



# Raised by Nature

Guidebook on the health benefits of nature  
during pregnancy and toddler years



Preventive Health  
Research Unit

SITRA

A close-up photograph of a child wearing a yellow hat, holding a branch with small white flowers. The child's face is partially visible in the background, looking towards the camera. The scene is set outdoors with green foliage in the background.

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**Contact with nature  
has significant  
effects on health  
and wellbeing.**

# Introduction

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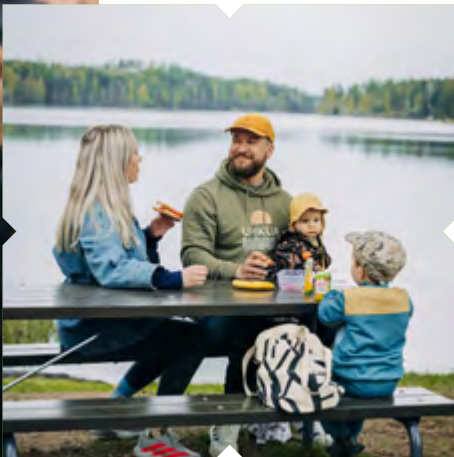
**The foundation of health and wellbeing is built during pregnancy and early childhood. The lifestyles learned in childhood are reflected far into adulthood.**

You don't have to go on big nature excursions. A local forest or a park with a natural setting is enough. When outdoor activities and spending time in nature become a habit in the family's everyday life, its positive effects are enhanced and can support the wellbeing of the whole family in the long term.

In addition to the health benefits of nature, this guidebook presents practical tips for increasing nature exposure for families with children aged between 0 and 2.

Many people are accustomed to spending time in nature. The aim of the guidebook's tips is to help people notice the already existing and often-overlooked opportunities in their everyday lives for integrating nature into daily living through small everyday decisions.

The facts presented in the guide are based on researched information on the health benefits of nature. QR codes for the source data of the guide book can be found at the end of the guidebook (in Finnish).



# Nature promotes the health and wellbeing of mothers and families

## Nature supports the mental wellbeing of the expectant mother

Spending time in nature can support and improve the mood and emotion regulation of the expectant parent. Even a short visit to a forest or other green environments can also improve sleep and increase positive emotions. Physical activity and leisure in nature improve the mood considerably more efficiently than similar activities in an urban environment.

Spending time in nature has a calming effect on the body. Nature can provide an important means of handling stress during pregnancy and recovering from stress.

The intensity of the health and wellbeing benefits of nature is clearly influenced by the frequency of nature visits. Mental health benefits can be observed when visiting green environments regularly.



## Nature-based activities promote the health of the cardiovascular system

Spending time in nature is good for your heart. When you spend time in a forest or park, your heart rate slows down and you feel calmer. Nature has a calming effect on the body and can thus support maintaining healthy blood pressure. In addition, nature-based activities promote weight management.

For pregnant women, brisk physical activity is recommended for a total of at least 2 hours 30 minutes a week, divided into at least three days. Also, it is recommended that strength and mobility be exercised twice a week. (UKK Institute.) These recommendations can be implemented in many ways, such as through outdoor activities or engaging in activities in local nature.

Natural environments are particularly suitable for physical activity during pregnancy.

## Biodiversity supports the immune system

Spending time in nature and exposure to natural microbes is good for the immune system. When the skin and body come into contact with a diverse soil, the microbiota of the skin and intestine diversifies. This promotes the development of a balanced immune system and can reduce the risk of allergies and autoimmune diseases, for example.



# Spending time in nature during pregnancy may promote the wellbeing of the unborn baby



The development of the child's immune system begins in the womb and continues after birth when the child is exposed to a wide range of environmental factors.

The proximity of green areas and spending time in nature may reduce the risk of low birth weight and premature birth.



A close-up photograph of a child wearing a blue jacket with yellow accents, reaching down to hold a small yellow flower in a grassy field. The child's face is partially visible at the top of the frame.

# Nature supports the child's immune system

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The child's first years of life are particularly important for immune system development. During this time, environmental microbes modify the microbiota of the skin, intestines and respiratory system, which helps the body's natural defence system to develop in a balanced manner.

