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# Childhood, Unplugged: Overcoming Barriers to Outdoor Learning and Hands-On Play

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## Introduction

**“Play is often talked about as if it were a relief from serious learning but for children play is serious learning. Play is really the work of childhood.” — Fred Rogers**

For children, play is associated with positive cognitive, social-emotional, and physical development. The evidence is so strong that in August 2018, the American Academy of Pediatrics published a recommendation for their providers to “prescribe” play for children they see – encouraging parents and other adults in a child’s life to play with them, particularly unstructured play where we can follow a child’s lead.<sup>1</sup>

Outdoor play is essential to healthy development. Children develop social-emotional skills like self-regulation and cooperation when they have to take turns at the playground, physical skills when they try out the monkey bars or have room to run at a local park, and cognitive skills when they problem solve in the sandbox. Any adult who knows that refreshing clarity of mind from just a walk around the block in the middle of a work day knows intuitively the importance of making sure children have room to stretch their legs, and minds, outdoors.

This white paper introduces readers to the importance of play and outdoor experience during the early childhood years and establishes the negative impacts of a lack of play. It also presents a number of common barriers to embracing play and outdoor learning in the lives of young children and “troubleshoots” these scenarios based on best practices in communities and research evidence. This paper will focus on issues and opportunities at multiple levels: **families, program providers, policymakers, and community-members**. It is not a definitive roadmap/playbook, but rather a field guide to better understanding the science of play and empowering individuals, communities, and governments to commit themselves to investing in opportunities which have the potential to improve quality of life and learning.



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## Why is ICS focusing on outdoor learning?

With an eye towards improving outcomes for children, the Institute for Child Success undertook two events in the fall of 2018 in Denver, Colorado.

*Childhood, Unplugged* invited attendees to discuss hands-on learning's impact on child development. Participants explored barriers and opportunities to improve equitable access and identify low-cost, low-burden strategies to thoughtfully incorporate good outdoor and experiential learning practices in formal and informal learning environments.

- Dr. Yuko Munakata of the Cognitive Development Center at Colorado University – Boulder served as keynote speaker, discussing the importance of free play.
- The event also featured a panel including Sarah Konradi, Program Director, National Wildlife Federation Early Childhood Health Outdoors (ECHO) Initiative; Mary MacKenzie, ICS Senior Fellow, and Child Care Quality Improvement Consultant; and Justin Svingen, Planner, Public Health Madison and Dane County leading the National League of Cities-funded Connecting Children to Nature Network Initiative.

*Bringing the Outdoors to Early Learning Environments*, a no-cost professional development session, was offered to child care providers and early childhood educators in Colorado. Mary MacKenzie, ICS Senior Fellow and international expert on quality improvements in early care and learning led a discussion of low- to no-cost strategies to bring outdoor and experiential learning opportunities into daily practices and routines.

## BENEFITS OF PLAY

Research increasingly bears out what many have intuitively known for years: play is good for children. The impacts of play, especially outdoor play, manifest themselves in many ways, including brain development, social-emotional skills and social engagement, physical health, cognitive development, a love of nature, a healthy sense of adventure, and expanding horizons through imaginative play. In this section, we discuss some key research findings that show the importance of play and outdoor exploration for developing the whole child. While this section is by no means a definitive discussion of the benefits, it highlights foundational benefits of play which allow for further growth.

### Brain Development

All learning begins with the body. The body is the brain's first teacher and movement is the Lesson Plan. In the first years of life, 90% of the neural pathways in the brain will be set for life. These pathways determine how a child thinks and learns and who they will become - their passions, interests, triumphs and challenges, and outlook on life.

Children learn by building connections between brain cells called "neural pathways." The more these neural pathways are used, the stronger they get - and that is why practicing helps build these skills. Each brain cell (neuron) looks a bit like a baby tree. As babies take in information about the world, their neurons branch out and create connections with each other. Called neural pathways, these connections are like an electrical wiring system each neuron can have multiple connections to other neurons. The "wires" don't touch. Instead they pass information at the gaps between neurons - the "electrical boxes" known as synapses. Brain chemicals (neurotransmitters) help power the system to get these messages through.

Brain science tells us that certain chemicals get released when we move our bodies that foster neural growth in our brains. Early childhood is the fastest period of brain growth humans ever have, so it's important for children to have experiences that get their hearts pumping and brains transmitting.

