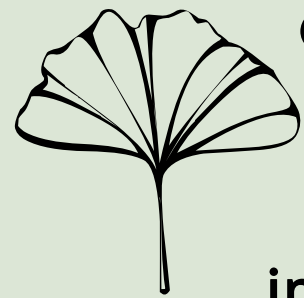




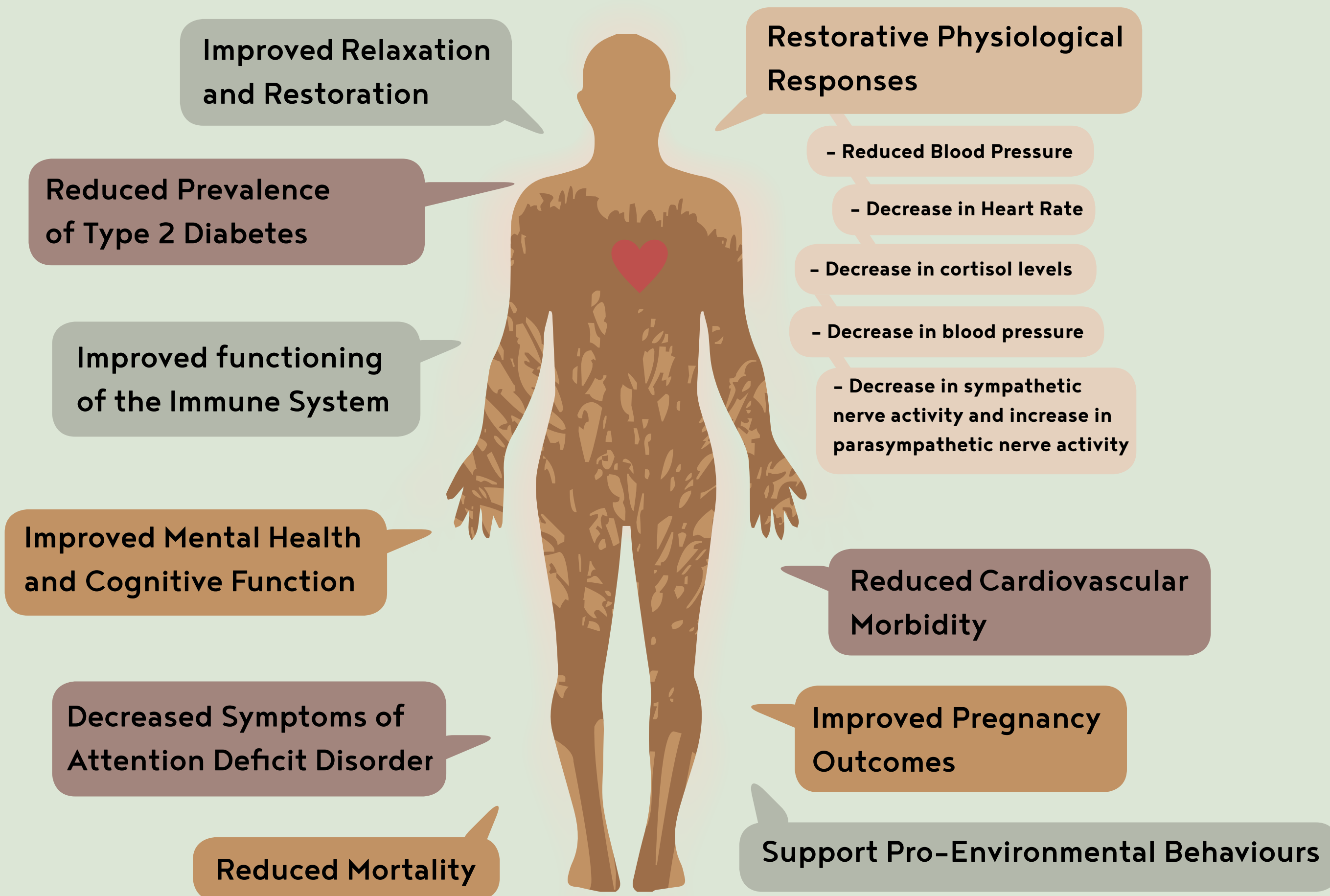
ASSOCIATION OF
Nature & Forest Therapy
GUIDES & PROGRAMS

