



Pilates – an Effective Exercise Tool & A Safer, Healthier, Low-Impact Workout for Obese Children

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ABSTRACT

Childhood obesity and its consequences have been attracting more attention in the medical field because of the increasing prevalence worldwide and the long-term effects of childhood obesity in adults. Concerned parents are now looking at exercise programs for their children in an effort to keep them fit and set them up for a lifetime of good health. A rigorous exercise regimen, however, may not be beneficial for young children and could even be harmful. For these children, a safer, healthier, low-impact workout is needed such as Pilates. Improved posture and spinal alignment are realized as exercises increase the strength and flexibility. It promotes toned, sleek bodies and improves athletic performance. Pilates can help establish correct principles of movement that children will use for their entire lives, and also create balanced musculature that can alleviate pain and reduce the potential for injury now and as they continue to grow into adulthood.

KEYWORDS : Childhood Obesity, Pilates, Exercise

INTRODUCTION

Childhood obesity and its consequences have been attracting more attention in the medical field because of the increasing prevalence worldwide and the long-term effects of childhood obesity in adults. Obesity is no longer rare in children and the prevalence is increasing at an alarming rate. Pathological processes start early in life and are accelerated by obesity.¹

Modern society threatens children's health. Eating habits have changed so that these days children's diets are high in fat, salt and sugar. In addition, increased time spent in front of the computer or television or playing video games (often while snacking on 'junk food' and soft drinks) means that children spend less time being physically active, thereby producing increasing number of children who are obese. Studies on urban Indian schoolchildren from selected regions report a high prevalence of obese and overweight children.^{2,3,4,5,6.}

Children who are overweight or obese frequently have poor self-esteem as a result of being teased, bullied and ostracized. Lack of exercise, poor nutrition and resultant weight problems in childhood have serious health consequences both in the short term and the long term, including joint pain, asthma, sleep apnoea, raised blood pressure, high cholesterol, fatty liver disease and non-insulin dependent (Type II) diabetes. Children who are obese have a significantly higher blood pressure.⁷ Obesity represents an important risk factor for cardiovascular diseases and is often associated with the future development of hypertension.⁸ It is suspected that future hypertension may develop in children in whom BP is high for their respective age or body size.⁷ Unless we reverse the weight problems in our children we run the risk that the next generation will have such serious health problems that their life expectancy will be less than that of their parents.

DISCUSSION

Exercise or increasing physical activity is one of the cornerstones of pediatric obesity treatment. Exercise can increase energy expenditure and create a negative energy balance, facilitating weight loss. In addition, exercise increases fitness, and exercise may have independent effects on many of the diseases often associated with obesity. Society today sees an increase in sedentary behaviors of our children. Increased sedentary behavior places our young at risk for becoming the first generation to have shorter life spans than their parents. Joseph Pilates, the founder of Pilates believed that "Physical fitness is the first requisite of happiness" and with our children so sedentary physical activity should be compulsory, especially if it leads to a greater understanding of their body.

Concerned parents are now looking at exercise programs for their children in an effort to keep them fit and set them up for a lifetime of good health. A rigorous exercise regimen may not be beneficial for young children and could even be harmful. Young children's developing skeletal frame cannot handle the demanding forms of exercise in

more aerobic-oriented or cardiovascular programs. For these children, a safer, healthier, low-impact workout is needed such as Pilates. While the popularity of Pilates among adults is well chronicled, the exercise program also offers a large range of benefits to children. Improved posture and spinal alignment are realized as exercises increase the strength and flexibility of the abdominal and inner muscles of the body (core or trunk). It promotes toned, sleek bodies and improves athletic performance. Children can gain awareness of their body, and learn how to move efficiently and gracefully. Pilates can help establish correct principles of movement that children will use for their entire lives. It will also create a balanced musculature that can alleviate pain and reduce the potential for injury now and as they continue to grow into adulthood.

