

## Review Article

# PILATES EXERCISES

Salvi Shah

Lecturer, SPB Physiotherapy College, Ugat Bhesan road, Surat, Gujarat, India.

## ABSTRACT

This article presents a theoretical basis for techniques of physical exercises developed by Joseph Pilates. The method, as a part of the so-called Body Mind Exercises group, first gained recognition among professional dancers, actors and choreographers but has become more popular and is now regularly applied in sport, fitness and physiotherapy. Pilates is a uniquely precise and intelligent approach to exercise and body-conditioning, which gives you a leaner, suppler, more toned body and a calmer, more relaxed mind. The initial part of the paper presents historical background, principles of performing exercises and benefits using the Pilates Method. Pilates is a gentle, non-aerobic exercise method, which lengthens and strengthens the muscles, and improves posture, without stressing the joints or the heart. The Pilates method incorporates both physical and mental elements. The technique focuses on the "power house" or what is known today as the core; in Pilates, this includes the abdominal, gluteal, and paraspinal muscles in particular. The final part of the article includes detailed pilates mat exercise programme (basic, intermediate, advanced) and evidence for the use of pilates exercises. The author hopes to encourage the environment of physiotherapists to enhance their professional skills with elements of Pilates' method.

**KEY WORDS:** Pilates; Powerhouse; Evidence practice.

**Address for correspondence:** Mrs. Salvi Shah, Lecturer, SPB Physiotherapy College, Ugat Bhesan road, Surat, Gujarat, India-395005. **Tel:** +91 9427800238, **Email:** shahsalup@yahoo.com

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## What is Pilates?

Pilates exercises belong to a group of so-called Body-Mind Exercises, where the focus is on controlled movement, posture, and breathing. Pilates (pronounced: puh-**lah**-teez) improves mental and physical well-being, increases flexibility, and strengthens muscles through controlled movements done as mat exercises or with equipment to tone and strengthen the body. The method combines principles of exercises from the Eastern cultures (control of motion by the mind, precision, body centre as the main energy point, proper breathing and relaxation – Hatha-Yoga) and the Western cultures (endurance training, stabilisation – classical ballet).<sup>1</sup> According to Crews, the described training concept assumes reinforcing the muscles of the whole body, however, it is

especially emphasises conscious action exerted on deep muscular structures. Appropriate functioning of those structures is essential for normal stabilisation during motion.<sup>2</sup>

## History

The Pilates Method of body conditioning was developed by Joseph H. Pilates. Joseph Pilates began to develop his system of body conditioning during the First World War and continued to enhance and refine this system over the next 50 years until his death in 1967. All told, the Pilates system of body conditioning contains over 500 stretching and strengthening exercises.<sup>3</sup>

Pilates exercises may be divided into two broad categories: mat and apparatus exercises. The first exercises developed by Joseph Pilates were mat exercises, which as the name implies are

done on a mat on the floor. In the mat class, participants typically sit or lie supine or prone and use gravity to help stabilize the core. Of note, many of these exercises are nonweight bearing and have a strong flexion bias. In addition, Mr. Pilates designed specialized apparatus to train a variety of movement patterns and postures. The Reformer, for example is made of a sliding horizontal platform within a box-like frame upon which a person sits, stands, kneels or reclines; varying resistance to movement is provided via light springs attached to the moving platform and through a simple pulley system.

Upon creation of his method of body conditioning, Pilates named it "The Art of Contrology". Inherent in this name is Pilates' belief that it should be the goal of a healthy person to attain a strong mind and use it to gain total mastery or control over his/her physical body. Therefore, the Pilates Method as advocated by Joseph Pilates is more than just a physical regimen for the body; it is also a balanced regimen for strengthening and conditioning the mind as well.<sup>4,5</sup> Pilates felt that modern society had robbed us of our natural physical and mental vitality. He noted that with the advent of civilization and sedentary indoor living, our activities have failed to exercise the body in ways that are structured and balanced. Additionally he observed that our compensatory efforts via hobbies, activities and recreation, are all too often performed in ways that are unbalanced and ineffective at truly encouraging good control of the body.<sup>(3-5)</sup> The dance community initially embraced Pilates as a method of conditioning ballet and modern dancers.<sup>6</sup>

### Principles of Pilates

Pilates developed a comprehensive method of stretching and strengthening exercises that together aim to create a strong and limber body as well as a strong will of mind that can control the body. Certainly, any method as comprehensive and diverse as Pilates will have many core principles. This is true for the Pilates Method, which may be said to have six key principles.<sup>7</sup> They are: centering, concentration, control, precision, breath, and flow.

