to manage sleepiness, work in a better mood and stay alert, according to Zadeh.

(2014). Daylight is the best medicine, for nurses. *Cornell University*. Retrieved from <http://mediarelations.cornell.edu/2014/08/04/daylight-is-the-best-medicine-for-nurses>

Daylight provides physical and mental benefits

Physical Benefits of Sun Exposure:

- Boost the immune system: Vitamin D is essential to the immune system, and can help boost your immune system so that you can fight off disease more effectively.
- Lower cholesterol: One of the ways you can help lower your cholesterol naturally is to enjoy some sensible sun exposure.
- Lower resting pulse rate of the heart: Studies suggest that sunlight can help lower your pulse rate, improving cardiovascular health.
- Add resistance power to skin: While too much sun can be damaging to the skin, moderate exposure can actually be helpful to the skin. It can actually help your skin build up resistance to eczema, acne and psoriasis.
- Increase metabolism: Sensible sun exposure can help boost your metabolism, increasing the rate at which you burn calories. This can be a great thing, helping you lose weight and stay in shape.

- Better liver function: The nutrients that come as a result of sun exposure can help enhance your liver's function.
- Improve digestion: If you are interested in improving your digestion, you can increase your sun exposure to a moderate amount.
- Enhanced kidney function: Sun exposure, thanks to Vitamin D, offers help when it comes to kidney function. Kidneys remove waste from the body, so getting proper sun exposure can help decrease the toxicity in your bloodstream.
- Stronger skeleton: As the Vitamin D produced from sun exposure is absorbed, it can help strengthen bones in the skeleton. You'll have less brittle bones, and a better posture.

Mental Health Benefits of Sun Exposure:

- Reduce stress: You can reduce your stress level with the help of proper exposure to sunlight. Taking some time to enjoy the sun can help you sleep better as you decrease your stress level.
- Reduce anxiety: If you are feeling anxious, sensible sun exposure on a regular basis can help soothe you. Sunlight is one of the natural remedies to anxiety.
- Fight depression: There is evidence that sunlight is a natural way to improve your mood. If you suffer from depression, adding a little moderate sun exposure might help you combat the symptoms.
- Fight Seasonal Affective Disorder (SAD): If you suffer from SAD during the winter, you can combat the feelings with the help of natural light. Look for ways to introduce more sunlight into your environment, with the help of open windows.

(2010, July). Feeling Sunny? 25 Health Benefits of Sensible Sun Exposure. *E-Health News Blog*. Retrieved from <http://onlineradiologytechnicianschools.com/2010/feeling-sunny-25-health-benefits-of-sensible-sun-exposure>

Healing in hospital settings aided by daylighting

A patient room providing good outdoor views and daylighting can increase patient well-being: a psychological state resulting in reduced stress and anxiety, lower blood pressure, improved post-operative recovery, reduced need for pain medication and shorter hospital stays.

Brown, G.Z.; Kline, J.; Livingston, G.; McDonald, B.; Smith, C.; Wilkerson, M.; Brickman, J.; Staczek, D. (2005). Daylighting Patient Rooms in Northwest Hospitals. *Energy Studies in Buildings Laboratory, Department of Architecture, University of Oregon and Zimmer Gunsul Frasca Architects LLP*. Retrieved from http://www.betterbricks.com/graphics/assets/documents/Daylighting_Patient_Rooms_brochure_final.pdf

Daylighting delivers health benefits, including stress reduction

Daylighting the interior space of buildings is an important consideration for architectural design. Studies have shown that increased daylighting improves worker productivity, provides for faster patient recovery, and improves students' grades. Additional benefits of daylighting include keeping our biological clocks in order and relieving stress. These benefits have long been recognized in Europe, where minimum amounts of daylighting and an opportunity to enjoy an exterior view are regulated.

(2005, January). The Facts About Windows & Daylighting. *National Fenestration Rating Council*. Retrieved from https://c.ymcdn.com/sites/nfrccommunity.site-ym.com/resource/resmgr/fact_sheets/windows_and_daylighting.pdf