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Using The "Reformer," "Wunda Chair," And "Foot Corrector": The Pilates Method Enhances Alignment And Core Awareness

By: **Marianne Adams, MA, MFA**

Abstract

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Using The “Reformer,” “Wunda Chair,” and “foot Corrector”: The Pilates Method Enhances Alignment and Core Awareness

A trained Pilates professional in a fully equipped studio can help your patient make significant improvement in strength and flexibility by addressing postural habits and alignment problems.

By Marianne Adams, MA, MFA

Joseph Hubertus Pilates began development of his method – a body–mind approach to exercise – in the early 1920s. As a child, Pilates suffered from asthma, rickets, and rheumatic fever. His early efforts toward self-healing explored a multilayered approach to building strength, body awareness, breath control, and increasing flexibility, all in a balanced way.¹ Early in his career, he also worked as a boxer, circus performer, and self-defense trainer.

Because Pilates’s perspectives were so varied, his approach makes Pilates particularly effective as a rehabilitative tool – recognizing the role that kinesthetic awareness, or mindfulness, plays in efficient physical (and mental) repatterning.² The Pilates method was designed to create harmony between body and mind by combining aspects of mental focus and breath awareness with the physicality of gymnastics and other sports.³

Between the 1920s and 1970s, an increasing number of dancers, circus performers, and athletes worked with Pilates and had a strong impact on the development of his method. To develop his method, Pilates studied, and drew from, Eastern and Western practices, including Yoga, Zen meditation, and ancient forms of Greek and Roman exercise. His original name for the Pilates method was “Contrology,” which he defined this way⁴:

Contrology is the complete coordination of body, mind and spirit. Through Contrology you first purposefully acquire complete control of your own body and then, through proper repetition of its exercises, you gradually and progressively acquire that natural rhythm and coordination associated with all your mental and subconscious activities.... Contrology develops the body uniformly, corrects wrong postures, restores physical vitality, invigorates the mind, and elevates the spirit.

[Pilates’s Method Today](#)

Although there are many different approaches to the Pilates method, the style that adheres most closely to Pilates’ original work is “Classical,” or “Authentic,” Pilates. In this tradition, the work is typically taught one-on-one, using equipment that is very similar to the equipment that Pilates

developed in the early part of the 20th Century. Pilates created more than a dozen pieces of apparatus – using springs, pulleys, and arcs for resistance or support – to improve fitness on 3 levels: mind, body, and spirit.⁵

Although many clients might have been exposed to Pilates mat exercises, the full potential of the method is enhanced by experiencing the method in a fully equipped studio. Each lesson is individualized, and all teachers certified in the Classical approach have completed a rigorous training program more than 600 hours long, including comprehensive examinations.

Getting Started

Pilates created a repertoire of more than 500 exercises for supine, standing, and seated positions. Whereas one apparatus adds challenge, a similar exercise on another apparatus will give a beginner, or rehabilitative client, a needed simplification.² Although the examples provided in this article focus on exercises for strengthening, awareness of alignment, and increasing range of motion in the lower leg, the fundamental philosophical approach of the method is to “work” the body as a unified whole.

An important aspect of the Pilates method is to treat the whole body as a system; that is, clients who are seeking rehabilitation for a specific body condition are instructed to initiate and engage from the core of the trunk musculature, generally considered to include the transversus abdominis, oblique, rectus abdominis, gluteal, and adductor muscles. Pilates called this core the “powerhouse.” The approach of working mindfully with the breath is central to his method, as is a limited number of repetitions with each exercise, to foster the sense of mind–body kinesthesia.

Footwork (Supine) Using the “Reformer”

This is the first piece of apparatus that Pilates invented, while interned as a German prisoner of war in England, during World War I. He made his early prototype from a hospital bed, using springs and pulleys, to help his platoon recover and heal from their injuries. The Reformer comprises a frame with springs that attach to a carriage. As the carriage rolls horizontally on tracks, the springs add non-weight-bearing resistance to each exercise.