### Centering (Powerful body centre – core)

Centering is considered to be the main focus point of the Pilates Method. The "center" refers to the center or core of the body and is usually known as the "powerhouse".<sup>8</sup>

The powerhouse in Pilates is usually defined as extending from pelvic floor inferiorly to the ribcage superiorly. Effectively, the powerhouse is the center of the body. Effectively, the powerhouse is center of the body.<sup>8</sup>

A movement in each exercise is preceded by muscle tension and achievement of a so-called "stabilisation cylinder" around the spine. It is formed primarily by deep muscle-fascial structures: anteriorly - muscles of the abdomen (transverse muscle and internal oblique muscles), posteriorly- multifidus muscle and transverse muscle of loin, superiorly - diaphragm and inferiorly – muscles of pelvic fundus. In EMG studies, it was confirmed that muscles of pelvic fundus, transverse muscle of abdomen and multifidus muscle act synergistically.<sup>9, 10</sup>

In the technique of Pilates, it is strived to their co-activation by tensing the transverse muscle of abdomen, which is practically achievable by following the instruction: "pull the umbilicus towards the spine" and by tensing pelvic fundus muscles. The latter mode of activation of the "stabilisation cylinder" seems to be more difficult because of the fact that, according to some authors, as many as 50% of women are unable to consciously tense the muscles of the pelvic fundus and disturbances of the function of this important muscle group of "deep stabilisers" is observed in 80% of women.<sup>8</sup> In the described method, beginning with the first classes, learning of proper activation of body centre is introduced. It is emphasised that muscle tone should be moderate, that is should constitute approximately 30% of maximum muscle tone. In other words – the tone should be at "2" in a scale, where 0 – minimum tone, 5 – maximum tone.<sup>11, 12</sup>

Many classical exercises by Pilates, e.g. "circles with one leg", especially engage in the movement the muscles directly affecting function of the hip joints. This result from the assumptions of reaching the "strong core", as the function of adductors and abductors of the hip

and of gluteal and latissimus dorsi muscles (because of localisation of their origins on the spinal column and the pelvis) affects stabilisation of the body centre. A well stabilised spine with the pelvic girdle is a fundament of economical motion of humans in the erect posture. This favours elimination of sliding lateral movements within spinal articulations and enables performance of more unimpeded movements of the extremities. Muscular structures located deeply in the walls of the body, close to its core, originating directly on the spine or the pelvis are referred to as core muscle.<sup>1</sup>

Their principal activity involves formation of strong trunk stabilisation essential for performance of basic motor activities such as standing, sitting, walking, leaning over, or catching and lifting objects. Development of civilisation resulting in a sedentary style of living, trauma or disturbances of muscular balance due to bad motor habits lead to weakness and restriction of function of these “deep body stabilisers”. In case of disturbances in body core muscles function, stabilisation of the trunk is overtaken by large muscle groups located externally (trapezius muscle, erector muscle of spine – superficial layers). This leads to chronic tension and fatigue of these structures, which, in turn, results in pain. Activation of deep trunk muscles characteristic for the described method, preceding initiation of each exercise, repeated many times and consolidated during subsequent training sessions aims at formation by the patient an automatic and functional stabilisation of the trunk and ergonomics, ease and lightness in daily life motor activity.<sup>1</sup>

### **Concentration**

It assumes maximum concentration on performance of a given exercise in a proper way. To achieve this, movement visualisation is used – imagination of a motion before and during its conduction.<sup>2</sup>

### **Control**

During the exercises, the mind controls the way they are performed so that they are not harmful. Fatigue of the muscles is avoided by precise performance of a small number of repetitions of exercises (usually 10 in a set), with graded level of difficulty and introduction of respiration and

stretching exercises into training sessions. In the Pilates’ method, control of the mind and motion are to serve to reconstruct normal nerve-muscle coordination based on a profound involvement of consciousness in performing motor activities.<sup>2, 13, 14</sup>

