

Active Play and Health



Encouraging active play and participation in sports is vital for our children. Why? Because there are fewer opportunities for active play than in the past – fewer urban play spaces, less school time devoted to play and sport, fewer playmates at home to play with. This contributes to the sedentary lifestyle of young people and the problems, such as obesity, that may accompany it.



Physical play begins in infancy, with rhythmic repetitive movements. It develops into active play during the preschool years and rough-and-tumble play during middle childhood. Sport begins in middle childhood and may continue throughout life. Physically active play improves muscle control and co-ordination, strength and endurance, and may promote fat reduction and body temperature regulation. Rough-and-tumble play usually involves playing with others and is related to social skills, status and emotional control.¹

Given the space and resources, children enhance their physical development through play that draws upon bodily movement and control. They build muscle strength and can develop habits and interests that form the basis for a healthy lifestyle. Children only become "couch potatoes" when adults have restricted their activity, limited their access to outdoor play and allowed children to spend excessive time on "screen play" with a television or computer.²

Obesity is more than just a cosmetic concern. Short- and long-term physical and psychological problems can result from childhood obesity, which has been linked to shorter life spans and a number of health factors including diabetes, cardiovascular disease, high blood pressure, stress on bones and lungs, high cholesterol, joint disease, irregular menstrual cycles and stroke. Furthermore, obese children are often teased and psychological effects can include feelings of inadequacy, low self-esteem and embarrassment. When these children become obese adults, they are often discriminated against and have difficulties in finding jobs and establishing relationships.

IF OBESITY IS THE PROBLEM, PLAY MAY BE THE SOLUTION

Young animals living in an environment with a surplus of food rarely develop obesity – they simply play more.

'Animals play so that they burn up energy that might otherwise be stored as fat... By engaging in energy-burning play, animals remain lean and fit, making them less susceptible to predators. If excess calories were not burnt off in play, then the resulting obesity might increase the risk of predation by impeding escape ability through



¹ Anthony Pellegrini & Peter K. Smith. (1998). Physical activity play: The nature and function of a neglected aspect of playing. *Child Development*, 69, 577-598.

² from What is play? Children's Play Information Service. 2002 www.ncb.org.uk. For more information on play and health see <http://www.ncb.org.uk/cpc/dams.htm#health>



increasing balance problems, fatigue, muscle strain, inability to enter narrow spaces.... Moreover, because play activity raises basal body temperature, it could decrease the young animal's susceptibility to cold stress and pathogens³.

Childhood obesity results from genetics, the environment, including parental example, emotional instability, hormone levels and also intake-activity

relationships. For the majority of people involved with children, the intake-activity relationship is the only factor they can reasonably influence. This leaflet looks at the activity side of the equation, namely active play in the home, garden, playground and open spaces⁴. Increasing the physical activity level among children is complicated. Schools, under pressure to increase test scores, are decreasing children's opportunities to participate in break periods and physical education⁵.

Recent studies suggest one solution to childhood obesity is to encourage children to participate in active free play outdoors. Children burning calories in play on a playground are more likely to maintain a healthy weight. Cardiologists recommend that children get 30 minutes of vigorous cardiorespiratory exercise at least three times a week. Outdoor play areas are excellent places to promote active and healthy recreational habits.

Play spaces should provide challenging activities for children who are not as physically adept as their non-obese peers, so that they will have opportunities to be physically active during play times⁶.

Active free play can lead to improved academic performance. One study shows that providing children with play breaks during the school day maximizes their attention to cognitive tasks. Without play, self-control does not develop adequately. 'The idea that all types of play – from fantasy to rough-and-tumble – have an important, if not critical, role in child development has not received much attention from mainstream child development researchers', says child psychologist Anthony Pellegrini⁷.

ROUGH-&-TUMBLE PLAY

Active play, especially outdoors, burns more calories than other forms of play⁸. 'Professionals need to be careful not to equate play-fighting with serious fighting and not to label a child as "aggressive" simply because he or she prefers a particular kind of play. Given many children's interest and enjoyment in active, locomotor (physical) play, children should be given numerous opportunities for this type of play as well. Such activities likely contribute to motor development, overall physical fitness and possibly cognitive development⁹.

Girls who engage in active play as children are more likely later to be involved in sport.¹⁰

Fathers are more likely than mothers to initiate physically active play with their children. About one-third of fathers engage in rough-and-tumble with their children on a daily basis and only 4% to 16% of fathers never do.¹¹

³ Thomas G. Power. 2000. Play and exploration in children and animals. Hillsdale, NJ & London: Lawrence Erlbaum Associates. p. 154.