The chemical in the brain called Brain Derived Neurotrophic Factor (BDNF) is only made when you move. This chemical encourages neurons to develop and to join up and create new networks, contributing to memory and learning.<sup>2</sup>

### **Social-emotional and “soft skills”**

Learning is not just about knowing facts – it's about being interested in the world around you, being willing to explore and experiment, knowing how to get help, being inventive, making choices/decisions, managing self and others, and being resilient. Understanding the emotions and perspectives of others. These are the things which will make connections in the brain and literally make it grow.

Children and adults both have their days filled with a mix of structured and less-structured or unstructured time. Structured time for children can include lessons, homework, and chores, while less-structured time allows for more child-initiated and directed activities, such as free play or unguided practice. Research tells us that there is a link between children's *unstructured* time to play and “self-directed executive function,” a particular type of self-regulation in which children set and achieve goals with external guidance – even when controlling for age, household income, and child verbal ability.<sup>3</sup> While children can often benefit from some structure to link play to learning outcomes, it is clear that children need time and freedom to explore, experiment, and create anything their imaginations can envision. <sup>a</sup>

### **Physical Development and Health**

Research indicates the connection between movement and children's cognition, suggesting that to reach their maximum brain potential they need to move. Therefore, a lack of these movements will impact children throughout life and learning.<sup>4</sup> Nature has a variety of heights, levels, terrain and space for a child to set their own challenge and it is constantly changing. Research has shown that children who play regularly in natural environments show more advanced motor fitness, including coordination, balance and agility, and they are sick less often.<sup>5</sup>

#### **Nature's Playground**

How can a natural environment support fundamental movement?

**Uneven terrain** to master

**Hills** to roll down

**Slopes** to climb up

**Space** for rough and tumble

**Logs** to jump from

<sup>a</sup> The researchers in this study reflected on the occasional difficulty of classifying “structured” and “unstructured” events in this field. “The broad, standardized definitions of structured and less-structured time adopted in this study (e.g., Meeks and Mauldin, 1990) ignore differences in the degree of independence that children experience within and across activities. In the present study, trips to museums, libraries, and sporting events are each classified as less-structured, but may vary in relative structure...Similarly, although any activity within the category of “media and screen time” counts as less-structured time, this category includes activities that range from passive movie-watching to self-directed internet searches to more structured video games.”

Gross motor development is a key part of children's development in the early years. Children learn to control their bodies from the center outwards, and from the top downwards. In other words, babies build up their neck muscles so they can hold up their heads, then the trunk muscles so they can sit, and finally the whole body control and balance required for walking. This development generally follows predictable patterns that parents and pediatricians alike can observe. Children benefit from varied opportunities to test themselves and develop these skills, from the early days of "tummy time" to wide open spaces safe to take a few tumbles when learning to run.

What many of us take for granted in our every day movements are actually fascinating interplays between our brains and our bodies, a dance between conscious and unconscious decisions and coordination. Proprioception tells us where our bodies are in space without having to look. It tells us where our bodies end and the external environment begins even when it can't be seen, giving us the ability to be safe in the space around us and develop good coordination of the body - for example, walking up the stairs without looking at each step. Children develop the proprioceptor sense through movements such as running, jumping, climbing, crawling and hanging. Our *vestibular system* includes the parts of the inner ear and brain that help control balance and eye movements. Furthermore, it contributes to spatial awareness, emotional development and sensory system, which is vital for later learning. It is the way we process the sensation of gravity flowing through our nervous system and this helps provide a reference of all other sensory experiences.<sup>6</sup> The vestibular system is developed through sliding, swaying, spinning, swinging and rocking. We sometimes wonder why children just love to spin endlessly and yet don't seem to get dizzy the way we adults would, they are actually developing their vestibular sense. The ability to sit totally still is one of the most advanced of all movement activities and is not possible until the vestibular system is well developed which can take up to seven years.

Building *core strength* is like building a strong foundation for children. Core strength is the development of the torso muscles that stabilize, align, and move the trunk of the body. Poor core strength can cause poor posture which can also affect gross motor and fine motor skills. The best way to develop core strength is through good old-fashioned outdoor play! Children need daily opportunities to run, jump, climb, crawl and explore in an unstructured environment. How many of us as adults are now trying to strengthen our core muscles through Pilates or yoga as we are suffering back or neck challenges?