### **Precision**

In Pilates, awareness is sustained throughout each movement. There is an appropriate placement, alignment relative to other body parts, and trajectory for each part of the body. A common saying in the world of Pilates that illustrates this is: “It is not how many, but how”.<sup>8</sup>

### **Breathing**

Appropriate coordination of breathing with performance of an exercise constitutes the first rule introduced in teaching the Pilates’ technique. Proper respiration favours better blood oxygenation thus improving functioning of the mind and movement control. Rib-diaphragmatic breathing is used, accentuated at forced expiration with simultaneous traction of the umbilicus towards the spine. At inspiration, the thorax is widened in three planes (three-dimensional breathing), at forced expiration, oblique muscles of abdomen are additionally involved, which enables better pulmonary ventilation. The crucial movement of an exercise is performed during expiration at proper spinal stabilisation<sup>13, 15</sup>.

### **Flow**

The rate of exercises in the Pilates’ system is moderate, depending on the precision of the performed movement and on individual respiration rhythm. Exercises should be performed at proper concentration and all body movements, including those of transitions between positions, should be performed fluently, with maintenance of a flow. This positively affects safety during exercises, even for persons who experienced injuries.<sup>2, 13, 14</sup>

### **Additional principals of Pilates exercises are:**

#### **Postural alignment**

In the described method, conscious striving to maintenance of proper body posture during all phases of exercise is emphasised. All movements are performed in neutral positions, without enhancing of physiological spine curvatures.

It is stressed out that the head should be positioned without its protrusion in the protraction movement and the shoulders should be positioned without their elevation resulting from excessive tension – “preceding the ear from the arm”. The scapulae should be slightly retracted towards the buttocks direction, the pelvis should remain in a neutral position, and body core should be tensed by “pulling the navel to spine”. While standing, it should be kept in mind to actively elongate the body along the axis of the spine – “preceding the top of the head from the feet”, slightly flex the legs without blocking the knee joints and symmetrically load both feet positioned at a distance of pelvis width from each other. These assumptions as well as the other, resulting from striving for a neutral body position, are obligatory during performance of exercises at other baseline positions. For example, during lying supine on a side, the region round the waist should be slightly elevated over the ground in order to better stabilise the pelvis while the feet should be kept in plantar flexion (the so-called “active feet”). In the Pilates technique, it is also emphasised to correctly change positions for the exercises, e.g. transition from standing to lying down on the back is performed by the so called “rolling of the spine”.<sup>2, 12, 13</sup>

### **Stamina**

Exercises are conducted at a training load adjusted to abilities of the exercising persons. In case of group exercises, it is recommended to divide the group into beginners and advanced subgroups. Classical Pilates’ exercises, e.g. “a hundred”, are designed in several versions, appropriately for skill level of the exercising persons. In the method, it is aimed to achieve an increase in general endurance of the whole muscular system in the distal system – peripheral with regard to the body core.<sup>1</sup>

### **Relaxation**

Acquisition of skills of conscious relaxation of selected muscle groups is an essential component of correct exercise performance in Pilates’ method. According to the principles of this system, movement is linked to concentration of the mind and respiration; when performed smoothly but precisely, it leads to paving new,

more ergonomic movement behaviours as well as it provides measurable psychological advantages by reducing stress level.<sup>2, 14</sup>

### **Coordination**

When combining two or three movements we go through the phases of learning. We start with the “cognitive stage/” proceed to the “motor stage/” before we reach the “automatic phase.” This takes practice but achieves results.<sup>16</sup>

### **Six key benefits of Pilates<sup>17</sup>**

Pilates exercises combine strengthening with relaxation; they lighten the load on your spine and joints by correcting muscular imbalances due to bad posture or misuse of muscles and alleviate tension.

#### **Alignment**

Proper alignment balances your skeleton so your muscles are held at their ideal length, without tension. If your body is constantly held out of good alignment, it places a great strain on your muscles, ligaments, and joints, which will reduce your body’s ability to react to the force of gravity, resulting in aches and pains and inhibited movement. Pilates gives you an opportunity to learn to correct your misalignments and allow your muscles to work as efficiently as they should.