Diverse microbes in soil, plants and outdoor environments play an important role in this development.

The child benefits from being in direct contact with nature. The positive effects of nature may be visible in the body's defence system quite quickly.

**” Make moments in nature a regular habit, and the impacts on wellbeing are enhanced.**

# Nature provides an excellent environment for learning

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Nature offers a rich multisensory environment for play and learning through play.

Playing in nature has shown positive impacts on the development of the child's ability to think and observe, as well as on learning. Nature-based activities can promote the child's problem-solving skills, creative thinking and linguistic skills.

Spending time in nature can simultaneously calm down and increase vigilance, making it an ideal place for learning new things.

Natural environments can also support the child's attention, executive functions and impulse control.



# Motor skills develop in nature



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Nature offers the child diverse opportunities to move and play in a versatile manner. The uneven terrain, rocks, roots, different surfaces and changing seasons of the forest offer a lot of useful sensory stimuli to the child and inspire the child to climb, run and balance.

Playing in nature develops the child's motor skills, such as balance, coordination, agility and speed.

**” Make spending time in nature a shared routine with your child.**

# Nature promotes the child's mental health and wellbeing



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The proximity of nature and a green habitat are linked to a better mood. Nature increases positive feelings and provides space for calming down.

Playing in nature can reduce the stress experienced by the child, help the child recover from everyday stress, as well as support the recognition and regulation

of emotions. Moreover, nature offers a comfortable environment for practising social skills together with other children.

Positive nature experiences as a child can support mental wellbeing far into adulthood.

**” Take a little moment in nature every day, it's good for you.**

# Nature relationship is built through interaction

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A child's relationship with nature begins developing in early childhood. Regular and positive nature experiences help the child see nature as a familiar and meaningful part of their everyday life. Parents play an important role in this development. The parents' personal attitudes towards nature have a strong impact on the child's relationship with nature.

The natural environment supports social interaction. A calm and stimulating environment helps both the child and the parent to be present, which deepens interaction between them.

Early nature experiences lay the foundation for a lifelong bond with nature and can also support the development of environmental responsibility. A child who learns to appreciate nature from an early age, carries this appreciation with them into adulthood.



# Tips and ideas for nature exposure during pregnancy

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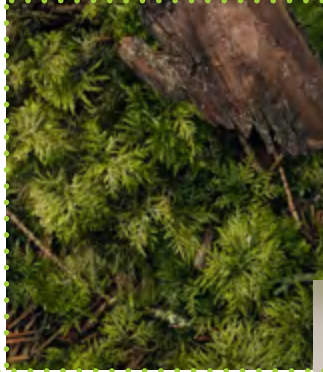
If possible, take advantage of green areas along your route when running errands. Select routes with trees and forest.

Do small everyday routines outdoors if possible. Call a friend on a forest walk. Drink your morning coffee or tea on the balcony, in the garden or in the forest.

Take a short walk in your local nature. You don't have to go hiking, just go and spend time in nature.

Change your familiar walking or running route from the urban environment to the forest, from time to time.

Occasionally, choose an outdoor gym instead of indoor exercise. Try exercising in the forest for a change.



Touch and feel the moss, leaves or grass.

When in nature, pay attention to the sounds, smells and shapes of the environment.

If tiredness or the weather prevents outdoor activities, listen to nature sounds or look at trees and the sky from the window. Use nature photos, sounds and videos to support calming down.

Organise your space so that you can see out of the window.



Bring elements of nature into your home that you can touch and explore. Collect cones, small branches and create an arrangement of them.