Children with poor core strength will tend to slump with shoulders rolled forward while seated, have poor endurance, and may exhibit poor balance. Core strength development starts as an infant. When an infant has an opportunity to lie on his tummy, he learns to lift his head which helps to strengthen the neck and upper back muscles. This will help the infant to begin supporting the weight of his own head and to be able to look around in response to sounds. It will also prepare the infant for such developmental milestones such as crawling, rolling over and sitting up independently.

### **Academic Skills**

There is an international interest in understanding the link between physical activity and academic impacts for children. A recent review of 26 previous studies looking at the impact of physical activity on academic performance found that children who get extra physical activity in school do better in reading and mathematics. The study, published in the journal

*Pediatrics*, involved more than 10,00 children between the ages of 4 and 13. It found that physical activity, especially physical education, improves behavior in classrooms and is a boost to academic achievement, especially mathematic related skills and reading.<sup>7</sup> Psychologist Leon Kamin envisioned that play would “help with behavioral issues in the classroom, because if children are able to move, they are not going to have so much excess energy. They are going to be able to focus and it is going to solve a lot of the sort of interpersonal issues that arise.”<sup>8</sup> Following a daily movement program can improve children’s physical development levels and has the potential to boost their chances in the classroom. Research in the United Kingdom with two schools and more than 40 Foundation Stage children (age 4-5) in a yearlong study.<sup>9</sup> They found that those who took part in a daily movement program for one academic year showed greater improvements in throwing/catching, balance and manual dexterity compared to those not taking part in the programme. The participating children also improved their overall levels of physical development from the 32nd percentile to the 50th percentile (an improvement of approximately 18 percentile points). A 15-year longitudinal study in China concluded “physical activity is positively associated with cognitive function and academic performance in early life.”<sup>10</sup>

### **Reading and Writing**

The development of *vision* is also dependent upon moving; vision does not develop properly and fully unless the body is moved in a rich three-dimensional environment. Children need a complex visual environment to move through and they need to move through this with intent and purpose. This applies to learning to read. You need to move your eyes and stare and then move and stare and move and stare. This is very complex for the eyes to manage and it takes years to develop. It is simple things like running through a complex environment with other children or climbing up and down something that gives the brain the information to strengthen connections.

The link between play and gross motor skills is somewhat obvious, but there is a more subtle impact on fine motor skills, which are important for children in developing *writing skills*. Arms and fingers follow the same outdoor development as legs; at first a child will be able to manipulate the arm from the shoulder joint, then a child can control his hands, and finally he learns to use individual fingers.<sup>11</sup> The seemingly simple task of writing, for example, is actually a marvel of a number of developments in tandem:

- Control of limbs and, eventually, dexterity in use of their fingers
- “Bilateral integration” in which children learn how to use both their dominant and non-dominant sides to achieve a goal (holding the paper with non-dominant side while using a writing implement with the dominant side)
- Fine motor control and hand/wrist strength to allow for the proper grip and hold on a writing instrument
- Hand-eye coordination so their hands execute the ideas in their brains

### **Risk Taking and Resilience**

We have to be careful not to hamper learning - through our instructions to sit still, don’t touch that, don’t climb on that. We have to be realistic about children’s ages and what they can do and are compelled to do. Children need to be strong learners which means being

confident, having freedom and time to explore and investigate, and make sense of what they experience.

Children need to learn how to manage the risks and challenges they encounter in everyday life. Early childhood expert Helen Tovey explains that “risk taking in play allows you to demonstrate your competences, it requires instant judgements about danger and about safety and some planning and foresight... being able to assess and manage risk is a life skill that we need for survival.”<sup>12</sup>

Children who learn in their early years to make their own reasoned decisions rather than simply doing what they are told by others will be in a stronger position to resist the pressures they will inevitably face as they reach their teenage years - “children are seriously disadvantaged if they do not learn how to approach and manage physical and emotional risk and being overprotected can prevent children from learning about possible dangers and how to protect themselves from harm.”<sup>13</sup>

Resilience is the capacity to recover quickly from difficulties, an ability to bounce back. Developmental psychologist Ann Masten describes resilience as “Ordinary Magic,” meaning that in many cases a resilient outcome doesn’t come about as a result of something particularly earth shattering happening, it is developed through everyday opportunities.<sup>14</sup> We can teach children to judge what is safe for them at a particular moment, but we also want children to dust themselves off and try again with the knowledge that they were hurt but are still all right. We as adults need to be comfortable with risk taking, comfortable with allowing accidents to happen so that young children can have the opportunity for perseverance, a sense of overcoming difficulties, emotional and physical. Adults need to stand back, watch and wait even when a child tumbles. Adults should model risk-taking while problem solving and thinking aloud

### Love of Nature

In his landmark book, *Last Child in the Woods*, Richard Louv was the first to bring widespread attention to the alienation of children from the natural world, coining the term “Nature Deficit Disorder” (NDD) and outlining the benefits of a strong nature connection—from boosting mental acuity and creativity to reducing obesity and depression, from promoting health and wellness to simply having fun.