As you exercise, always strive to correct your alignment because it will directly impact on the effectiveness of your workout. Use a mirror where possible to check your alignment and develop your ability to observe how your body moves. Check your feet are in line with your knees and hips, your shoulders are level, and your waist long. For floor exercises, use the mat as a guide. Work in the centre and keep the distances between the sides of the mat and your body equal during the workout.

#### **Key benefits**

- The impact of gravity on your spine and joints will be reduced every day, whether you are moving or at rest.
- The risk of strain or injury is lessened with good alignment, particularly with more challenging and dynamic exercises.
- Improvements in your posture, how you carry yourself, and how you move every day result from awareness of body alignment.

## Strength

Pilates is a wonderful body-conditioning programme because you don't need any equipment in order to strengthen your body. You can simply use your own body weight to create resistance for your muscles and to tone up. Which truly does mean that your workout will be only as effective as the effort you put in to the exercises. Strength begins with a determination to achieve the best. Over time, you will see your muscles gaining tone and looking sculpted, but you'll also feel much stronger and more energized.

Pilates strengthens the whole body, targeting each muscle group evenly with a mixture of dynamic and static strength training. No body part is neglected. You also work on all planes of movement – sitting, lying and standing. This means that the muscles are worked from many different directions, producing a uniform and very deep strength and tone, even without using heavy weights.

### Key benefits

- You are less likely to suffer from muscular and joint aches and pains, or to injure yourself, because your balance and the way you carry yourself will improve.
- You rev up your metabolism by building muscle, so that even when not exercising your stronger body burns more calories.
- Strength leads to greater health: by committing to a Pilates way of life, you will lower your blood pressure and reduce your cholesterol levels.
- Pilates builds strength from the inside out, from your deep core muscles, so that they support your body effectively in movement, and outwards to the limbs.
- Reduced tension and strain in the body results from a strong core, which will also allow your muscles to be free to work with an intensity that will create great results.

## Flexibility

We all want to achieve a strong body, but there must be a balance between strength and flexibility, and Pilates is the perfect exercise regime to achieve this. Tight muscles hinder your mobility and can lead to tension, aches, and pain.

Flexibility is essential for your overall fitness and vitality. It ensures a greater range of movement in your joints, and will in turn mean your joints remain healthy and fare better against normal wear and tear as they age.

Pilates makes most use of dynamic, rather than static, stretching: this involves taking your body into and out of a stretch repeatedly, in a choreographed movement. It warms up the muscles so that they respond more effectively. As you progress through the exercises in this book, you should find your range of movement increasing and your flexibility improving.

### Key benefits

- Your muscles are free from tension, and your movement is unrestricted, when you achieve good flexibility.
- Your posture will improve, because you will be able to hold your muscles correctly.
- Better blood circulation results from improved flexibility, because it helps the muscles to align more effectively. Improved circulation also gives you a boost of energy.
- Joints stay healthy as you age: they resist wear and tear better if they are flexible and move freely.

### Shape and tone

For a lot of us, our muscle tone while at rest may be quite weak. Muscles respond quickly to regular exercise, and after a few weeks of Pilates you should notice visible muscle tone and see your body begin to evolve. Pilates uses your body weight and the occasional prop as resistance for shaping your muscles, but it trains every part of your body evenly – front, back, and sides.

For example, during an abdominal exercise, don't think only about engaging your centre or belly, but be aware of lengthening your limbs, lifting your buttocks, and connecting your shoulders. If you also combine exercise with proper diet to reduce body fat, you'll notice your muscle tone become even more defined.

### Key benefits

- Develop more muscle definition through Pilates exercise – sculpt your waist and shoulders and tone your abdominals, arms, thighs, and your buttocks.

· Change your body shape completely with regular practice of Pilates. With work, you should see a beautifully toned and lengthened body emerge.

### **Endurance**

Pilates builds endurance within individual exercises and also within workouts. Focus on improving your concentration to build strength for both – endurance comes first from mental strength and therefore requires determination and persistence. Visualize your success and becoming stronger, and stay strong through challenging exercises.

You should practise Pilates sequences without breaks, like a choreographed piece of movement. Initially, you may need to take breaks to perform a linked sequence of exercises. Your muscles will begin to tire after several repetitions, but you need to stay focused and to complete the set. Over time, work towards completing a sequence without pausing.

