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| CrossFit Kids Program and Children’s Mental and Physical Development |
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**Introduction**

What if increasing our future generations’ life expectancy could easily be obtained? Simply applying exercise and a healthy diet into everyday lifestyles could have the most positive effects ever seen. Chronic disease could be significantly reduced and even diminished one day. One new type of exercise being experimented with is called CrossFit. CrossFit is defined as that which optimizes fitness (constantly varied functional movements performed at relatively high intensity)1. Exercise is equally as important as diet and nutrition and can aid people in reaching and maintaining a healthy existence. Can a CrossFit exercise regimen introduced at an early age be beneficial to a child’s mental and physical development? According to a study conducted by UNICEF in 2003, America is falling behind the rest of the world in the classroom. Not only are the studies in education declining, physical education is also being depleted from many school districts. Physical education now only exists at 8% of elementary schools, 6.4% of middle schools and 5.8% of high schools2. CrossFit Kids was created by Jeff Martin and wife Mikki in 2004, a program specifically designed for a special population and the specific developmental needs of that population: neurological, cognitive and motor. CrossFit Kids is not simply a scaled down version of CrossFit, it is entirely CrossFit geared with children in mind3. Research is being conducted annually testing the positive effects of exercise on the brain. With the removal of physical education classes from school systems, children are gradually becoming more obese, less active and education levels are declining. Physical activity is said to be connected with improved physical and mental health in children and adolescents. It has been proven to reduce the risk of chronic diseases such as type II diabetes, some cancers, and even cardiovascular disease in adulthood4, all of which are the most prevalent diseases Americans are suffering from according to the Center for Disease Control5. Not only are Americans falling behind in the classroom, exercise has been linked to self-esteem as well. With the decline in exercise, children have shown to have an increase in poor self-image and self-esteem. Improving self-esteem with way of exercise may help to prevent the development of both psychological and behavioral problems6. I chose this topic because I was introduced to CrossFit a little over two years ago in Sarasota, Florida. At the age of 24, my body was pushed to its limits in the best possible ways. I was taught proper technique to squat, press, and lift heavy weight. After changing my entire lifestyle, I saw tremendous positive effects in my overall well-being including body image, relationships and brain function. I began researching how this type of exercise could be beneficial to children and there was such a positive position on incorporating this into the school system it was overwhelming. The more light shown on the importance of exercise and diet, the better our future generations will become.

**What is CrossFit Kids?**

CrossFit Kids is currently being employed in over 1,200 gyms not only in the United States, but also in Australia, Europe, Africa, India, Japan and Panama. CrossFit Kids is a program specifically designed to strengthen and condition children and teenagers in group setting exercises7. Again, CrossFit can be defined as constantly varied functional movements performed at relatively high intensity1. What does this exactly mean? Constantly varied means that no two workouts are the same, keeping children and teens excited and engaged both physically and mentally. Functional movements include exercises that are fundamentally focused on what kids need in every day play; pulling, pushing, running, climbing, lifting and jumping7. Moving in functional ways will have lifelong applications. Phil Eich, a member of the CrossFit Kids educator committee and writer for the CrossFit Journal, says that, “Learning proper mechanics at a young age will create benefits in sport and life”8. Friendly competitions called Gauntlet events are being created to inspire and challenge children and adolescents. The idea behind these events is to demonstrate how CrossFit Kids encourages lifelong fitness through fun rather than cutthroat competition9. CrossFit Kids was designed to create lasting athletes, not over-trained children. One parent whose child competes at these events stated, “Success breeds success. When a kid is successful at one thing, it leads to something else”. CrossFit Kids doesn’t limit their education and training to only one type of exercise, it tackles 10 fitness domains: cardiovascular and respiratory endurance, stamina, strength, flexibility, power, speed, coordination, agility, balance and accuracy7. The American Academy of Pediatrics released a statement in 2008 endorsing light weight training to be safe and effective for children eight and older10. Skepticism surrounded many parents when it came to cross-training for children, but is sole park play enough to ensure a healthy life? According to the Center for Disease Control, also known as the CDC, obesity now affects 17% of children and adolescents in the United States. That number has tripled from only one previous generation11. Is CrossFit Kids safe? Jeff Martin designed the program to be distributed across four age ranges: preschool, elementary, preteen and teen. All groups are intentionally planned to optimize strength and movement for each age. Preschool classes, ages 3-5, are encouraged to engage in supervised play that integrates simple fundamental movements using bodyweight only. Elementary classes, ages 5-12, are introduced to gymnastics’ style training with light objects such as a PVC pipe or small dumbbells. Preteen classes, ages 12-14, are familiarized with dumbbell training with increased weight and then introduced to exercises using barbells. Teen classes, ages 13-18, are encouraged to explore heavier weighted movements with an increase in intensity of workouts. Most importantly, proper form and mechanics are taught before any weight is ever introduced7.

