

The Health and Fitness Benefits of Tai Chi for Middle-aged and Elderly People

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Abstract: As a traditional form of Chinese martial arts, Tai Chi attracts martial arts enthusiasts worldwide with its unique charm while also serving as an ideal fitness choice for middle-aged and elderly individuals. Its profound philosophy of health preservation and remarkable fitness benefits make it particularly appealing. Tai Chi emphasizes the coordination of breathing and movement. Through slow, smooth, coherent, and gentle movements, it helps regulate the physical functions and psychological well-being of middle-aged and elderly individuals. This practice significantly enhances their overall health and effectively improves their quality of life. This paper explores the concept and characteristics of Tai Chi, examines its fitness benefits for middle-aged and elderly individuals, and proposes corresponding exercise approaches, aiming to provide practical guidance.

Keywords: Tai Chi movement; Middle and old age; Fitness; Efficacy

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1. Introduction

With the rapid advancement of society and the intensification of population aging, the health concerns of middle-aged and elderly individuals have garnered increasing attention. As a traditional and effective form of exercise, Tai Chi has emerged as a popular choice for fitness methods tailored to the needs of this demographic.

Known as a treasure of traditional Chinese martial arts, Tai Chi encompasses a profound philosophy of health preservation and delivers unique fitness benefits, making it an ideal option for middle-aged and elderly individuals striving for a healthier lifestyle. Characterized by slow, smooth, consistent, and gentle movements, Tai Chi is particularly suited to this age group. Its low-intensity and continuous nature minimizes physical strain while effectively promoting overall body adjustment and functional enhancement through the integration of various movements and coordinated breathing. This practice ultimately achieves the goal of strengthening the body and maintaining health ^[1].

2. Overview of the Tai Chi movement

2.1. Definition of Tai Chi movement

As a traditional practice that integrates Taoist philosophy, traditional Chinese medicine theory, and martial arts, Tai Chi originated in China and encompasses a profound cultural heritage and unique sports concepts. It is not merely an external form of physical exercise but also an embodiment of internal cultivation and spiritual aspiration. Tai Chi emphasizes the principle of “overcoming rigidity with softness and stillness overcoming motion.” Through slow, fluid, and consistent movements, it harmonizes Yin and Yang, unblocks channels and collaterals, and achieves the dual purposes of physical fitness and character development ^[2].

During practice, movements are required to be relaxed and natural, with an emphasis on non-forceful intention. The flow of Qi and blood is guided by the mind, promoting harmony and unity within the body. Tai Chi comprises various forms, each imbued with the concepts of attack and defense. However, its primary aim is not aggression but the cultivation of a calm and composed mindset and the ability to respond to adversaries with tranquility and control. This mindset is particularly effective in alleviating stress and enhancing self-regulation in today’s fast-paced modern life.

Additionally, Tai Chi focuses on the coordination of breathing with movement. Deep, fine, and even breathing techniques further relax the body and ensure the smooth flow of Qi and blood. This method not only improves cardiopulmonary function but also regulates the nervous system, enhancing the body’s adaptability and immunity.

In summary, Tai Chi is a comprehensive practice that integrates fitness, health preservation, and self-defense. Its unique principles and fitness benefits make it a beloved traditional activity. Through consistent practice, individuals can achieve physical health while experiencing significant spiritual satisfaction and personal growth.

2.2. The characteristics of Tai Chi

2.2.1. The combination of movement and stillness, using softness to overcome rigidity

Tai Chi emphasizes the integration of motion and stillness, where stillness exists within motion, and motion exists within stillness. During practice, the body maintains an outward appearance of calm while internal activity continues, guiding the flow of Qi and blood through mental focus to achieve harmony between the internal and external states. This synergy between movement and stillness helps regulate the nervous system, alleviate mental stress, and foster a sense of calm and relaxation. Furthermore, Tai Chi highlights the principle of using softness to overcome rigidity, avoiding the limitations of brute force. From a technical and combative perspective, it advocates using skillful techniques and flexible movements to dissolve an opponent’s strength invisibly before redirecting momentum to counterattack effectively. This philosophy embodies the martial arts essence of Tai Chi while reflecting a profound life principle: when confronted with challenges, one should employ wisdom and strategy to overcome difficulties and mitigate risks.

2.2.2. Guiding Qi through the mind, achieving integration of body and mind

Tai Chi emphasizes mental focus to guide the flow of Qi and blood, striving for a state where the body and mind are harmonized. Practitioners are required to maintain concentration, focus on every movement, and integrate their thoughts into the practice, making their actions more fluid and coordinated. This practice enhances the circulation of Qi and blood, regulates the functions of the internal organs, and boosts the immune system ^[3]. Tai Chi also underscores the unity of body and mind, where practitioners synchronize physical movements, breathing, and inner peace, achieving a balanced state. This integration promotes stress relief, improves overall quality of life, and

instills a sense of calmness and confidence in daily activities.