### **Key benefits**

- Pilates builds stamina, not only physical, but mental.
- Immense strength and tone in the body is developed in Pilates by using your own body weight.
- Improved concentration results from focusing on completing each repetition, exercise, and sequence.

### **Stress Relief**

Stress is one of the biggest negative factors of modern life, affecting your physical and mental wellbeing just as much as disease does. Frequent exercise is one of the best remedies for stress and has many benefits. Pilates focuses on breathing – a deep, mindful pattern of breathing that instantly enhances feelings of calm and release in the body and mind. We also work constantly on posture: a poised and lifted body, free from tension and pain, creates a calm mind.

### **Key benefits**

- A sense of calm and wellbeing is encouraged by the relaxation of tense muscles during Pilates.
- Pilates releases endorphins, which naturally cause the body and mind to feel more relaxed and positive.

· Your sleep will improve with regular Pilates, which will greatly reduce any fatigue and stress.

· You will feel energized and invigorated, because Pilates forces you to focus on the present moment and the movement you are performing, to the exclusion of your everyday preoccupations and stresses.

### **Pilates Considerations for Back Pain Patients<sup>18</sup>**

Before starting any new exercise system, it is always advisable to check with a physician or other healthcare provider. Before starting a Pilates exercise program, it is important to check that the potential instructor has received training in the Pilates exercise system, and that he or she understands any specific back problems. If a patient starts Pilates after physical therapy, the physical therapist should outline the exercise principles identified as particularly important for his or her rehabilitation.

The important principles of Pilates are consistent with an exercise program that promotes back health. In particular, learning awareness of neutral alignment of the spine and strengthening the deep postural muscles that support this alignment are important skills for the back pain patient.

Patients with pain stemming from excessive movement and degeneration of the intervertebral discs and joints are particularly likely to benefit from a Pilates exercise program. In addition, postural asymmetries can be improved, thus decreasing wear and tear resulting from uneven stresses on the intervertebral joints and discs.

Pilates improves strength, flexibility and suppleness of the muscles of the hip and shoulder girdle. Fluid and supported movement through these joints helps prevent unnecessary torque on the vertebral column.

The Pilates program also teaches awareness of movement habits that may stress the spine, and helps the patient change these habits to those that preserve neutral alignment. Awareness of excessive tension and the use of proper focus help the patient use the body efficiently.

### **Evidence for Pilates exercises use**

Elizabeth Ballard et al had done a systemic review on “Effects of Pilates on Low Back Pain”.

There is limited evidence to support the efficacy of a Pilates exercise intervention in the management of LBP when compared to no treatment. There is no evidence that Pilates exercise is superior to lumbar stabilization exercises or massage therapy in the treatment of LBP.

Lisa Marie Bernardo<sup>19</sup> in 2007 performed study on "The effectiveness of Pilates training in healthy adults: An appraisal of the research literature." This appraisal of three human subjects research studies utilizing Pilates finds support for the effectiveness of Pilates in healthy adults to improve flexibility, transversus abdominis activation, lumbar– pelvic stability, and muscular activity.

Edwin choon wyn lim et al<sup>20</sup> in 2011 performed study on "Effects of pilates-based exercises on pain and disability in individuals with persistent nonspecific low back pain: a systematic review with meta-analysis." They concluded that Pilates-based exercises are superior to minimal intervention for pain relief. Existing evidence does not establish superiority of Pilates-based exercise to other forms of exercise to reduce pain and disability for patients with persistent nonspecific low back pain.

Cruz-Ferreira A et al<sup>21</sup> in 2011 had done study on "A systematic review of the effects of pilates method of exercise in healthy people." They concluded that there was strong evidence to support the use of the Pilates method of exercises at least to the end of training to improve flexibility and dynamic balance and moderate evidence to enhance muscular endurance.

A.R. Aladro-Gonzalvo et al<sup>22</sup> in 2012 had done a systematic review on "The effect of Pilates exercises on body composition". This systematic review suggested that there is poor empirical evidence indicating a conclusive effect of Pilates exercises on body composition.

Cherie Wells et al<sup>23</sup> in 2013 performed study on "Effectiveness of Pilates exercise in treating people with chronic low back pain: a systematic review of systematic reviews". They found that there is inconclusive evidence that Pilates is effective in reducing pain and disability in people with chronic low back pain.