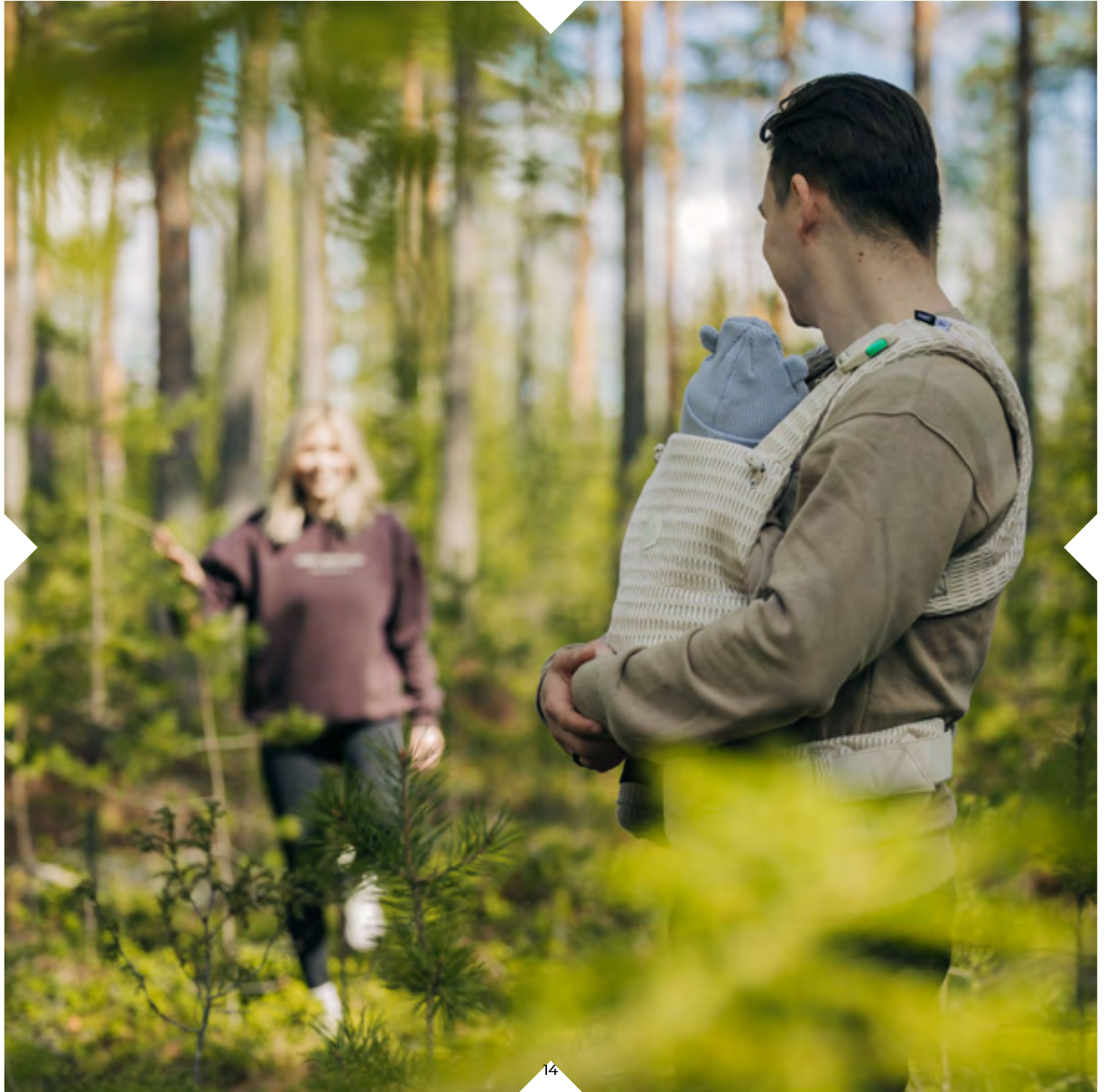
If possible, get plants and flowers for your home. Grow salads and herbs, for example.

Choose a nature-inspired background image for your computer or phone.



# Tips and ideas for nature exposure with a baby

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Feel the bark, moss, sticks and cones together with the baby. Let the baby explore natural materials with their hands.

Let the baby lie on the ground while spending time in nature.

Let the baby sit and crawl on the moss and lawn, also outside the blanket.

Let the baby feel the ground with their bare hands and feet.

Carry the baby closer to trees and bushes. Let the baby reach and touch.



“Pick berries” while holding your baby. Let the baby touch the shrubs and leaves.