Because most exercises on the Reformer, are performed supine, this is the typical starting place for most clients. Typically, the instructor stands at the foot of the Reformer as this position offers a trained instructor a wealth of information on full body alignment, muscular habits of tension, breath patterns, etc., as the client begins to move.

The initial series of exercises on the Reformer is called “footwork” (Figure 1). The client lies supine on the carriage, knees bent, with the metatarsal pads of the feet at the center of the foot bar, heels together, toes in external rotation at 30° to 45°. As the client straightens their legs, they push the carriage away from the foot bar; the springs add resistance. The spring action must be controlled on the return as the carriage glides back into the stop, or stable, position.

By pulling the transverse abdominal muscles in and upward, the legs push against the bar to straighten and, keeping the legs straight (Figure 2); the heels then lower and lift, working to

increase strength and range of motion in the toes and ankle joint. For clients in the active rehab phase of an ankle or knee injury, or after hip replacement, the spring resistance typically is adjusted downward, from 4 to 2 springs.

Footwork is a multipart exercise, repeated in several foot positions, using the toes (Figure 1), arches (Figure 3), and heels (Figure 4) and a tendon stretch (Figure 5).

Footwork Seated in the “Wunda Chair”

Also known as the “magic chair,” the Wunda Chair (Figure 6) was developed for Pilates’s advanced clients who wanted a challenging workout in their home. The Wunda Chair comprises a stationary seat and a foot pedal; resistance varies with differing spring settings. Beginners will find many basic exercises on the Wunda Chair that increase strength, awareness of alignment, and balance. A client must be able to engage their abdominal core and balance while seated on a backless chair.

To complete the tendon stretch on the Wunda Chair (Figure 7), the client stands, with toes on the pedal in forward spinal flexion, as they lower and lift the heels by engaging the core muscles of the powerhouse. This is done on 2 legs simultaneously or in a right–left–right or left–right–left alternating pattern, as needed for rehabilitation.

In general, the Wunda Chair is good for working the weak–strong–weak sides of the body. It is important to realize that, although a client might present, for example, “a bad ankle,” any injury is rarely so isolated. Particularly when working with clients in rehabilitation, an instructor who begins to look closely will see that the presenting ankle problem is often linked to other patterns of dysfunctional alignment. Injury in one particular place will often be related to weakness or overuse in another area of the body.

This is the real beauty of the Wunda Chair: After close examination, an instructor might realize that, although a client needs to do right–left–right repetitions of the tendon stretch, they in fact need a left–right–left exercise pattern for the hips and a right–left–right pattern for exercises to strengthen or stretch the quadratus muscles.

Footwork (Standing) With the “Foot Corrector”

This apparatus can help identify and solve problems in foot and ankle standing alignment (Figure 8). The device is also helpful for rehabilitation after lower-leg injury.

The Foot Corrector comprises a brass foot plate, 2 vertical springs, and a perpendicular cross-plate that moves downward as the springs are compressed. It is often used for dancers or climbers, who need articulate foot strength and acute balance sensitivity. Because postural alignment needs to be maintained (keeping iliac hip pointers even), careful placement of the apparatus in relation to the standing leg and a watchful eye by the instructor are needed for feedback (Figures 9-11).

Toe Spacer

Rarely used, the toe spacer (Figure 12) is a small but beneficial piece of Joseph Pilates' inventive repertoire.

Multiple Benefits Using Multiple Techniques

These are only a few Pilates footwork exercises. Many others, on other equipment, are performed in a typical Classical lesson to work the body as a unified system. Together, the apparatus system offers a great deal of flexibility for clients with varied needs. For example, clients with less mobility might start on the "Trapeze Table" (also called the "Cadillac"), which can be described as a massage table with a canopy frame. This apparatus allows a client to begin their exercises that provide spring resistance in a stable, supine position.

When Pilates is practiced with a comprehensively trained professional, in a fully equipped studio, efficient progress can be made by increasing awareness of postural habits and alignment issues. For many clients, simply coordinating the conscious use of breath with movement initiation from the core eases pain and can improve daily quality of life. Consistent Pilates training can enhance alignment awareness, physical efficiency, and core control.