HEALTH BENEFITS OF NATURE CONNECTION



Over the past two decades, there has been increased interest in the health benefits for humans of being in nature. *In the Urban green spaces and health report: WHO Regional Office for Europe, 2016* presents strong evidence that advocates for an increase in number of Urban Green Spaces to benefit the human population.

There is increasing evidence showing that visits to forest environments have positive impacts on human health. These benefits include physiological, psychological and social benefits.



IMPROVED RELAXATION AND RESTORATION

It has been recognized for centuries that contact with nature can be restorative and evidence of mental health benefits from having contact with nature and green spaces is well documented (Hartig, 2007; Hartig et al., 1991). There are two main theories that attempt to explain this:

a) *Psycho-physiological stress reduction theory* proposes that contact with nature can have a positive effect for those with high levels of stress, by shifting them to a more positive emotional state ([Ulrich, 1983](#); [Ulrich et al., 1991](#))

b) *Attention Restoration Theory* suggests that involuntary attention given to interesting and rich stimuli in natural settings helps to improve performance in cognitively demanding tasks ([Kaplan and Kaplan, 1989](#); [Kaplan, 1995](#); [Kaplan, 2001](#); [Kaplan and Kaplan, 2011](#))

***Studies have shown
that exposure to natural
environments enhances
our ability to recover from
stress, illness and injury,
and provides a wide range
of social, psychological and
physiological benefits
(Ulrich, 1984; Kofler, 2010)***



RESTORATIVE PHYSIOLOGICAL RESPONSES

Various researchers have observed restoration of physiological responses in various populations after spending time in nature. These include reduced blood pressure ([Hartig et al., 2003](#), [Ottosson & Grahn, 2005](#), [Ulrich et al., 1991](#)), Decrease in Heart Rate ([Ottosson & Grahn, 2005](#), [Ulrich et al., 1991](#)), decrease in cortisol levels, decrease in blood pressure, decrease in sympathetic nerve activity and increase in parasympathetic nerve activity ([Lee et al., 2011](#); [Park et al., 2007](#))

IMPROVED FUNCTION OF THE IMMUNE SYSTEM

Japanese studies have demonstrated associations between visiting forests and beneficial immune responses, including expression of anti-cancer proteins ([Li et al., 2008](#)). [Kuo et al in 2015](#) suggested a central role for enhanced immune functioning in the pathway between nature and health.

IMPROVED MENTAL HEALTH AND COGNITIVE FUNCTION

Studies of green spaces and health have demonstrated stronger evidence for mental health benefits, and for stress reduction, compared with other potential pathways to health (reviewed by [de Vries, 2010](#); [Gascon et al., 2015](#))

DECREASED SYMPTOMS OF ATTENTION DEFICIT DISORDER

A 2004 study examined the impact of relatively “green” or natural settings on attention-deficit/hyperactivity disorder (ADHD) symptoms across diverse subpopulations of children. The results demonstrated that green outdoor activities reduced symptoms significantly more than did activities conducted in other settings, even when activities were matched across settings. Findings were consistent across age, gender, and income groups; community types; geographic regions; and diagnoses. The researchers concluded that green outdoor settings appear to reduce ADHD symptoms in children across a wide range of individual, residential, and case characteristics. ([Kuo and Taylor, 2004](#))

REDUCED CARDIOVASCULAR MORBIDITY

Studies have demonstrated that there are significant associations between a more intense use of green space and reduced risk of cardiovascular disease ([Tamosiunas et al., 2014](#)).