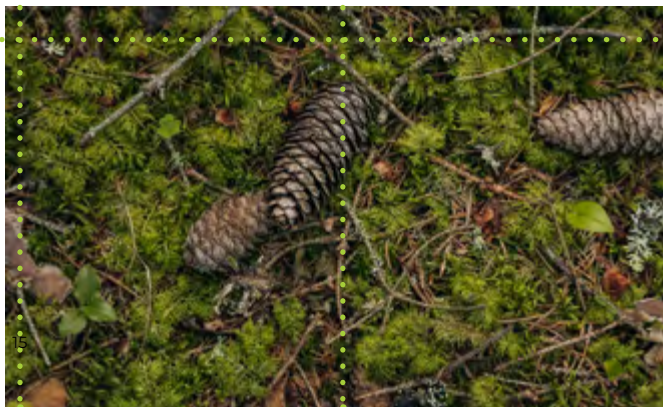


Walk through a park or forest when travelling with the baby.

Let your baby nap in the stroller near some trees.

Take stroller walks in parks and forests, whenever possible.

Carry your baby in your arms or in a baby carrier while in the forest.



# Tips and ideas for nature exposure with a toddler

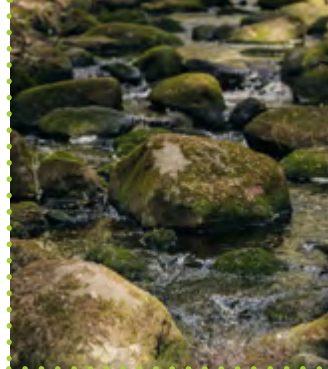
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Take the toddler to the forest and trails to walk and play.

Get off the trails with the child sometimes. Try walking outside the trail on roots and mossy ground. Climb on stumps and rocks.

Explore nature together. Touch and smell the soil, moss, branches, evergreens, cones, plants and bugs.



Play “mud games” together using water, sand and blades of grass. Let the child get messy.

Every now and then, choose the forest instead of the playground.

Visit nature in the middle of everyday life. While running errands, take advantage of the forests and parks along your routes.

Take trips to your local forest together. A “forest” can also be just a few trees.

Plant ryegrass, herbs and balcony or garden flowers together.



Care for and water the flowers and plants together.

Gather (permitted) natural materials together and play with them.

Do crafts together with your toddler using natural materials.

Invite your friends on a trip to the forest.

Build your own little “nature basket” at home. Collect mosses, cones, stones and twigs in a box or basket so you can touch and explore them together.

Create a shared “nature box” together in your apartment building’s yard using a raised garden bed.

# Factors and special situations to be considered

## "There's dirt and harmful bacteria outdoors."

Nature is full of microbes, most of which are harmless and beneficial to humans. However, it is a good idea to wash your hands after spending time outdoors.

## "Pollen allergy prevents outdoor activities."

If needed, schedule outdoor activities for times when pollen levels are low, such as early morning or late evening. After rain, outdoor activities are often easier. Wearing sunglasses and a cap can help prevent pollen from getting into the eyes and face. Wash your child's face and hands after outdoor activities, change their clothes and brush their hair, or give your child a shower to remove pollen.

## "I am afraid of snakes."

Vipers (snakes) usually avoid people when they encounter them. In thick grass, it is a good idea to stamp your feet and wear boots or other footwear that protect your feet. If a viper bites, call 112."

## "What if we get a tick from the grass?"

It is a good idea to do a tick check in the evenings. The tick vaccine also protects against tick-borne encephalitis (TBE).

## "What if the child's asthma gets worse outside?"

Asthma does not prevent outdoor activities when the condition is well managed. Physical activity and outdoor activities are beneficial for the child and improve lung function and physical fitness. Very cold and dry air can exacerbate the symptoms, and in cold weather, the child's respiratory tract can be protected with a scarf that warms and moistures the air. If needed, make sure your child takes their medication before and during outdoor activities. If you have any further questions, please contact your care provider."



**You can always contact your public health nurse, if you have any concerns.**

Sources used in the guidebook (in Finnish):



More detailed information on the issues presented in this guidebook can be found in the publication *Luonnon kasvattamat: Luonnon terveys- ja hyvinvointivaikutukset odotus- ja pikkulapsiaikana*.

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**Contact with nature  
during pregnancy  
and early childhood  
may have wide-  
ranging benefits for  
health and wellbeing.**