

## **Play: A Biological Drive Important for Healthy Child Development**

Today's children are at risk of losing something vital, their playtime. Without careful consideration of how play shapes the lives of children, it is easy to minimize its importance and justify reducing or removing it from today's school curriculum and from the hours that children have after school. However, when the importance play is considered from a scientific standpoint, it is difficult to ignore the fact that play is a biological drive and it is imperative for healthy, whole-child development.

The impulse to play is so important to human development and survival that it seems to have become a biological drive<sup>1</sup>. A biological drive is generated internally and arises from an instinctual need that has the power of driving behavior<sup>1, 2</sup>. The strongest of these drives are the desire for food and sleep, but the drive to play may be equally important<sup>1, 3</sup>. Although not as strong as the desire for food or sleep, when the desire for play is not met in the lives of children, it causes a homeostatic disturbance generating a biological drive to satisfy that desire<sup>2</sup>. To deny children of the right to play is to create dissonance in them as a primal desire goes unfulfilled.

Play is so important to optimal child development that it has been recognized by the United Nations High Commission for Human Rights as a right of every child<sup>4</sup>. It helps to foster healthy cognitive development by providing environmental stimulation, which serves to create new synaptic pathways through experience-dependent synaptogenesis in the brains of children<sup>3, 5, 6</sup>. Experience-dependent synaptogenesis refers to the encoding of new experiences that occur throughout life, which foster new brain growth and the refinement of existing brain structures. These experiences vary for every individual. They are also a source of enduring plasticity and of adaptability to the demands of everyday life<sup>3</sup>. Myelination, the process in which nerve cells become insulated increasing the speed that nerve impulses are transmitted from one cell to another, is also affected by young children's behavioral experiences, such as play, and is a necessary part of healthy cognitive development<sup>6</sup>.

In addition to cognitive development, play is also important for the social development of children. A child's imagination or make-believe play is a powerful medium for socialization, assisting in the development of social skills such as cooperation, sharing, negotiating, leadership, as well as valuable problem solving skills<sup>3</sup>. Cynthia Jones, a fifth grade teacher at North Live Oak Elementary in Watson, Louisiana believes that the fifth grade is a "tricky time" socially for her students and that playing has helped many students to develop social skills and to form lasting friendships. She recalls one of her students that she refers to as a "shy fifth-grade girl" who was having trouble making friends. The girl usually just walked around alone at recess, reserved and distant from the other students. One day when no other students were playing on the swing the shy girl started swinging. A few days later Ms. Jones noticed that, the girl was swinging with another little who usually swung alone. After a month, the two lonely girls on the swing had become three. Not only did the three girls swing together, but they also began to walk around together talking, socializing. The swing set provided the medium upon which the socially awkward fifth graders could form lasting friendships and develop necessary social skills (C. Jones, personal communication, April 10, 2015). Some experts believe that the single best predictor of adult adaptation is not IQ, not school grades, and not classroom behavior, but the adequacy with which a child gets along with other children<sup>3</sup>.

Healthy social development allows children to play together successfully, which can lead to healthy physical development through active play. When moderate-to-vigorous exercise is achieved through active play, the benefits can be reduced risk for cardiovascular disease, diabetes, and colon cancer; prevention of obesity and premature death; development of healthy bones, lean muscles, and non-arthritis joints; lowered blood pressure and cholesterol; improvement of cognitive performance; increases in self-esteem; and reduced feeling of anxiety and depression. Physical activity experts recommend that children age five to nineteen engage in at least one hour of moderate-to-vigorous physical activity on a daily basis. Unfortunately, research shows that only 36 percent of students nationwide meet these criteria. Other research indicates that the prevalence of overweight children six through eleven years old rose from seven percent in 1980 to nearly nineteen percent in 2004<sup>7</sup>.

Even with the overwhelming empirical evidence available indicating the importance of play for healthy development in children, they are still in danger of losing their playtime. As mom and dad juggle work, school, and countless after school activities such as soccer, tee ball, dance, and karate, the time for imaginary, unscripted, spontaneous child-directed play goes by the wayside. To deny children this type of play is to deny them access to what makes up their identity as a child. Children have been losing their playtime at school as elementary schools bend under the collective weight of No Child Left Behind and Common Core standards that reduce recess in an attempt to increase standardized test scores<sup>8</sup>. Socioeconomic factors may also reduce playtime for many children by preventing them from accessing safe playground equipment after school. Adults, parents, teachers, and community members need to educate themselves about the importance of play and advocate for the rights of children, ensuring that they have adequate time to play and proper equipment to play on.

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