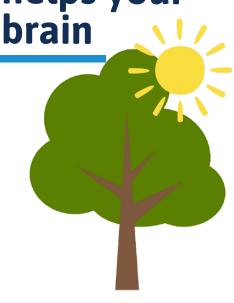




## How sunlight and nature helps your hrain



## **Nature**

Being outside in nature can have many benefits on our brain and mood. Being in nature can:



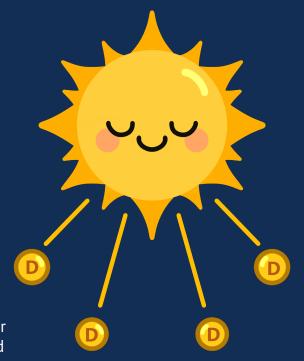
Being in nature has even been shown to improve concentration in people with ADD (attention deficit disorder) and ADHD (attention deficit hyperactive disorder).

## Sunlight

A lack of natural sunlight has been associated with physical and mental health disorders. Natural sunlight provides us with vitamin D, which can have a big effect on our mood and memory. Vitamin D is also important for brain development before birth. After birth, it can help us to keep our brains in good shape and prevent brain degeneration as we get older.

Besides vitamin D, natural sunlight is associated with regulation of serotonin (a feel-good chemical) and melatonin (a chemical that helps us sleep). Exposure to natural sunlight can help us feel good and keep a regular sleeping pattern.

Exposure to natural sunlight also increases blood flow to our brains. Good blood flow helps us with cognitive function and our memory.



Sunlight and nature play an important role in keeping our mood up, keeping our memory strong and preventing or helping mental health conditions.





## **Sunlight and Nature Sources**

Bratman, G.N., Hamilton, J.P. and Daily, G.C. (2012). The impacts of nature experience on human cognitive function and mental health. Annals of the New York Academy of Sciences, 1249(1), pp.118-136. doi:https://doi.org/10.1111/j.1749-6632.2011.06400.x.

Cox, D.T.C., Shanahan, D.F., Hudson, H.L., Plummer, K.E., Siriwardena, G.M., Fuller, R.A., Anderson, K., Hancock, S. and Gaston, K.J. (2017). Doses of neighborhood nature: the benefits for mental health of living with nature. BioScience, [online] 67(2), pp.147–155. doi:https://doi.org/10.1093/biosci/biw173.

Humble, M.B. (2010). Vitamin D, light and mental health. Journal of Photochemistry and Photobiology. B, Biology, [online] 101(2), pp.142-149. doi:https://doi.org/10.1016/j.jphotobiol.2010.08.003.

Kent, S.T., McClure, L.A., Crosson, W.L., Arnett, D.K., Wadley, V.G. and Sathiakumar, N. (2009). Effect of sunlight exposure on cognitive function among depressed and non-depressed participants: a REGARDS cross-sectional study. Environmental Health, 8(1). doi:https://doi.org/10.1186/1476-069x-8-34.

Tillmann, S., Tobin, D., Avison, W. and Gilliland, J. (2018). Mental health benefits of interactions with nature in children and teenagers: a systematic review. Journal of Epidemiology and Community Health, 72(10), pp.958–966. doi:https://doi.org/10.1136/jech-2018-210436.

Wang, J., Wei, Z., Yao, N., Li, C. and Sun, L. (2023). Association between sunlight exposure and mental health: evidence from a special population without sunlight in work. Risk Management Healthcare Policy, 16, pp.1049–1057. doi:https://doi.org/.2147/rmhp.s420018.