NDD is not a medical condition; it is a description of the human cost of alienation from nature. A lack of routine contact with nature may result in stunted academic and developmental growth. Louv says we have entered a new era of suburban sprawl that restricts outdoor play,

### Before you stop a child, ask yourself:

Is it necessary to stop?

Is it for his safety and well being or is it for my peace of mind?

What will I stop him from? Trying, Failing or Succeeding?

“The memories made as a child stay with you forever, and if outdoor places are part of these memories, then hopefully children will grow up wanting to protect these special places for years to come”

—Helen Meech from  
Outdoors and Nature Engagement

in conjunction with a plugged-in culture that draws children indoors. But, as Louv presents in his book, the agrarian, nature-orientated existence hard-wired into human brains isn't quite ready for the overstimulating environment we have carved for ourselves.<sup>15</sup>

Play helps foster a connection to the natural world for children, which can grow into attention to the environment as adults – and it doesn't take a trip to a national park to start inspiring them. We need to embrace *being natural in our thinking*, fostering opportunities every day on walks, etc.

Children benefit from open opportunities to engage with nature, and are most likely to develop their own interest in conservation if they have a chance to first fall in love with nature before being asked to save it.<sup>16</sup> If adults impart knowledge and responsibility before children have been allowed to develop a loving relationship with the earth, then knowledge without love will not stick; if love comes first, knowledge is sure to follow.<sup>17</sup> These ideas are suggesting it is important to have a developmentally appropriate play based learning for young children out in nature that develops an awareness and interest in and about nature.<sup>18</sup> Developing children's empathy with the natural world should be the main objective. Contact with nature can be seen as part of a "balanced diet" of childhood experiences.<sup>19</sup>

## TROUBLESHOOTING

Research tells us that outdoor learning and hands-on play have a range of positive impacts for children and families – and yet, it can still be difficult for children to have opportunities to run, jump, and play. In this section, we identify a number of commonly cited challenges among parents, providers, and communities working to foster opportunities for play and outdoor learning, and provide both light-touch and resource-intensive strategies based on research findings, expert guidance, and best practices in communities. We consider each challenge from four perspectives:

 <p><b>Families</b>, including the members of the immediate household in which children live as well as extended family members and family friends</p>	 <p><b>Program providers</b>, primarily referring to child care center and preschool personnel (both administrators and classroom professionals) as well as elementary school teachers</p>
 <p><b>Policymakers</b>, including state and local government officials and advocacy groups</p>	 <p><b>Community-members</b>, comprising those living and working in communities, including business owners, medical providers, community-based organizations, and faith-based institutions.</p>

## There is no time in our schedules.

**Challenge:** It's not a secret that families feel time pressure, often reporting that they do not have enough hours in the day to do what they need to – and so play, particularly time outside, begins to feel like a “nice to have,” but not an option many days of the week. Teachers and child care providers also report a tension in finding the time to allow for unstructured outdoor time. Many teachers report feeling pressure from administrators to focus on more “academic” time, and only 8 states in 2016 required elementary schools provide daily recess.<sup>20</sup>

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### Families

Free time is good for kids. Children who become overscheduled lose their creativity and come to depend upon adults for their timetabling and activities. Children must have opportunities to freely explore and develop confidence in their movements, allowing them time to problem solve and simply find their creativity when they are bored. By acknowledging and embracing this, creating opportunities for motion, we can foster healthy development – and save ourselves some frustration. Small steps add up – maybe you can't find a 60-minute block of time for outdoor play, but what about four 15-minute blocks? Consider adding some time while you wait for the bus, making a quick stop at the playground near the bank, bringing your child along to walk the dog even though it's quicker if they stay home with your partner.