Marianne Adams, MA (Clinical Psychology), MFA (Choreography and Performance), is Professor of Dance Studies,, Department of Theatre and Dance, Appalachian State University, Boone, North Carolina, where she is a member of the graduate faculty of Appalachian for Expressive Arts and Bodywork. Ms. Adams has also worked in therapeutic movement in mental health settings.

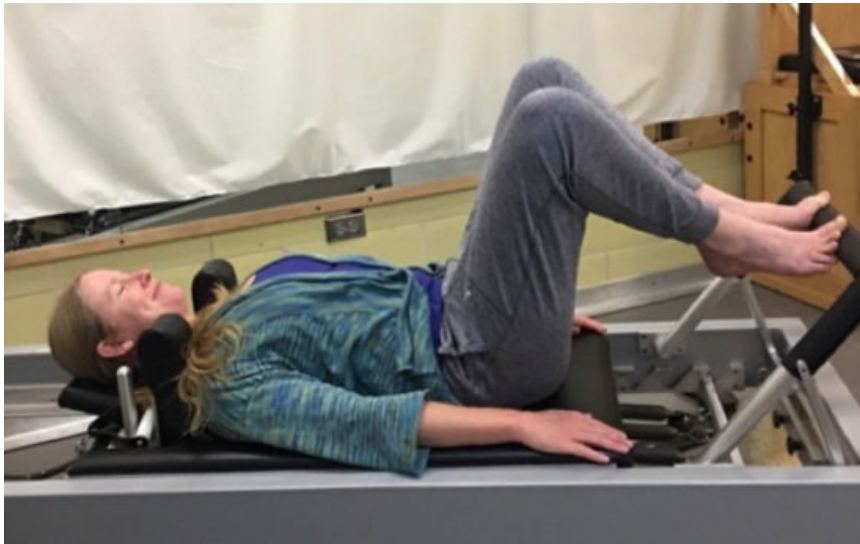


Figure 1. Footwork on the Reformer: Toes first.

The footwork series on the Reformer starts with the toes and metatarsal pads pushing against the foot bar. As the legs straighten, the adductors and abdominals engage, increasing strength and midline awareness. Range of motion in the toes increases as the “high-heel” position is maintained against the resistance of the springs.



Figure 2. Working the Reformer with legs straight, feet parallel

For clients with hypermobility of the knee, all the Reformer exercises shown here (Figures 1-4) can be done without rotation, with feet parallel-together or 4 to 6 inches parallel apart.



Figure 3. Exercising the arches with the Reformer

The second footwork exercise on the Reformer stretches and strengthens the arch of the foot. The client moves the feet to parallel as the knees flex and straighten, moving the carriage out and in, while pushing the arches against the foot bar. Because the instructor stands at the foot of the Reformer, it is easy to spot alignment issues and asymmetrical muscular patterning in the calf, thigh, and abdominal regions.



Figure 4. Exercising the heels with the Reformer

The third footwork exercise includes pushing from the heels with legs in the parallel-together position. Attention is paid to activating the medial and lateral line of the legs by pulling the little toes towards the nose. Note: In each footwork exercise, the client is encouraged to widen the back of the ribs into the carriage, lift the abdominals in and up, and coordinate the outbreath with the muscular effort.



Figure 5. Stretching tendons with the Reformer.

The final exercise of the footwork series is the tendon stretch, with the toes going back to the foot bar in the original externally rotated position (see Figure 1). While the legs stay straight, the heels lower and lift, stretching the Achilles tendon and stretching and strengthening the soleus and gastrocnemius muscles.

