

Putting Nature back into Nurture: The Benefits of Nature for Children

What do we mean by 'Nature'?

Simply put, nature can be defined as any environment containing natural elements (such as trees, rocks and water).

Children benefit from nature contact

Increasing evidence indicates children benefit from contact with nature, as it supports their personal and social development as well as their mental and physical health by:

- reversing fatigue
- providing varied learning environments
- enhancing social cohesion and support
- providing important microorganisms

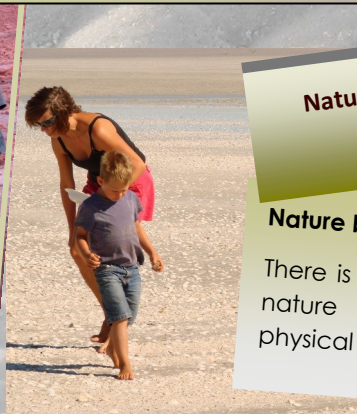
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Children's activity patterns have changed... ..

- Western cultural changes have led to children spending less time outside than ever before.
- The majority of children surveyed recently in both Australia and the US report spending more than the recommended 2 hours/day in front of electronic screens.
- These changes have led to a reduction in the time children spend in contact with nature.

This trend is concerning.



Nature provides a unique setting for 'mental restoration'.

Nature benefits adults

There is strong international research indicating nature contact is associated with positive physical and mental health for adults¹.

Children and adolescents face many health issues....

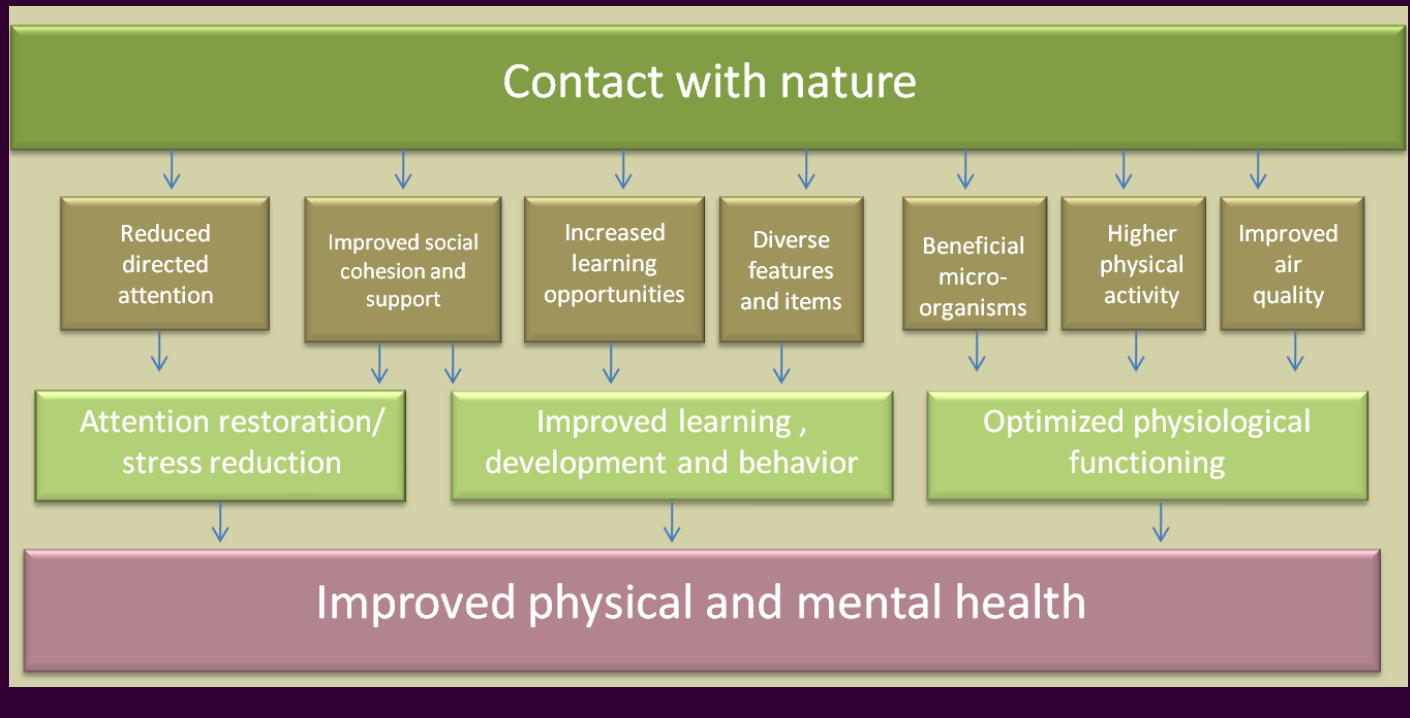
There are concerns about the physical, mental and social health of many youth today;

- 1/4 of Australian children and adolescents are overweight or obese².
- There has been a global rise in child asthma rates³.
- 14% of children and adolescents have been diagnosed with a mental health disorder in Australia⁴.
- The proportion of children with Attention-Deficit/Hyperactivity Disorder (ADHD) is around 11%⁴.

Nature benefits children through varied mechanisms

Nature contact and children's health is a relatively new research field, however evidence to date indicates that a variety of mechanisms exist which enable natural environments to enhance children health, learning and behaviour. For instance, nature enhances sense of peace and restores attentional stress (stress from constant attention), increases social cohesion and support, increases learning opportunities, provides diverse learning environments, provides exposure to important micro-organisms, increases physical activity and has improved air quality.