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### Programs

The Society of Health and Physical Educators (SHAPE) recommend that all child development centers, elementary schools, and middle schools provide 30 to 60 minutes per day of physical activity, which can include “recess, active classroom lessons, in-class physical activity breaks, and physical education.”<sup>21</sup>

Children are innately driven to move; movement underpins all other aspects of child development. Educators' expectations for children to sit still, listen and attend must be realistic – you see it in the daily classroom activities when we tell them not to move! Academic goals and physical activities aren't at odds with each other – rather, they each have their own value while strengthening the impact of the other.

Start by incorporating movement into your classroom wherever you can, in activities and in transitions – help children channel their energy the way they need to, which can help with classroom management as well. Keep expectations realistic about how long they can sit. As a basic guide use the child's age plus two additional minutes, e.g. a two-year-old may be able to sit still and concentrate for four minutes.

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## Policymakers

Of the 100 largest U.S. cities, only one ensures that all children and families have a park within a ten minute or less walk.<sup>22</sup> Only 54 percent of US kids live within a ten minute walk to a park – start by finding out the rate in your city with resources from the Trust for Public Land.<sup>23</sup> When getting to a park becomes a major undertaking of a family’s time or requires logistical arrangements – bus schedules, loading the car – it creates one more barrier to kids getting their recommended outdoor time. Undertake a planning process to evaluate your communities’ offerings and identify well-trafficked locations which, with some attention, could become a vibrant play space – consider facilities near schools, transit hubs, libraries, and grocery stores; these are locations where families are likely to be with their children and can make a quick “play stop” in the course of their errands.



## Communities

How can you build “natural thinking” into your community? Some businesses and community-based organizations may be able to bring their programming outside and make it easy for families to engage with their services while enjoying some nature. For others, it may be easier to build small reminders into daily life – even city streets lined with trees give an opportunity for nature talk. Develop and share nature “conversation starters” with families, hanging them in the window of your business.

City planning shapes the everyday experience of families in ways we often might not appreciate. Long commutes rob families of time together, particularly during daylight hours when outdoor learning is most intuitive. The average American commute is 27 minutes each way, and 14 million residents spent more than an hour commuting. Transit systems that keep up with demand, traffic planning which prioritizes both safety and efficiency, and workplace flexibility which creates opportunities for remote work can help reduce a range of work-life pressure on employees and families.<sup>24</sup>

## **We have no access to outdoor space.**

**Challenge:** Many kids lack access to safe, quality places to play, which creates a real barrier for them to enjoy these benefits – and deprives them of a childhood rite of passage we all cherish. For families in cities and rural areas, it can be particularly difficult to access quality play spaces within walking distance. Play advocacy group KaBOOM! recommends children have access to a park within a walking distance of 0.5 miles. In many instances, this is not realistic - consider suburbs without sidewalks; rural areas with large distances to travel; and cities with a shortage of open space or adequate transportation. Child care centers and schools may not have open space to build a playground or an open field for free play.

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### **Families**

Explore your neighborhood on foot with your child – and allow them to do so on their own as they get older. Viable playspaces and playgrounds may not always be included in what your mapping app shows you – for example, some schools allow public use of their playground equipment but would not show up on your phone as a park space. Walking to familiarize yourself with the neighborhood, and explore it through your child’s eyes, is itself an opportunity for exercise and exploration.

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### **Outdoor**

If your program does have playspace, could it be made available to families after standard hours, and to others in the community? What would you need to have in place to feel comfortable with the arrangement – volunteer monitors, partnership with the city? Speak with your city’s parks and recreation department regarding opportunities to formalize and publicize this partnership, especially if your facility is usually closed in the summer and equipment is not being used. For inspiration, we recommend exploring the projects the Early Childhood Health Outdoors initiative at the National Wildlife Federation for examples of this work in action.<sup>25</sup>



### **Programs**

Any outdoor facility, no matter how small, is an opportunity to broaden horizons. Be creative when working with what you have got, consider how you can help children climb, balance off the ground, spin, swing, jump and roll. Bring nature to your outdoor area, e.g. by creating a “mud kitchen” for creative, messy outdoor play which doesn’t require wide open fields. Mud kitchens do not need to be fancy and do not cost much. The most important part of a mud kitchen is that they are made with the children who will be using them. The kitchen needs an easy accessible supply of basic materials: walls, fences or other vertical surfaces to allow for hanging utensils and pots; a water supply, which does not have to be nearby, as children love to fill, and transport containers to the kitchen; a variety of collecting containers, utensils, and a work surface; gravel, pebbles, dirt, and grass; and an area for washing everything up.<sup>26</sup> Other programs have had success

developing “learning gardens” which allows kids to get outside, get dirty, and develop a healthy connection to where their food comes from.<sup>27</sup>

### **Indoor**

Have an indoor movement area where children can move freely, especially at low level. Tummy time for babies is important but crawling activities are also vital for older children to build muscles and develop links between the body and the brain. Create opportunities for children to move freely in a range of ways, e.g. through dance, and role play. Try to create an environment where children are not inhibited by educators telling them to stop doing what they are doing.