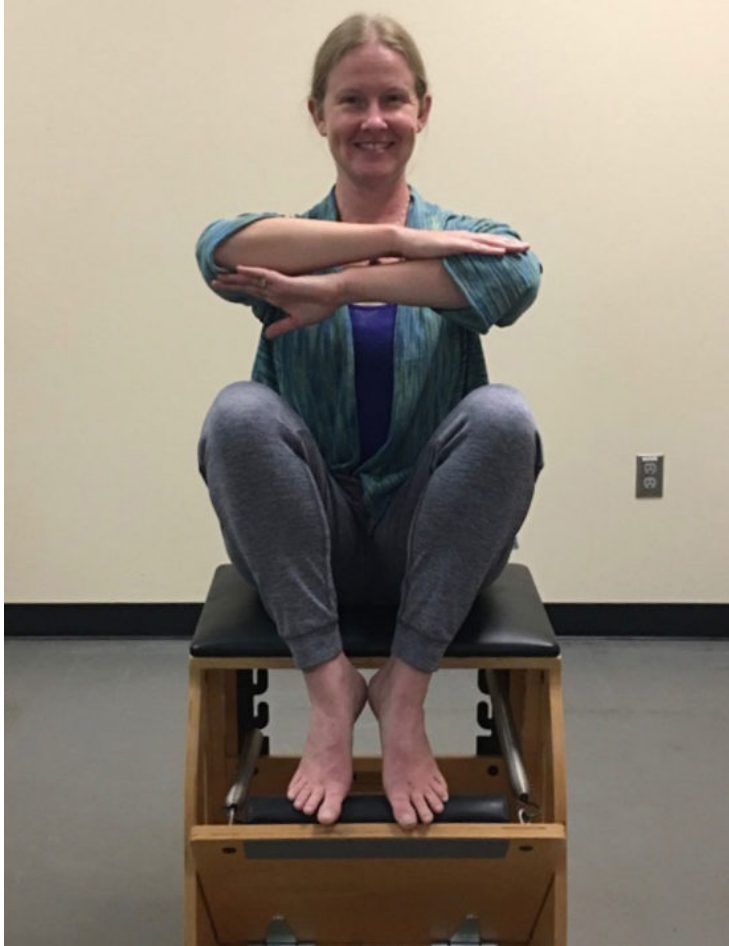


Figure 6. The Wunda Chair

A somewhat more challenging variation of the footwork series can be performed while the client is seated atop the Wunda Chair. The client begins the footwork series working the toes, arches, and heels in a seated position.



Figure 7. Wunda Chair tendon stretch
The tendon stretch can be completed in an externally rotated or parallel position, as needed for the individual client. With weight equally distributed on hands and feet, the core muscles of the powerhouse are challenged to help lower and lift the heels; doing so also activates and stretches the hamstrings and calf muscles.



Figure 8. The Trapeze Table offers stability when working the Foot Corrector
The client keeps their standing leg straight while holding a vertical pole on the Trapeze Table (also known as the "Cadillac") for stability. The client keeps the working knee bent while depressing the springs and returning with control, working toe articulation.



Figure 9. Working the arches with a Foot Corrector
When using the Foot Corrector to stretch and strengthen the arches, weight must be placed on the standing leg, which should be placed directly across from the apparatus, with attention to keeping the hips square and the iliac crests pointing anteriorly forward.



Figure 10. Foot Corrector: Heel pushes
When using the foot corrector apparatus to work through heel pushes, the heel must push against the resistance of strong springs. Working through the toes, arches, and heels while standing provides an opportunity to focus on foot articulation; additional balance support is provided by holding on to the frame of the Cadillac (see Figure 8).



Figure 11. Foot Corrector: Tendon stretch exercise
This exercise can be practiced by alternating legs, using a pair of Foot Correctors. Advanced clients can challenge balance skills by stretching the Achilles tendon and rising to demi-pointe position (ie, on the metatarsal pads) without holding on to a vertical pole. Tendon stretch quickly reveals weaknesses in alignment and muscle patterning.



Figure 12. Toe Spacer
This is a challenging but useful tool for disciplined clients who are willing to work in small increments of progress. The toe spacer, or toe spreader, exercise can initially be done seated, in a non-weight-bearing position, which activates the awareness of midline muscles and, alternately, adductor leg muscles.