REDUCED PREVALENCE OF TYPE 2 DIABETES

It is well-known that type 2 diabetes mellitus can be prevented by life-style interventions that improve physical activity and reduce obesity. Therefore, it is plausible that access to green spaces can prevent diabetes by promoting more active lifestyles. Cross-sectional observational studies in The Netherlands, Australia and the United Kingdom demonstrated significant associations between neighbourhood greenness and reduced odds of having type 2 diabetes mellitus ([Astell-Burt et al., 2014a](#); [Maas et al., 2009b](#); [Bodicoat et al., 2014](#))

IMPROVED PREGNANCY OUTCOME

A systematic review and meta-analysis ([Dzhambov et al., 2014](#)) showed that access to green space in close proximity to the homes of pregnant women was positively associated with birth weight. Birth weight is a useful indicator of health in early life: low birth weight is one of the major predictors of neonatal and infant mortality, as well as long-term adverse effects in childhood and beyond

REDUCED MORTALITY

Evidence that exposure to urban green space is linked to reduced mortality rates is accumulating (reviewed by [Gascon et al., 2016](#)). Studies in Japan have shown that the five-year survival rate in individuals aged over 70 was positively associated with having access to more space for walking and with parks and tree-lined streets near the residence ([Takano et al., 2002](#))

SUPPORT PRO-ENVIRONMENTAL BEHAVIOURS

Shifting the focus from fear, guilt, and indignation related to deteriorating environmental quality, the authors hypothesized that people who see greater potential for restorative experiences in natural environments also do more to protect them by behaving ecologically, as with recycling or reduced driving. ([Hartig et al., 2001](#))

‘Feeling connected to nature has been shown to be beneficial to wellbeing and pro-environmental behaviour. Contact, emotion, meaning, and compassion, with the latter mediated by engagement with natural beauty, were predictors of connection with nature, yet knowledge based activities were not. ([Lumber R, Richardson M, Sheffield D, 2017](#)). A (third) study, a walking intervention with activities operationalizing the identified predictors, were found to significantly increase connection with nature compared to walking in nature alone or walking in and engaging with the built environment. The findings indicate that contact, emotion, meaning, compassion, and beauty are pathways for improving nature connectedness.’

*Creativity is a receptive process
and being in nature encourages
receptivity*



DIRECT BENEFITS OF SHINRIN-YOKU

In his 2018 book, *The Japanese Way of Forest Bathing for Health and Relaxation*, Miyazaki put forward the results of his 29 years of research in the field of Shinrin-Yoku, or Forest Bathing:

- Improvement of weakened immunity, with an increase in the count of natural killer cells, which are known to fight tumours and infection;
- Increased relaxation of the body due to increased activity in the parasympathetic nervous system;
- Reduced stress of the body due to a reduction in sympathetic nervous system activity;
- Reduction in blood pressure after only 15 minutes of forest therapy;
- Reduced feelings of stress and a general sense of wellbeing;
- Reduction in blood pressure after 1 day of forest therapy, which lasts up to 5 days of forest therapy.

ADDITIONAL BENEFITS OF THE ANFT WAY OF FOREST THERAPY

ROOTED IN DEPTH PSYCHOLOGY

In the ANFT Way, we refer to the method used by the guide to nurture the healing relationships as the Liminal Journey. This is a concept rooted in Carl Jung's depth psychology. The specific techniques we use are organized into a Standard Sequence, supported by skillful use of language, group process and quality of attention given by the guide to the participants on the walk.

THREE HOUR EFFECT

Wilderness guides know the "three-day effect" where it takes three days to reach a level of internal silence that allows us to see life from a different perspective. With the ANFT method of guiding people in nature, there is a "three hour" effect that emerges quite spontaneously. No further therapeutic intervention is needed, only the supportive witnessing of the guide and the group.