Provide open ended fine motor resources that allow the child to set their own challenges rather than a pre-decided outcome. E.g., rather than plastic lacing cards with pre-cut holes, use open-weave materials, such as mesh bags where they can make their own shapes as they thread.

How can you best utilize the indoor facilities you do have? A gymnasium, cafeteria, or multi-purpose room can all help to create some room to runaround, particularly if your families would prefer children not be outside in unpleasant weather.



#### **Policymakers**

Undertake a play space mapping process as part of broader commitments to walkable living and family life. KaBOOM! has guidance on community mapping efforts.<sup>28</sup> Work with your community to understand where parks are missing and any interim measures you can incorporate. Sponsor a partnership program with schools and businesses. The National League of Cities provides a Municipal Action Guide which offers concrete steps government and community leaders can take to begin improving access to outdoor space.<sup>29</sup>



#### **Communities**

Businesses and community-based organizations can help develop temporary and permanent opportunities for play. Consider parklets. Can your restaurant afford to turn your outdoor seating into community seating, even if just during “off-peak” hours and market the opportunities? Sidewalk chalk and Astroturf can go a long way! Can you block off your parking lot for outdoor events? If you are based in a commercial district, working with other businesses or your Chamber of Commerce to close down the street for a day of sidewalk sales and outdoor play. Supporting outdoor play can benefit local residents and also serve as an investment in your business.

Not sure how to get involved? Learn from organizations already leading in this area. The National League of Cities Children & Nature Network has an interactive map of communities worldwide working to expand access to nature for children as well as a resource guide to help all community stakeholders find a way to contribute.<sup>30</sup>

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**I am afraid our children will get injured, or our environment feels unsafe.**

**Challenge:** No parent wants their child to get injured in the pursuit of fun – and the fear can be even worse when you are responsible for someone else’s child! While child care centers, governments, and community programs can take reasonable steps to minimize the risk of harm, we can often stunt children’s creativity and ability to gauge risk by stepping in too soon or limiting opportunities.

Sometimes, the fear isn’t about falling off the monkey bars – it’s about safety in neighborhoods in which families live and play, or about dangerous traffic conditions getting to a play space.



Families

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Create a safe space for big play, as much as possible. All young children will have days where they are climbing on the furniture, but having a designated space for more physical activities can help to redirect them into less risky activities. Provide opportunities for children to move in a range of ways both indoors and outdoors - jumping or hopping across carpet squares or walking on pillows, using large cardboard boxes to crawl in and out of and climb over, and building dens using blankets and scarves. Balancing along a ribbon on the floor with their eyes closed, making a masking tape road to walk around, jumping on a large sheet of bubble wrap, making different shapes with their bodies, e.g. utilize a few key children’s yoga poses which might also help give some calming quiet time to other family members too! Build a simple obstacle course using cardboard boxes, or baskets, hanging scarves or playing with balloons.

Give children opportunities for movement that don’t involve “getting it wrong.” Lots of musical collections exist to help your family engage with motion, but many of them give specific instructions for children on what to do. This may help parents if they first feel “shy” about dancing around the living room with their children, but also give children the chance to design their own movement to a variety of music and to “feel” the movement of their bodies.



Programs

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Provide children with a challenging outdoor environment that enables them to build confidence and a can-do attitude. Be on hand to give verbal guidance and scaffold their learning to ensure that they learn from their mistakes and ultimately experience success. The best risk management processes involve the children assessing risks for themselves alongside an adult. E.g., if it has been raining, children would assess whether equipment is safe to use. Introduce new resources carefully and slowly. Emphasize how to use them safely and effectively. Less is always more! Having a team agreement on your risk policy, and incorporating children into the process whenever possible, is paramount. If you are taking children off-site for outdoor play, like a walk to the local playground, plan your safety protocols and “buddy system” in advance; communicate across all staff members; and let parents know your approach ahead of time.