2.2.3. Combining strength and softness, cultivating physical and mental well-being

Tai Chi uniquely combines elements of hardness and softness, as well as form and spirit, to create a harmonious movement system. In terms of technique, practitioners are encouraged to blend the strength of softness with the rigidity of force while focusing on the aesthetic appeal and inner essence of movements. This combination enhances Tai Chi's artistic and fitness value. From a combative perspective, the interplay of hardness and softness creates unpredictability, making it challenging for opponents to gauge intent or strength. Moreover, the emphasis on uniting form and spirit encourages practitioners to cultivate their inner temperament alongside refining technical skills, making Tai Chi a practice that integrates both internal and external growth. This dual cultivation elevates Tai Chi to a martial art that fosters physical health, mental clarity, and spiritual refinement.

3. The fitness effects of Tai Chi on middle-aged and elderly people

3.1. Enhancing cardiopulmonary function and promoting blood circulation

With age, the cardiopulmonary function of middle-aged and elderly individuals declines, often leading to poor blood circulation. As an aerobic exercise, Tai Chi effectively enhances heart and lung function while promoting blood circulation through slow and deliberate movements. Tai Chi emphasizes deep, fine, and even breathing, which increases lung capacity and improves cardiopulmonary endurance. Additionally, its movements engage muscles and joints throughout the body, stimulating blood circulation, reducing vascular pressure, and lowering the risk of cardiovascular diseases. Regular Tai Chi practice can result in noticeable improvements in respiratory function, such as smoother breathing and reduced fatigue during physical activity.

3.2. Improving joint flexibility and preventing osteoporosis

Joint stiffness and osteoporosis are common concerns for middle-aged and elderly individuals. Tai Chi, as a comprehensive form of exercise, improves joint flexibility and prevents osteoporosis through its slow and gentle movements. Practitioners are guided by the principle of “moving without excessive force,” which ensures that joints maintain an optimal range of motion, enhancing their flexibility and stability. Furthermore, Tai Chi stimulates bone growth, increases bone density, and reduces the risk of osteoporosis. For individuals already experiencing osteoporosis, Tai Chi's gentle movements help minimize stress on the bones and reduce the likelihood of injuries.

3.3. Regulating the nervous system and relieving mental stress

Middle-aged and elderly individuals often experience mental health challenges, such as anxiety and depression, stemming from life and work-related pressures. Tai Chi, as a mind-body exercise, effectively alleviates mental stress by regulating the nervous system. Practicing Tai Chi requires sustained mental focus and inner tranquility, facilitating a state of harmony between the body and mind. This integration alleviates negative emotions, such as anxiety and depression, and supports mental well-being. The slow movements and deep breathing patterns characteristic of Tai Chi also relax the body, reduce muscle tension, and improve sleep quality ^[4].

3.4. Promoting digestion and absorption and improving metabolic function

Middle-aged and elderly individuals often experience challenges related to poor digestion, absorption, and reduced

metabolic efficiency due to age-related physical decline. Tai Chi promotes gastrointestinal motility, thereby improving digestive and absorptive functions. The movements stimulate muscles and joints across the body, aiding gastrointestinal activity. Additionally, Tai Chi's breathing techniques help regulate metabolic processes, promote fat burning, and support weight management. For individuals with metabolic disorders such as obesity or diabetes, Tai Chi serves as an effective complementary therapy.

3.5. Enhancing coordination and balance

With aging, physical coordination and balance tend to deteriorate, increasing the risk of falls. Tai Chi, which emphasizes physical coordination and balance, significantly improves these abilities in middle-aged and elderly individuals. Tai Chi movements require practitioners to perform intricate movements while maintaining bodily stability, fostering muscle strength and coordination. Consistent practice enhances balance and reduces the likelihood of falls. Over time, practitioners experience improvements in coordination and stability, leading to increased confidence in activities such as walking and daily movement.

4. Exercise strategy of Tai Chi to improve the physical fitness of middle-aged and elderly people

4.1. Developing personalized exercise plans to gradually improve physical fitness

The physical condition and fitness levels of individuals vary significantly. Therefore, middle-aged and elderly people should formulate personalized exercise plans based on their health status and physical capabilities when engaging in Tai Chi practice. These plans should consider exercise frequency, duration, intensity, and other aspects to ensure effectiveness and safety.

Firstly, regarding exercise frequency, middle-aged and elderly individuals should tailor the number of Tai Chi sessions to align with their schedules and physical conditions. Generally, practicing Tai Chi three to five times per week is recommended to maintain continuity while preventing overexertion and fatigue.

Secondly, for exercise duration, it is advisable to adjust practice times according to fitness levels and health status. Beginners might start with 30-minute sessions and gradually increase to approximately one hour per session as their endurance improves. Practitioners with prior experience can extend practice durations as appropriate, provided they avoid overexertion and the associated risks of fatigue.

In terms of exercise intensity, selecting suitable Tai Chi routines and difficulty levels is crucial. Beginners are encouraged to start with simpler routines, focusing on mastering fundamental movements and breathing techniques. As physical fitness improves, the complexity and intensity of the routines can be progressively increased to enhance the overall benefits of the exercise.