**Fitness and Academics**

 How can exercise benefit today’s youth? Picture a drug that would put you ahead of your classmates by as much as 33 percent. Sounds simple and easily remedied, right? It is called Learning Readiness Physical Education, more commonly known as exercise12. Not only does exercise lead to better overall health, it can also lead to a positive correlation with academics. Dr. John Ratey, Professor of Psychiatry at Harvard Medical School and best-selling author, studied a chemical produced in the brain called brain-derived neurotrophic factor that aids in the storing of information. Dr. Ratey refers to these chemicals as, “Miracle-Gro for the brain”. The levels of brain-derived neurotrophic factor are significantly elevated post exercise. Children who study after exercise are receiving innumerable benefits. Dr. Ratey validates his studies with the example of the cerebellum. Not only is the cerebellum responsible for balance, which is needed during exercise, it is also linked to memory, learning and social skill13. Traditional physical education classes are often most fun for children who excel in specific sports. CrossFit Kids makes functional movements fun and the program is effective because it creates learning environments for children of all capabilities. All skills and movements can be scaled to individualize and challenge children independently. This creates an environment for increased participation and desire. CrossFit Kids provides teachers with programming to improve physical and mental well-being of their students8. Jeff Martin designed the program to inspire and encourage children to work efficiently in both exercise and in the classroom. CrossFit founder and CEO, Greg Glassman, created a program that emphasizes just that, combining CrossFit training with education. The program was offered to high school students who were interested in increasing their SAT scores at no cost to the student. The CrossFit SAT-prep program was projected to improve students’ thinking processes, logic, vocabularies and in the background, fitness levels. The free program was scheduled on a weekly basis for 12 weeks including three days of CrossFit and two days of tutoring. The results were tremendous. The students’ progress was tracked and overall scores increased by 37.9 percent. Not only do these types of programs have positive effects on the students’ lives, CrossFit community members are also taking notice. Greg Glassman hopes that this will create a constructive flowing effect throughout the public14.

**Fitness and Self-Esteem**

 CrossFit Kids biggest goal is to deter childhood obesity by implementing exercise programs that are fun and engaging. The physical and mental demands of CrossFit Kids raise self-confidence, discipline, persistence, problem solving, and integrity that can be applied in all areas of children’s lives7. According to the World Health Organization, also known as WHO, 1.9 million deaths are attributed to physical inactivity and 2.6 million deaths are attributed to problems caused by being overweight or obese annually. With the decrease of physical education in schools, less after school activity engagement and increased television time, children’s self-esteem has also declined15.

A study was conducted to determine if exercise implementations can improve self-esteem among children and adolescents. It was determined that improving self-esteem at a young age could deter development of psychological and behavioral complications. The review of trials supports that exercise has progressive effects and concludes that exercise can be directly correlated with self-esteem. More research is needed due to the limited number of trials performed6.

Another study performed experimented with the relationship of physical activity and social networking. Three types of groups were researched: 1) friendship similarities in physical activity, 2) peer group influences on physical activity; and 3) social preference and physical activity. The review concluded that both physical activity and friendship play vital roles when choosing each other. Children who possess more self-esteem tend to choose group interaction. More self-esteem is acquired from physical activity, which is influenced by friendship. All three are interconnected and related to one another4. Dr. John Ratey states, “CrossFit is great. It provides the play aspect, certainly the exercise aspect, the connections and the small groups.” 13

**Conclusion**

 Throughout the research obtained on this topic, it is more than evident that exercise plays a major role in the mental and physical development of children. It is not only beneficial to overall health, but also has major contributions to academics and self-esteem. Through the CrossFit Kids program, children and adolescents are provided with a positive atmosphere that promotes learning and growing both as individuals and communities.

For future dietitians it is very important to realize that our nation is facing a serious epidemic of numerous chronic diseases. It is our job to promote exercise, healthy eating habits and support for those in need. Physical education needs to once again be made a priority in schools, which will lead to an increase in Americans’ abilities in the classrooms. With the surge of obesity and poor exercise habits, Americans have the obligation to change things, beginning with the children of all communities.

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