# Time spent in Greenery, Nature, and Health

Research is underway on the relationship between time spent in greenery, nature, and health.

For example, in Japan, *shinrinyoku* practices of walking amongst trees have been found to have scientifically supported positive benefits. [1]

More broadly, the research program divides into two techniques.

1) Residential proximity – well advanced
2) Direct exposure – underway

**1) Residential proximity,** for example the amount green spaces within one kilometer of one's home**:** As summarized by Matthew White et al, [2] "while the quantity and quality of evidence varies across outcomes, living in greener urban areas is associated with lower probabilities of cardiovascular disease [3], obesity [4], diabetes [5], asthma hospitalization [6], mental distress [7], and ultimately mortality [8], among adults; and lower risks of obesity [9] and myopia [10] in children. Greater quantities of neighborhood nature are also associated with better self-reported health [11, 12, 13], and subjective well-being [14] in adults, and improved birth outcomes [15], and cognitive development [16], in children."

Residential proximity research makes use of satellite data and big data techniques in general. However, what is not known is the frequency that people use the green space, or whether they regularly visit green space outside the residential proximity definition. For this, it is necessary to measure directly the time spent in natural environments.

**2) Direct exposure**, for example by direct monitoring or surveys. One study, [2] for example investigated the relationship between recreational nature contact in the last seven days and self-reported health and well-being measures. Weekly contact was measured in one-hour blocks. The study's conclusion is interesting:

Compared to no nature contact last week, the likelihood of reporting good health or high well-being became significantly greater with contact ≥120 mins. Positive associations peaked between 200–300 mins per week with no further gain. The pattern was consistent across key groups including older adults and those with long-term health issues. It did not matter how 120 mins of contact a week was achieved (e.g. one long vs. several shorter visits/week).

**In summary,** two to four hours a week of recreational nature exposure, e.g., walking in large parks, woods, the countryside, is recommended.

Reference:


1) *J-Wellness 2020: the economics, career options, and investment opportunities*, page 74, by Peter Eadon-Clarke and Yoriko Soma
2) *Spending at least 120 minutes a week in nature is associated with good health and wellbeing*, by Mathew P. White, Ian Alcock, James Grellier, Benedict W. Wheeler, Terry Hartig, Sara L. Warber, Angie Bone, Michael H. Depledge & Lora E. Fleming, June 2019
3) *Neighborhood greenspace and health in a large urban center*, by Kardan, O. et al., 2015
4) *Green and blue areas as predictors of overweight and obesity in an 8-year follow-up study*, by Halonen, J. I. et al., 2014
5) *Is neighborhood green space associated with a lower risk of type 2 diabetes? Evidence from 267,072 Australians*, by Astell-Burt, T., Feng, X. & Kolt, G. S., 2014
6) *Land cover and air pollution are associated with asthma hospitalizations: A cross-sectional study,* by Alcock, I. et al., 2017
7) *Neighborhood environments and socioeconomic inequalities in mental well-being,* by Mitchell, R. J., Richardson, E. A., Shortt, N. K. & Pearce, J. R., 2015
8) *Residential green spaces and mortality: a systematic review*, by Gascon, M. et al. 2016.
9) *Exploring the relationship between childhood obesity and proximity to the coast: A rural/urban perspective,* by Wood, S. L. et al., 2016.
10) *Green spaces and spectacles use in schoolchildren in Barcelona*, by Dadvand, P. et al., 2017
11) *Surrounding greenness and pregnancy outcomes in four Spanish birth cohorts*, by Dadvand, P. et al., 2012
12) *Green spaces and cognitive development in primary schoolchildren*, by Dadvand, P. et al., 2015
13) *Green space, urbanity, and health: how strong is the relation?* by Maas, J., Verheij, R. A., Groenewegen, P. P., De Vries, S. & Spreeuwenberg, P., 2006
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15) Quantifying the impact of scenic environments on health, by Seresinhe, C. I., Preis, T. & Moat, H. S., 2015
16) Would you be happier living in a greener urban area? by White, M. P., Alcock, I., Wheeler, B. W. & Depledge, M. H., 2013