Figure 1: Proposed mechanisms through which nature contact benefits children health, behaviour and learning.




Nature promoting programs for youth are emerging

Encouragingly, there are some programs emerging within western countries aimed at encouraging children to spend more time outside in nature, with some showing success. For example...

The Western Australian **Nature Play** website (natureplaywa.org.au) encourages families to start nature clubs, provides nature-related resources and links and offers suggestions for activities to support children interacting with nature.

The English **School Green Gym** program, involved children attending 60 – 90 minute after school sessions incorporating environment-based activities on the school grounds and in nearby open spaces. The evaluation results indicated that that after ten weeks in the program children's weekend physical activity levels increased significantly from 142 to 189 minutes. In addition, children's score in psychosocial and overall physical health scores increased²⁸.

Children want to spend time in nature
 Promoting that children spend more time in nature is likely to be well received by children, as they report enjoying nature and report wanting more nature in their neighbourhoods^{26,27}.
 However, planning the method and timing for promoting nature is likely to be important; mandating or insisting children spend time in nature while in the middle of watching their favourite TV show or chatting to their best friend on Facebook is not likely to be received well.!



Natural consequences: What does the evidence tell us about children and nature?

Nature enhances children's learning and development

Programs increasing nature contact have identified beneficial effects on children's personality development, cognitive functioning, attitude and school behaviour.

- Incorporating the school's surrounding natural environment as the basis for school curricula within 40 schools in 12 US States led to greater academic achievement, improved classroom behaviour and management, increased engagement and enthusiasm for learning and greater pride and ownership in accomplishments²¹.
- Nature contact has been shown to be important in children's personality development²².
- Research indicates that children who live in areas with more surrounding nature are better able to direct their attention²³.
- Views of nature from classroom windows have been identified as associated with better attention and learning for children²⁴.
- In a study in Chicago, girls' self-discipline was higher when their home apartment had views incorporating nature than girls whose apartment had no view²⁵.



Nature helps those with learning/behavioural disorders

Research indicates that time in nature assists the performance of children with ADHD and those displaying delinquent behaviour;

- ❖ A 20 min walk in the park produced a positive effect on the attention of children with ADHD¹⁵.
- ❖ Children with ADD have been measured as functioning better than usual when after school activities were held in green settings¹⁶.
- ❖ The more nature in a child's play area, the less severe their attention deficit symptoms¹⁷.
- ❖ Wilderness programs have been effective in reducing antisocial and delinquent behaviour in children displaying delinquency¹⁸.

Play in nature builds motor skills

Playing in natural environments assists with building children's motor skills.

- Kindergarten children with access to a forest environment for one year had significantly more improvement in their motor skills, balance and coordination than those children with access to only a traditional playground¹⁹.
- Better motor performance has also been identified in kindergarten children who had access to a more natural play environment when compared to children with access to a more traditional urban play setting²⁰.

Nature is associated with good mental health

Contact with nature, especially during middle childhood, has been indicated as having an important role to play in children's mental health

- ☉ Nature contact is associated with children's emotional responsiveness and receptivity¹¹.
- ☉ Children manage stress better when they have more contact with nature¹².
- ☉ Children had better perception of their own responsibility for actions, positive self-concept and better academic achievement after participating in outdoor adventure programs^{13,14}.



Natural environments are associated with lower risk of children being overweight

There is a decreased risk of children being overweight when more nature is present in their neighbourhood.

- Increased neighbourhood vegetation has been identified as being associated with decreased risk for childhood overweight^{7,8}.
- A higher number of trees has been shown to be associated with higher use of outdoor spaces by children in inner-city neighbourhoods⁹.
- Time spent in natural spaces is associated with greater physical activity intensity amongst children when compared to outside non nature-based areas¹⁰.



Getting back to nature: How to increase children's contact with nature



Action.....

1. Children are likely to benefit from more **picnics, walks, bike rides, visits to the beach, river etc.** (see natureplaywa.org.au and childrenandnature.org for more ideas or to start or join a Nature Club). Schools, day care centres and parents can all use this strategy. Parents can encourage schools and day care centres to take children on excursions.
2. **Gardening**, such as redeveloping a dilapidated bed or preparing a **kitchen garden (kitchengardenfoundation.org.au)** is a great way to get children outside and with nature.
3. Or start a **bush garden** at home or in the school/child care etc grounds using local plants, children can be taken out to the local nature reserve and nurseries to collect seeds and buy seedlings to grow the plants.
4. **Create art from found natural objects.** The process of finding the items is as good for children as the designing and building processes.

Design....

1. Efforts to encourage children to increase their time outside must be partnered with strategies to **ensure that the surrounding areas are appealing.** Design of home gardens, local open spaces, parks and sports fields would benefit with the input from children. Many natural play spaces have been designed in consultation with children (cabe.org.uk/public-space/spaceshaper), and these ideas can be used to assist with designing and developing similar areas.
2. **Nature-based playgrounds** are well received by children, and these can be developed instead of installing typical play equipment such as plastic slides (which children report as being boring!). Schools, councils, day care centres and parents can all be involved in promoting and developing more natural play spaces.
3. Promote, support and lobby local councils/planners to develop **child friendly streets**, such as those overseas , e.g. *Woonerfs* (streetwiki.wikispaces.com/Woonerf).

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