Additionally, adhering to the principle of gradual progression is essential. At the start of training, individuals should begin with basic movements and postures to familiarize themselves with Tai Chi's unique rhythm and style^[5]. Over time, as familiarity and confidence grow, they may gradually incorporate more complex movements to further enhance their physical fitness.

Finally, it is important for middle-aged and elderly individuals to incorporate adequate rest and recovery periods into their exercise plans. Balancing exercise and recovery helps to prevent physical strain and minimizes the risk of injury caused by overexertion.

4.2. Emphasizing standardized movements and breathing coordination to enhance exercise effectiveness

Tai Chi, as a holistic exercise integrating the mind and body, requires a high level of precision in movements and coordination with breathing. To maximize its benefits, middle-aged and elderly individuals should focus on the accuracy of movements and the synchronization of breathing during practice.

Firstly, regarding movement precision, middle-aged and elderly participants should carefully learn and internalize the fundamental movements and postures of Tai Chi. These movements must be executed with accuracy, coordination, and a sense of rhythm and strength. Attention to detail is crucial, as improper execution or lack of coordination may reduce the effectiveness of the exercise and increase the risk of injury. Adjusting the complexity and range of movements based on individual physical conditions and fitness levels is also essential to ensure safe and targeted exercise.

Secondly, breathing coordination plays a pivotal role in enhancing Tai Chi's overall benefits. Abdominal breathing, the recommended technique in Tai Chi, helps improve respiratory system function, increase lung capacity, and enhance breathing efficiency. It is important for practitioners to synchronize their breathing with their movements, maintaining a steady rhythm that aligns with the flow of the exercise. This harmony between movement and breath not only optimizes the fitness benefits but also fosters improved body coordination and balance.

In addition, the depth and frequency of breathing significantly influence relaxation and recovery during Tai Chi practice. Practitioners should focus on maintaining smooth and even breathing, avoiding issues such as shallow breaths, rapid breathing, or breath-holding. Adjusting the depth and frequency of breathing to match one's physical condition and fitness level ensures that the practice remains comfortable and safe.

By emphasizing the standardization of movements and breathing coordination, middle-aged and elderly individuals can effectively improve the exercise outcomes of Tai Chi while minimizing potential risks associated with the improper practice.

4.3. Combining other exercise methods to comprehensively enhance physical fitness

While Tai Chi significantly benefits the physical fitness of middle-aged and elderly individuals, integrating additional exercise methods can further enhance overall fitness levels. These complementary exercises may include aerobic activities, strength training, and flexibility exercises, providing a well-rounded improvement in physical health.

Firstly, aerobic exercise plays a vital role in improving cardiovascular and pulmonary function in middle-aged and elderly individuals. It enhances cardiopulmonary endurance, improves blood circulation efficiency, and lowers the risk of cardiovascular diseases. Activities such as brisk walking, jogging, or swimming can be incorporated alongside Tai Chi to bolster cardiopulmonary function. This combination ensures a balanced approach to improving endurance and cardiovascular health.

Secondly, strength training is essential for maintaining and enhancing muscle strength and endurance, which naturally decline with age. By incorporating strength-focused exercises, middle-aged and elderly individuals can improve muscle stability, endurance, and overall body balance. Exercises utilizing tools like dumbbells or resistance bands are particularly effective and can complement Tai Chi routines to address specific muscle groups and improve stability.

Lastly, flexibility training offers significant benefits in increasing joint mobility and reducing the risk of

injury. As joint stiffness often becomes more pronounced with age, flexibility training can improve joint stability and coordination. Exercises such as yoga and Pilates can be combined with Tai Chi to enhance flexibility and physical coordination, thereby reducing the risk of movement-related injuries and promoting overall body harmony.

By integrating Tai Chi with aerobic exercise, strength training, and flexibility training, middle-aged and elderly individuals can achieve a comprehensive improvement in their physical fitness. This combined approach not only targets various aspects of physical health but also promotes long-term well-being.

5. Conclusion

In conclusion, Tai Chi provides a comprehensive means to enhance the physical fitness of middle-aged and elderly individuals by strengthening muscle strength and endurance, optimizing posture, improving cardiopulmonary function, promoting blood circulation, and regulating psychological well-being. Consequently, Tai Chi can be considered an essential fitness strategy for this population. Through the development of personalized exercise plans, adherence to proper movement techniques and breathing coordination, integration with other exercise methods, and other supportive measures, this low-intensity and highly adaptable exercise modality can be effectively utilized to enhance physical fitness and contribute to a healthier and more fulfilling life.

During practice, it is crucial for middle-aged and elderly individuals to adjust their exercise plans and methods based on their physical condition and fitness levels. This ensures not only optimal outcomes but also the comfort and safety of the exercise routine, minimizing the risk of injury or overexertion.

Disclosure statement

The authors declare no conflict of interest.

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