Because Pilates is a mind and body discipline, it can guide kids to a stronger body, and a more relaxed state of mind. Working to strengthen their bodies can increase children's self esteem, stamina, abdominal strength and sleep. That, combined with the focused breathing techniques essential to the exercises, can help kids attain a much more serene and less stressful outlook.⁹ With regard to young people's health, Pilate's exercises can override the body's physiological response to stress, initiate the relaxation response and invigorate the nervous system by means of concentrated and focused breathing, integrate all the body's systems to bring students into an energized, alert state and organize whole brain function for optimal learning. It can also raise levels of all chemical "messengers" known to balance behavior and inhibit hunger, unify the cognitive and motor regions of the brain critical to strengthening our attention and coordination, by the introduction of cross-lateral movements. Pilates creates a fun, harmonious, and safe way of learning and developing group dynamics and social skills. It can reduce stress, increase mind and body fitness, and develop key elements of lifetime health such as Self-awareness, Self-care and self-management.¹⁰

Pilates is a unique practice that focuses on foundational and functional movement skills, which challenges and stimulates the student while integrating the body and mind through a series of specific exercises. With this in mind, Pilates can be taught in a manner that is fun for young people, and it readily complements traditional exercise regimens taught in schools. It is essential for all children to be exposed to physical activities that offer opportunities for successful movement experiences. Generally boys have a higher probability of increased physical activity from 9 -12 years onwards, whereas girls tend to decrease or stop their involvement in physical activity around 9-12 years old. These changes in exercise patterns are defined as the "magic window" and are the optimal age range to introduce exercise modalities such as Pilates. Why the magic window? This age range is before the skeletal and muscular growth spurts that come with puberty and it is also when young people are at the peak of neurological development. Learning effective and functional movement during the "magic window" years of neurological development can foster an

improvement in perception of physical abilities.^{10,11} In addition to the physical changes taking place during this time, there are also a host of emotional changes going on during these middle school years. Societal pressures of fitting in and performing well in school add to the vulnerability of this age group. These impactful years serve as a magic window to educate pre-teens and teens about Pilates, a form of exercise that will help them prepare their bodies and minds as they grow into adulthood.

Pilates is a unique practice that focuses on foundational and functional movement skill, which challenges and stimulates children while integrating the body and mind through a series of specific exercises. Pilates training is intended to improve general body flexibility and health by emphasizing “core” (truncal) strength, posture, and coordination of breathing with movement. Joseph Pilates noted that mobilizing early in rehabilitation resulted in a reduced convalescence period after musculoskeletal injuries. Advocates report that the exercises can be adapted to provide either gentle strength training or challenge with a vigorous workout.¹² Pilates original program has been altered by incorporating more preparatory exercises and modifications in hopes of improving safety and maintaining neutral spine position.¹³ Exercises are designed to put participants in a position that minimizes unnecessary muscle recruitment, which could potentially lead to early fatigue, decreased stability, and impaired recovery.

Training, focusing on back extensors and the abdominal musculature, in particular the Transversus Abdominus, is referred to as core strengthening. Goal of core strengthening without straining peripheral joints is realized through concentrating on (1) coordinating breathing with movement; (2) scapular, pelvic, and rib cage stabilization during abdominal movements; and (3) head and cervical spine placement to avoid neck strain. Pilates instructors provide physical assistance and verbal feedback to maximize accuracy as well as safety during exercise. Mat exercise progression initially uses a wide truncal base of support in prone, side-lying, or supine positions, while moving the limbs to vary torque on truncal muscles. As participants develop improved strength and form, base of support is gradually reduced to retrain proprioceptive mechanisms while fostering more efficient movement patterns.¹⁴

CONCLUSION

Joseph Pilates, founder of the Pilates method believed that we must “first educate the child”. Pilates promotes the principles of and integrated body and mind, and recommends beginning the practice at a young age. “In childhood, habits are easily formed –good and bad. Why not then concentrate on the formation of only good habits and thus avoid the necessity later on in life of attempting to correct bad habits and substituting for them good habits”.¹⁵ Enhancement of muscle control, achievement of postural stabilization, and an increase in overall muscular strength, flexibility, and endurance are the pillars that support the popularity of Pilates. Pilates original work serves as the conceptual framework that may be integrated with sound exercise science research to develop safe and effective exercise programs for obese children.

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