

FOREST BATHING

for Your Health and Wellness

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Forest Bathing is an Ancient Practice

Humans have used nature for therapy and medicinal purposes for thousands of years. The idea of letting nature into your body through your senses is based on ancient Shinto and Buddhist practices. In the 1980's Japan coined the term "Shinrin-Yoku," or "forest bath," to capture the spirit of this therapy.

Now, cultures around the globe embrace Forest Bathing as a natural form of therapy to improve people's mental and physical wellbeing².

The goal of forest bathing is to immerse yourself in nature and use all your senses – **sight, sound, feel, taste, and smell**, to fully experience your surroundings. By disconnecting from devices like your cell phone and other distractions, you mindfully concentrate on what's around you¹.

You might truly see green foliage and blue sky, appreciate the warmth of the sun or breeze on your skin, and focus on the sounds of chirping birds. Taking a deep breath, you can take in the aromas of nature.

The Science of Forest Bathing

Plants produce a chemical called phytoncide, that protects them from insects and diseases². The term phytoncide means "aroma of the forest." Phytoncides benefit people by stimulating Lymphocyte white blood cells, or "killer cells", an essential part of our immune system that targets and kills invading pathogens³. When you spend time outside in nature, your body passively absorbs these beneficial phytoncides.

After forest bathing, people experience lower levels of the stress hormone cortisol, a lower heart rate, and report feeling lower levels of anxiety⁴.

One study compared levels of killer cells in peoples' blood after forest bathing, and after walking in an urban environment. The group that forest bathed had 50% higher levels of killer cells than the group with urban exposure².

When you forest bathe, your exposure to the phytoncides produced by plants not only boosts your immune system with higher levels of Lymphocytes but also reduces stress and anxiety. Urban environments lack the necessary phytoncides⁴. Scientists are working to better understand the role of contact with nature in your health.

How do you forest bathe?

You don't have to escape to remote wilderness areas to experience the benefits of forest bathing. As the objective is to connect with the natural world, you can forest bathe in any green space.

Here are some ideas to get you started:

1. Sit under a tree and watch birds come and go, and branches move in the wind
2. Take a deliberate and slow walk through a park, being present and noticing nature around you
3. Practice yoga, tai-chi, or meditation out in nature

Each time you forest bathe, set yourself up for success with these steps:

1. When you get to your chosen green space, take a few deep breaths
2. Spend a few moments simply observing your surroundings
3. Remember to use multiple senses in your experience
4. Be aware of your surroundings and take your typical outdoor safety precautions

You should spend at least 20 minutes forest bathing to experience the benefits to your health and wellness⁶.

The Growing Need to Reconnect with Nature

54% of the world's population resides in an urban environment.

2050 it's estimated that **66%** of the world's population will live in an urban environment and spend **93%** of their time indoors².

We evolved as a part of nature, and a part of us yearns for that connection to this day. Try different ways of getting outside, disconnecting with technology and busy thoughts, and instead paying attention to the nature around you.

References:

1. Koci, J., & Nartea, T. (2020). Forest Bathing and Medicinal Benefits of Plants. www.ext.vsu.edu
2. Li Q. (2010). Effect of forest bathing trips on human immune function. *Environmental health and preventive medicine*, 15(1), 9–17. <https://doi.org/10.1007/s12199-008-0068-3>
3. Li Q, Morimoto, K., Nakada, A., Inagaki, H., Katsumata, M., Shimizu, T., Hirata, Y., Hirata, K., Suzuki, H., Miyazaki, Y., Kagawa, T., Koyama, Y., Ohira, T., Takayama, N., Krensky, A. M., & Kawada, T. (2007). Forest bathing enhances human natural killer activity and expression of anti-cancer proteins. *International journal of immunopathology and pharmacology*, 20(2 Suppl 2), 3–8. <https://doi.org/10.1177/03946320070200S202>

4. Li, Q., Kobayashi, M., Kumeda, S., Ochiai, T., Miura, T., Kagawa, T., Imai, M., Wang, Z., Otsuka, T., & Kawada, T. (2016). Effects of Forest Bathing on Cardiovascular and Metabolic Parameters in Middle-Aged Males. *Evidence-based complementary and alternative medicine : eCAM*, 2016, 2587381. <https://doi.org/10.1155/2016/2587381>
5. Voskoboinik, L., Whistock, J. C., & Trapani, J. A. (2015). Perforin and granzymes: function, dysfunction and human pathology. *Nature reviews. Immunology*, 15(6), 388–400. <https://doi.org/10.1038/nri3839>
6. Yuen, H. K., & Jenkins, G. R. (2020). Factors associated with changes in subjective well-being immediately after urban park visit. *International journal of environmental health research*, 30(2), 134–145. <https://doi.org/10.1080/09603123.2019.1577368>