

spring into P*i*LATES

By Beth Downey



Flying leg springs on the Cadillac

With warm weather just around the corner, most fitness aficionados are ready to spring into more outside activities. Pilates is an excellent cross-training exercise method that gets you in shape for biking, running, rollerblading, tennis, golf or any other sports activity. One of the most defining features of the Pilates equipment is the use of springs for resistance to gain strength and flexibility at the same time.

The History of "Springs Training"

In 1912 Joseph Pilates traveled to England, reportedly to train as a boxer. While there, World War I broke out. Because of his German heritage, he was placed in an internment camp with fellow Germans. He began teaching self-defense and wrestling and continued to develop his exercise theories. These eventually led to the method we know today as Pilates. He then delved into fitness training for the camp's disabled. While working with bedridden patients, he devised exercises that he adapted to hospital beds

using pulleys, straps and springs, exercising against the coil's resistance. These beds were the forerunners of the Pilates equipment used today, including the Universal Reformer and the Cadillac, a piece he considered "the top of the line."

Pilates's efforts with the patients improved their recovery considerably. Pilates discovered that the "machines" he created provided the support he would have had to provide with his own body strength.



Side Splits on the Reformer with (1) spring - less spring is harder

Spring Resistance Training

Spring resistance is similar to the resistance training integral to other fitness methodologies, including Nautilus machines, free weights, rowing or equipment where weights or pulleys provide resistance for the muscles. In Pilates, the springs provide both resistance and assistance in the opposite direction. By mimicking the action of your muscles, the springs teach them to become springs themselves. This concept allows resistance when you push away as well as when you pull in, benefiting your every movement. Pilates equipment facilitates movements that clients can't do without assistance. The springs assist the movement of your muscles in accordance with the movement of the equipment.

The beauty of the Pilates spring system is that the tension can be adjusted to provide more or less resistance. As you gain greater muscle strength, the springs can be changed to accommodate the changes in your body. Interestingly, in Pilates, more springs are not always more difficult. Some exercises are actually harder to perform with fewer springs because the equipment is less stable. Therefore, more strength is required to control the lighter springs. (See

Picture 1). Other Pilates exercises follow the more practiced theory that more springs are harder because there is more resistance to press against. A well-trained Pilates instructor will use the springs either to challenge an advanced client or to assist an injured client.

Eccentric Muscle Movement

The idea of strong lean muscles is appealing because it represents strength and suppleness combined. Unnecessary bulk limits movement and restricts muscles, which often results in pain. The Pilates emphasis on eccentric movement creates the "Pilates Body." An eccentric contraction occurs when you lengthen a muscle while actively working it. The use of springs help the muscle "reach" longer as you press into the resistance and KEEP the muscle lengthened as you return back to your starting position. (See Picture 2). While weight training breaks down muscle fiber to rebuild larger muscles, the Pilates use of spring resistance strengthens without adding bulk and allows muscles to stretch more effectively. The end result is a longer look with supple strength.

Springs and Injury

Joe Pilates initially conceived the use of spring exercises where patients lie on their backs and move their arms and legs to strengthen their core. Ninety years later, doctors and physical therapists often prescribe Pilates as a pathway to health. The basic, smaller movements of Pilates are effective initial steps for rehabilitation, slowly adding more difficult movements as the body increases its stability and correct movement patterns. The use of springs help your core stabilize your body while your limbs move independently for greater strengthening.

Pilates equipment supports rehabilitation of injuries to the spine, neck, shoulder, hip, knee and ankle joints. Realigning the muscles to correct movement patterns reduces pain and also helps prevent or minimize injuries. The machines provide the necessary support to strengthen specific areas to reduce acute and chronic pain. At the same time, an injury doesn't mean you have to give up your exercise regimen. Because springs are non-weight bearing, you can exercise and strengthen that area while it is still injured. Just adjust the springs to give the injured area the most support!

Spring into Action

So put away your winter coat and gloves. Get back to your outside activities and appreciate the smell of the flowers and the trees. Let Pilates give you the core strength and balance to enjoy your special fitness program or sports activity with more energy and spring in your life.



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