POSITIVE BEHAVIORAL CHANGES

As a result of Forest Therapy, our sense of wholeness and authenticity is being enhanced as a direct correlate of elevating our awareness of, and confidence in, the wisdom embodied in our hearts. This leads to positive behavioral changes in how people spend their time. Other positive behavioral changes:

- Culture repair, enhanced relationships**
- Enhanced sense of belonging, one's place in the world**
- Great accessibility (It's Zen until you say so)**
- Cultural neutrality and adaptability**
- Sense of aliveness, freedom, joyful playfulness, connection, clarity**

FEELINGS OF CONNECTEDNESS AND SPIRITUAL REFLECTIONS:

Eva Sahlin's doctoral thesis focused on 'Nature-Based Therapy for the Rehabilitation and Prevention of Stress-related Disorders.' ([Sahlin, 2014](#)). Participants in the Nature-Based Rehabilitation (NBR) programme in the Gothenburg Botanical Garden, Sweden described nature as a strong resource to find and develop spiritual growth. The NBR participants experienced:

- Feelings of connectedness to a larger whole
- A sense of coming home
- A kinship with nature (also described by Wilson, 1984).
- A greater sense of self-acceptance which promoted a feeling of restoration.

[Cosgriff et al. \(2010\)](#) have described a deep connection to nature for women during nature-based leisure activities.



URBAN NATURE CONNECTION

THE IMPACT OF BIOPHILIC DESIGN

Oliver Sacks was a British neurologist, naturalist, historian of science, and author. In a 2019 NY Times article called “*The Healing Power of Gardens*”, reference is made to the forthcoming collection of his essays “*Everything in its Place*”:

‘Clearly, nature calls to something very deep in us. Biophilia, the love of nature and living things, is an essential part of the human condition. Hortophilia, the desire to interact with, manage, and tend nature, is also deeply instilled in us. The role that nature plays in health and healing becomes even more critical for people working long days in windowless offices, for those living in city neighborhoods without access to green spaces, for children in city schools, or for those in institutional settings such as nursing homes. The effects of nature’s qualities on health are not only spiritual and emotional but physical and neurological. I have no doubt that they reflect deep changes in the brain’s physiology, and perhaps even its structure.’ ([NY Times, 2019](#)).

Research into the global impact of Biophilic design in the workplace has found similar relationships between the presence of natural elements and productivity, made more interesting by cultural differences.

For example, in the UK, the Netherlands and the Philippines, it was found that the presence of indoor plants was positively associated with productivity. In contrast, workers' productivity in India and Indonesia was linked to the presence of green office colours. In Germany there was less focus on office colour, instead it was the use of stone elements that was strongly linked to employees' performance. In Australia it was the use of wood within the office design and furnishings that contributed to greater levels of productivity, yet, in Canada the presence of greenery indoors was most crucial for ensuring high levels of employee productivity.

Human Spaces: The Global Impact of Biophilic Design in the Workplace. (2015)





***“We need nature in our lives more than ever today, and as more of us are living in cities it must be urban nature. Biophilic cities are cities that contain abundant nature; they are cities that care about, seek to protect, restore and grow this nature, and that strive to foster deep connections and daily contact with the natural world. Nature is not something optional, but absolutely essential to living a happy, healthy and meaningful life.”
([Beatley, 2010](#)).***

SOCIAL, PSYCHOLOGICAL AND PHYSIOLOGICAL BENEFITS OF SPENDING TIME IN NATURE:

Connecting with nature can restore cognitive attention (Kaplan and Kaplan, 1995, 2002)

Improve blood pressure and self-esteem (Pretty et al., 2005)

Support pro-environmental behaviours ([Hartig et al., 2001](#))

Decrease symptoms of attention deficit disorder

Improve community resilience (Moore et al., 2006)

Upstream health promotion – prevention of mental health conditions (Maller et al., 2006)

Worldwide
800⁺
Guides

43
Different
Countries



Over
6400
walks with over
42,000
participants

Walks guided
worldwide in
different Languages **12**



130
Guides in Europe
in **30** different
countries