## Conflicts of Interest: None

## REFERENCES

1. Sylwia Metel, Agata Milert. Joseph Pilates' method and possibilities of its application in physiotherapy. *Medical Rehabilitation*, 2007;11(2):19-28.
2. Crews L. Pilates: philosophy and biomechanics. *American Fitness*. 2006, May/June: 58-62.2
3. Siler B. *The Pilates Body*. New York, NY: Broadway Books; 2000.
4. Gallagher S., Kryzanowska R. *The Joseph H. Pilates Archive Collection*. 2000 BainBridge Books, Philadelphia.
5. Pilates, J.H., Miller, W., *Pilates' Return to Life through Contrology*. 1945 Incline Village, NV, Presentation Dynamics (reprinted in 1998).
6. Susan Sorosky, Sonja Stilp, Venu Akuthota. Yoga and pilates in the management of low back pain *Curr Rev Musculoskelet Med*. 2008;1(1):39-47. (PMCID: PMC2684152)
7. Liekens B. *The Pilates Studio Teacher Training Manual: Part I—Basic/Intermediate*. New York, NY: The Pilates Studio; 1997.
8. Joseph E. Muscolino, Simona Cipriani. Pilates and the "powerhouse" F I. *Journal of Body work and Movement Therapies*. 2004;8:15-24.
9. [http://dianelee.ca/articles/articles\\_Pro.php#incontinence](http://dianelee.ca/articles/articles_Pro.php#incontinence) (Retrieved on July 2013). <http://www.pilatesontheball.com> (Retrieved on July 2013).
10. Johnson G.S, Johnson V.S. Zastosowanie zasad oraz procedur PNF w leczeniu niestabilności kregos³upa ledzwiowego. *za: Rehabilitacja Medyczna*. 2003;7(2): 25-45.
11. [http://dianelee.ca/articles/Areyou\\_really\\_contracting\\_yourPF.pdf](http://dianelee.ca/articles/Areyou_really_contracting_yourPF.pdf). (Retrieved on July 2013).
12. Janik B. 2003. *Pilates – prawdziwa si³a od srodka*. Wyd. GAMP Szczecin.
13. <http://pilatesontheball.com>. (Retrieved on July 2013).
14. <http://.pilates.pl> (Retrieved on July 2013).
15. Selby A., Herdman A.: *Pilates, kszta³owanie adnej sylwetki ciaa*. Wyd. Delta W-Z Stefan Kruce. Book. Polish. 2003.
16. Sandie Keane. *Pilates for Core Strength*. 2005, PRC Publishing page 8.
17. Dorling Kindersley .*The six key benefits of Pilates*. Updated on 19 February, 2013.

18. Beth Glosten ( MD ). Pilates Exercise and Back Pain. Published on 03/21/2003. Retrieved from <http://www.spine-health.com/wellness/yoga-pilates-tai-chi/pilates-exercise-and-back-pain>. During July 2013).
19. Lisa Marie Bernardo. The effectiveness of Pilates training in healthy adults: An appraisal of the research literature. *Journal of Bodywork and Movement Therapies*. 2007;11:106–110.
20. Edwin Choon Wyn Lim, Ruby Li Choo Poh, Ai Ying Low, Wai Pong Wong. Effects of Pilates-Based Exercises on Pain and Disability in Individuals with Persistent Nonspecific Low Back Pain: A Systematic Review with Meta-analysis. *Journal of orthopaedic & sports physical therapy*. 2011; 41(2):70-80.
21. Cruz-Ferreira A, Fernandes J, Laranjo L, Bernardo LM, Silva A. A systematic review of the effects of Pilates method of exercise in healthy people. *Arch Phys Med Rehabil*. 2011;92(12):2071-81.
22. Aladro-Gonzalvo AR, Machado-Díaz M, Moncada-Jiménez J, Hernández-Elizondo J, Araya-Vargas G. The effect of Pilates exercises on body composition: a systematic review. *J Body Mov Ther*. 2012;16(1):109-14.
23. Wells C, Kolt GS, Marshall P, Hill B, Bialocerkowski A. Effectiveness of Pilates exercise in treating people with chronic low back pain: a systematic review of systematic reviews. *BMC Med Res Methodol*.2013;13:7.

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