⁴ for information on playing safely see the Child Accident Prevention Trust www.capt.org.uk

⁵ <http://www.ptotoday.com/play4.html>

⁶ <http://www.ptotoday.com/play4.html>. Helen Bilton. (2004). Playing outside: Activities, ideas and inspiration for the early years. London: David Fulton Publishers.

⁷ quoted in Beth Azar, (2002). It's more than fun and games. *Monitor on Psychology*, March.

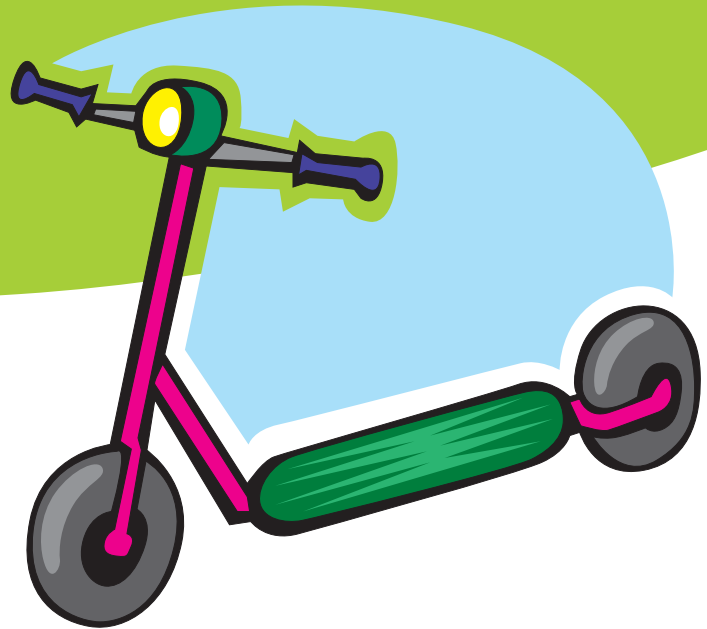
⁸ Anthony D. Pellegrini, M. Horvat, & P. Huberty. (1998). The costs of physical play in

children. *Animal Behaviour*, 55, 1053-1061. Roger Mackett. (2004). Making children's lives more active. Centre for Transport Studies. University College London. www.cts.ucl.ac.uk/research/chcaruse/

⁹ Thomas G. Power. (2000). Play and exploration in children and animals. p.395.

¹⁰ T. Giuliano, K. E. Popp, & J. L. Knight. (2000). Childhood play activities as predictors of sport participation by women. *Sex Roles*, 42, 159-181.

¹¹ D. Paquette, R. Carbonneau, D. Dubeau, M. Bigras, & R. E. Tremblay. (2003). Prevalence of father-child rough-and-tumble play and physical aggression in preschool children. *European Journal of Psychology of Education*, 18, 171-189.



Adults benefit as well from active play. In one study, participation in leisure activities was associated with reduced risk of dementia.¹² And in another, elderly people who played video games had faster reaction times and felt better than a comparable group of elderly who did not play video games.¹³

ENCOURAGING ACTIVE PLAY

Children who are shy, obese, or not well-coordinated will need encouragement for physical play.¹⁴ Toys, playground and sports equipment should be chosen so that they are easily accessible to physically challenged children but still be exciting.¹⁵

TOYS, NOT CANDY

One study investigated whether children in the U.S. would choose toys over candy when offered a choice on Halloween. The 284 boys and girls, age 3 to 14 who were part of this study were just as likely to choose toys as candy. There were no gender differences. According to this research, children will not be disappointed by toy treats rather than sweets.¹⁶

The health benefits of rhythmic movement have been well documented. Electronic games that require bodily activity are a beneficial tool for weight loss. Games that require dancing, for example, are used at schools to promote fitness. The possible health benefits are clear: one dance-along song, 'Max 300' is 88 seconds long and, set on 'maniac' speed requires 578 steps. That works out to an average of 6 steps per second.¹⁷

Design guidelines for play areas should:¹⁸

- provide different play opportunities to complete the social, intellectual and physical growth of children
- contain diverse activity spaces for structured games, creative play, play with natural elements, water and sand play, quiet play and shared open space
- allow the children to create their own environment to some degree to allow for adventure and creative play
- provide ambiguity to stimulate fantasy play, loose parts for creative and cognitive play, balls and games to foster social play
- provide stages of difficulty so that children can choose goals which they can accomplish



¹² Joe Verghese, et al. (2003). Leisure activities and the risk of dementia in the elderly. *New England Journal of Medicine*, 348, 2508-2516.

