

PRESCRIPTIONS FOR PARENTS -

MAKING SCIENTIFIC RESEARCH PRACTICAL FOR FAMILIES



BENEFITS OF NATURE

Researchers have been documenting the many ways children benefit by exposure to outdoor activities, especially natural park and forest setting. Unfortunately, as we are learning more about the positive impact of the outdoor environment, researchers find that children are spending much less time playing outside.

Dr. Stephen R. Kellert of Yale University states, "Play in nature, particularly during the critical period of middle childhood, appears to be an especially important time for developing the capacities for creativity, problem-solving, and emotional and intellectual development." *Building for Life: Designing and Understanding the Human-Nature Connection*. 2005.

Our newsletter today will focus on the changes in the ways children are spending their time and will list a few of the more important benefits that accrue to children when they play outside.

More information available at the Children and Nature Network at www.childrenandnature.org



PRENATAL - better birth outcomes

One study in Portland, Oregon, evaluated 5700 births to women in 2006 and 2007. Women who lived close to an open space / park-like setting had a significantly reduced risk of having a baby who was born small for



PRESCHOOLERS - improved cognitive, social and emotional health

Researchers evaluated many studies that looked at the impact of free play in young children. They found cognitive benefits, with improved creativity, problem solving skills,



ELEMENTARY AGE - improved physical health and less obesity

Numerous studies demonstrate the relationship between increased outdoor time and less obesity. This is usually due to improved physical activity.



EPIDEMIOLOGY - what is happening to children in America?

Less outdoor time

Many studies document that our children are experiencing:

- Less time outdoors
- Less unstructured play time

gestational age.

Donovan GH, Michael YL, et al. *Urban trees and the risk of poor birth outcomes. Health and Place. 2011; 17:390-393.*

INFANTS and TODDLERS - improved vision and eye development

Several studies have evaluated the relationship between near-sightedness (myopia) and decreased exposure to sunlight / outdoor play. One study of 1500 6 year olds in Sydney, Australia showed improved retinal vessel development in children who spent more time outdoors, compared to blood vessel narrowing in children who watched more television.

Gopinath, B., Baur, L. A., et al. *Influence of Physical Activity and Screen Time on the Retinal Microvasculature in Young Children. Arteriosclerosis, Thrombosis, and Vascular Biology. 2011; 31(5), 1233.*

Another study found less myopia in 12 year old children who spent more time outdoors.

Rose, KA, et al. *Outdoor activity reduces the prevalence of myopia in children. Ophthalmology. 2008; 115:1279-1285.*

PRACTICAL HINTS

Take your infant or toddler to the local park, and take her out of her stroller. Let her take off her shoes and feel the grass between her toes.

focus and self-discipline.

They also found social benefits that included improved cooperation, flexibility and self-awareness.

The emotional benefits were reduced stress and aggression and increased levels of happiness.

Burdette HL and Whitaker RC. *Resurrecting Free Play in Young Children: Looking Beyond Fitness and Fatness to Attention, Affiliation and Affect. Arch Pediatr Adolesc Med. 2005;159:46-50.*

PRACTICAL HINTS

Go on a nature walk with your preschooler. Point out the different things you see - and name them. Help your preschooler see the difference between the leaves of an oak tree and a maple tree. Let your child hold both types of leaves as you point out the differences. How do they smell?

Describe the smells of being outdoors. Describe how a blade of grass feels smooth, while a rose stem has sharp thorns.

Bring home some leaves, twigs, grass blades - and let your preschooler make a collage with them.

Find a safe place where your preschooler can run, explore, and climb - exploring his environment without fear - and without your admonitions to be careful.

One analysis of 70 studies researching the benefits of wilderness and nature-based experiences found children had reduced body fat, as well as reduced stress and anxiety, along with enhanced self-esteem and knowledge and skills.

Hine R, et al. *Social, psychological and cultural benefits of large natural habitat and wilderness experience. University of Essex. 2009.*

Improved ability to focus

Several studies demonstrate improved focus and attention when children are exposed to natural settings.

Decreased symptoms of ADHD

An internet survey of 421 parents of children 5 - 18 years of age with ADHD found that children who regularly played in green play settings with big trees and grass had fewer symptoms of ADHD than children who played more in indoor settings.

Faber Taylor A and Kuo FEM. *Could exposure to everyday green spaces help treat ADHD? Evidence from children's play settings. Applied Psychology: Health and Well Being. 2011; 3:281-303.*

Another study by the same authors found that children with ADHD had improved concentration and focus after taking a walk in a park as compared to when they walked through a downtown or a residential area.

Decreased stress

- Growing fear of strangers, traffic, and nature

- Less time spent in national parks and camping (Visits to US national parks declined by 25% between 1988 and 2003.)

A survey performed by Dr. Rhonda Clements, Professor of Education at Manhattanville College in New York State of 800 US mothers found 71% of mothers said they recalled playing outdoors every day, but only 26% stated their children played outdoors daily.

Clements R. *An Investigation of the Status of Outdoor Play. Contemporary Issues in Early Childhood, Volume 5, Number 1, 2004*

Another study found a decline of 50% in proportion of children 9 -12 years of age who spent time in outdoor activities such as hiking, walking, fishing, and gardening between 1997 and 2003.

More media time

Children replaced their time outdoors with indoor activities, especially time involved with media, television and computers.

Only 12% of 6 - 8 year olds spent time outdoors in 2003, and only 8% of 9 - 12 year olds did so.

The average weekly time spent outdoors by 6 - 12 year olds was 4 hours.

The Media Family: Electronic Media in the Lives of Infants, Toddlers, Preschoolers, and Their Parents. Kaiser Family Foundation, 2006.

Decreased awareness of the natural world

A study in Great Britain of

Find a sandbox and allow your toddler to play - feeling the sand trickle between his fingers, using a stick to "draw" tracks in the sand, placing and moving toys in the shifting environment.

Let your child touch flowers, pick up bugs and worms, climb onto a tree stump.

Bring nature indoors - have living plants in your home. Can you have a small aquarium with a goldfish in it?

Viewing nature, including seeing nature through a school window, helps decrease stress in children.

Wells NM and Evans GW. Nearby Nature: A Buffer of Life Stress Among Rural Children. Environment and Behavior. 35:3; 311-220.

PRACTICAL HINTS

Strongly encourage (or even insist) your child to have some outdoor time after school and before sitting down to do homework.

Find outdoor activities your family can enjoy together. Walk, ride bikes, go on a hike, go fishing, play a ball game.

Allow your child to have **unstructured** play time, preferably with other children, so he can learn negotiation, problem solving, and creativity skills as "rules of the game" are developed by the children.

Can you grow some edible plants in your home, on your deck? Do you have room for a small garden?

Allow your child to help water plants, prepare the earth, pull the weeds.

As you look for summer opportunities for your child, prioritize those with outdoor activities, especially those that allow unstructured free play.

700 children between 9 and 11 years of age found that only 8% could identify a bird seen commonly in their neighborhood and only 12% could identify a local flower, the primrose.

In another study from Great Britain, 8 year old children were more likely to identify Pokemon characters than beetles and oak trees.

Children desire outdoor time

However - 81% of children in a study in England stated they would like to play outside more.

Jane E. Anderson, M.D.

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md@physicianscenter.org
www.physicianscenter.org