Screen Time, Creative Play and Physical Activity: How They Impact Early Childhood Development & Obesity

Mary McCourt
Missoula City-County Health Department
Childhood Obesity

- National concern
21% of children ages 2-5 years are currently overweight or obese
Missoula County BMI-for-Age
3rd Graders
2008-2009 & 2009-2010

Prevalence of Overweight and Obesity

- 26% Overweight or obese (≥ 85th %ile)
- 12% Obese (≥ 95th %ile)
Background

- Poor dietary behaviors and physical inactivity increase risk for childhood obesity
- 61% of US children ≤6 years are in child care
- Foods and beverages consumed and physical activity in child care settings play a vital role in childhood obesity
- Intervention efforts in child care settings can be effective for:
  - promoting healthful behaviors
  - ensuring children develop healthful early in life
Did You Know?

The American Academy of Pediatrics recommends:

- NO screen time for children under 2
- Limiting screen time to 1-2 hrs. of QUALITY programming for children 2+ years old.
- NO screen media in the bedroom
And yet...

• On average, babies as young as 6 months to 3 years old spend nearly 2 hours a day with screen media (almost 20% of the waking hours).

• 40% of parents with young children report their family TVs are on “most” or “all” of the time.
Why It Matters

Screen time in the early years affects a child's physical health.

- Children are inactive and often snack on high calorie, high gat, and/or salty foods when watching TV.
- Over the last 30 years, obesity rates have tripled for preschool children ages 2-5.
• The majority of obese children 5-10 years old already show signs of heart disease.

• Active free play helps young children develop imagination, creativity and problem solving ability—all of which lead to positive, health-promoting lifelong skills.
Screen time in early years affects a child’s chances for success in school.

- Healthy brain development, in very young children, depends on emotionally positive, live interactions with adults, other children, and their surroundings.
- Screen media is not live, nor is it interactive. Therefore, brain development can be hindered by screen media.
- Children who watch a lot of TV and videos have weaker language skills than children who do not.
• Close relationships with responsible adults
• Direct knowledge of the living world of nature, developed through outdoor play, exploration, and gardening
• Time every day for child-initiated play
• Music, drama, puppetry, dance, painting, and the other arts, offered both as separate classes and as a kind of yeast to bring the full range of other academic subjects to life
• Hands-on lessons, handicrafts, and other physically engaging activities that embody the most effective first lessons for young children in the sciences, mathematics, and technology
• Rich face-to-face language experiences, including conversation, poetry, storytelling, and books read aloud
• Time and space for children to create meaning and experience a sense of the sacred
• Young children’s vocabularies and other language skills—which strongly predict school success—develop from hearing words spoken and read directly to them daily.

• Background TV can interfere with free play time, quality time with family, strong language development and sleep quality—all of which predict success with learning.
Creative Play

- Sociodramatic opportunities
- Emotional
- Cognitive
- Language development
- Social skills
- Problem solving
Studies have shown a relationship between TV viewing and overweight in young children. For example, watching more than eight hours of television per week has been associated with an increased risk of obesity in young children and exposure to two or more hours of television per day increased the risk of overweight for three-to five-year-olds (5,6). Among four-year-olds, as body mass index increased, average hours of TV viewing increased (7). Also, young children who watch TV have been shown to have poor diet quality. For each one-hour increment of TV viewing per day, three-year-olds were found to have higher intakes of sugar-sweetened beverage and lower fruit and vegetable intakes (8). Children are exposed to extensive advertising for high-calorie and low-nutrient dense foods and drinks and very limited advertising of healthful foods and drinks during their television viewing. Television advertising influences the food consumption of children two- to eleven-years-old (9).

- About two-thirds (66%) of children ages six months to six years watch television every day. About a quarter (24%) watch videos or DVDs every day, and nearly two-thirds (65%) watch them several times a week or more. Additionally, young children engage in other forms of screen activity several times a week or more including using a computer (27%), playing console video games (13%) and playing handheld video games (8%) (10). Survey data show that by three months of age, about 40% of infants regularly watch television, DVDs or videos. By twenty-four months, this rose to 90% (1).
Consuming Kids
Missoula Physical Activity Study

533 students

Meeting Health Guidelines
Elementary School = 78%
Middle School = 54%
High School = 11%

Meeting Fitness Guidelines
Elementary School = 27%
Middle School = 12%
High School = 2%
As BMI percentile increased, physical activity decreased.

- **Normal weight students: 72%**
  - 49% of normal weight students are meeting PA guidelines for health.

- **Overweight students: 19%**
  - 24% of this group are meeting physical activity guidelines for health.

- **Obese students: 9%**
  - Only 10% of this group are meeting physical activity guidelines for health.
Recommendations

Active opportunities—daily opportunities that may result in increased physical activity

- Children should be provided with at least 120 min of physical activity daily
- Outdoor activities should be provided ≥ 2 times daily
- Teacher-led physical activity should be provided ≥ 2 times daily
Fixed play environment—equipment which is fixed in the indoor and outdoor environment

- A variety of fixed play equipment should be available to all children
- Outdoor play spaces should include open, grassy areas and a track/path for wheeled toys
- Indoor space available for all activities, including running
Portable play environment-equipment that can be transported and used in various locations

- Large variety of portable play equipment available for simultaneous use by all children
- Outdoor portable equipment freely available to all children at all times
Sedentary opportunities-daily opportunities that may result in decrease physical activity

- Children should not be seated for periods greater than 30 minutes
- Television or videos rarely or NEVER shown
Sedentary environment-items in the environment that may discourage physical activity

- Display of sedentary equipment (e.g., televisions and videos) should be limited
- Promotional resources (e.g., posters and pictures) should be displayed openly
Staff behavior-interactions between staff and children that may promote/discourage physical activity

- Staff should participate with children in all active play
- Staff should encourage children to be active
- Active time should never be withheld as punishment, but should be offered as reward
Physical activity training/education-training or education of staff, children and parents that may increase participation in physical activity

- PA education be provided via standardized curriculum more than 1X a week
- PA education opportunities to be provided to parents more than 3X week
• Good luck & thank you!