¹³ Jeffrey Goldstein, L. Caijko, et al. (1997). Video games and the elderly. *Social Behavior & Personality*, 25, 345-352.

¹⁴ R. M. Page, & E. P. Zarco. (2001). Shyness, physical activity, and sports team participation among Philippine high school students. *Child Study Journal*, 31, 193-204.

¹⁵ <http://www.ptoday.com/play2.html>

¹⁶ Marlene B. Schwartz, Eunice Y. Chen, & Kelly D. Brownell. (2003). Trick, Treat, or Toy: Children Are Just as Likely to Choose Toys as Candy on Halloween. *Journal of Nutrition Education & Behavior*, 35 (4).

¹⁷ Edge, 'Dance, dance revolution.' 2003, no.1 24.

¹⁸ from Arnold 1996 <http://www.unl.edu/casestudy/456/sherri.htm>

JUST SOME OF THE TOYS THAT ENCOURAGE PHYSICAL, ACTIVE PLAY

Toys marked with an asterisk* are suitable for indoor play

balls

push-pull-alongs*

hobby horse*

building blocks and construction toys*

stacking toys

ride-ons*, scooters

swings, climbing frames

remote control vehicles

yo-yo's*, frisbee, hula hoop

super soaker

sliding boards

dance mats*

active games such as 'Twister'*

skates

cycles

pogo sticks

in-line skates

trampolines, climbing apparatus

garden tools

stilts

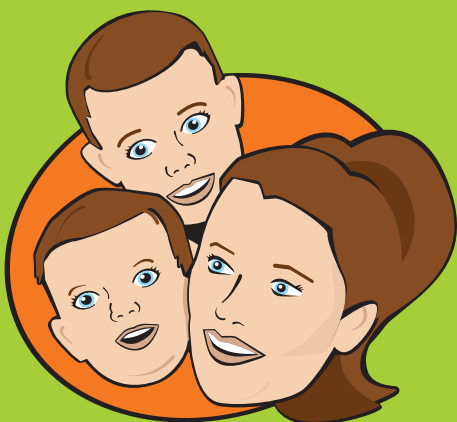
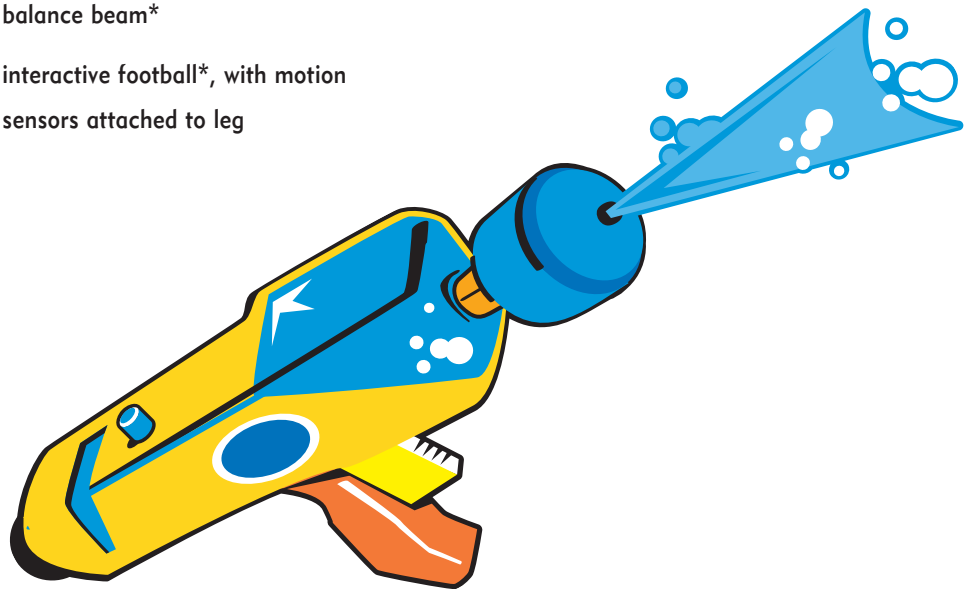
sports equipment

simulated sports games connected to TV or VCR

karoke*

balance beam*

interactive football*, with motion sensors attached to leg



The National Toy Council is concerned with child welfare and promoting a sensible attitude towards toys and play. Its members include representatives of the Child Accident Prevention Trust, British Toy & Hobby Association, National Association of Toy and Leisure Libraries, The Trading Standards Institute, BBC Children's Television, Kidscape, national press, academics, retailers and toy safety experts.

FOR FURTHER INFORMATION

BTHA, 80 Camberwell Road, London SE5 0EG

See all of the National Toy Council's leaflets on the internet at www.btha.co.uk