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### Policymakers

There are lots of examples of how government agencies can help support safety in playspaces, ranging from parks departments having adequate resources to maintain the equipment, to strategically utilizing police patrols at local playgrounds. But consider the broader societal conditions that could keep families indoors. Are the streets around the park well-lit and in good condition? Can traffic calming measures be utilized near parks and outdoor plazas to ensure slow speeds in case children dart into the street? Do you have bike lanes leading to parks, and bike racks on site, so children can safely arrive by bike, or scooter, or skateboard?



### Communities

If you are a business or community-based organization, find out how you can get involved in supporting quality park facilities and creating a neighborhood where families feel safe. This might include assembling a volunteer team for a park cleanup, helping to fundraise for new facilities, ensuring your own property has well-maintained sidewalks and lighting. Work with your local Chamber of Commerce or Business Improvement District on these efforts, or more informally collaborate with other local organizations you know.

Consider ways to “signal” to families that you are there for them, not just as clients but as members of the community. Is your facility easy to get in and out of if one has a stroller? Are there people loitering outside of your business who cause problems for pedestrians?

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## **We struggle to balance technology with unstructured play.**

**Challenge:** Shiny, fast, and constantly within arm's reach – smartphones and other electronic media devices are a temptation for children and adults alike. Most parents know the feeling of a stressful day, where a child is soothed only by loud cartoon characters on the screen. Families and programs alike may also see the appeal of so-called educational programs and apps in an increasingly STEM-focused (science, technology, engineering, and math) world. Families may feel guilty about their media choices but unsure how to set limits for their child or how to choose appropriate media.

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Families

Create and teach good technology habits and stop screen time from becoming an obsession. Don't reach for the tablet when the going gets tough and children need diversion. Remember - children need to move! Be aware of unrealistic expectations, as when going out for meals. Keep it short and use other distractions, e.g. talking to children or bringing a favorite toy. Don't be fooled by the alleged advantages of educational apps, many of which can label themselves as educational without meeting any outside standards. Children learn by exploring and experiencing trial and error and where they can question and evaluate what they have found. The American Academy of Pediatrics recommends no more than one hour of screen time per day for children aged 2 to 5 years, and recommends high-quality programming.<sup>31</sup> Keep your own technology habits in check, even if that means hiding your phone under your coat so you are not tempted to reach for your device during dinner.

In choosing technology for children, do your homework beyond just the description in the app store, and consider the “3 Cs” shared:<sup>32</sup>

**Content**—How does this help children learn, engage, express, imagine, or explore?

**Context**—What kinds of social interactions alongside the use of the technology?

Your **child** – “what one child needs, developmentally, at one moment in time”

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### Programs

Monitor individual children's screen time during the program's day. Co-view with children during screentime and scaffold the learning. Use strategies which teach self-regulation, self-calming and limit-setting.

Educate parents about early brain development and the importance of hands on and unstructured social play. Ask parents of children about their media use and help them develop a family media use plan; the AAP has resources that may be useful.<sup>33</sup> For children under 18 months, discourage use of screentime other than video chat with family. Guide parents to good quality apps and help them become discerning consumers.<sup>34</sup>



### Policymakers

Policymakers often see technology, especially the prevalence of smartphones, as a low-cost opportunity to engage with families, whether through mobile-based government forms and applications or utilizing communication methods between parents and teachers. But kids learn from parental behavior, and parental smartphone obsession does not set a good model for growing brains. Consider the benefits of your agency promoting an app or web tool compared to other methods of outreach.

Use your power as conveners to understand the challenges schools, community-based programs, and health care providers have related to family technology balance.



### Communities

If you have a waiting room at your office or practice, consider ways to shift away from digital media. Instead of having a TV playing cable news or cartoons on a loop, embrace low-budget strategies for creating a "literacy-rich waiting room," like including secondhand books, play materials, and colorful posters.<sup>35</sup> Even if you are a facility that does not specifically cater to children, parents likely often have children in tow – and adding these materials may help make the waiting experience more pleasant for everyone!

Parents commonly turn to digital devices to occupy children during errands, but low-cost strategies can be used to help foster positive interactions on site instead. Researchers have found that adding signs tailored to a location can foster language-rich conversations – like child-friendly conversation starters in supermarket, or posters in laundromats – which also build in a distraction for parents.<sup>36</sup> It's a win-win for all customers.

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