

# Newsletter

June 2011

## Complementary Therapies

Nicholas Institute of Sports Medicine and Athletic Trauma

### The Pilates Method

Pilates is a compilation of the works of Joseph H. Pilates. Born a sickly child in Germany in 1880, he suffered from asthma, rickets, and rheumatic fever. Pilates dedicated his entire life to become physically stronger. Eventually, he developed a series of approximately 500 exercises that helped him lead a healthy life. Pilates taught his fitness program to Hamburg 's police force and German Army. In 1926, Pilates migrated to the U.S. and open a studio in New York . The low-stress method of physical and mental conditioning soon attracted the elite of New York . Ballet dancers, actors and actresses were attracted to Pilates exercise program. The fitness program is able to built strength without adding bulk, balances strength with flexibility, and creates a perfect harmony between mind and body.

Introduction to the Pilates Method

#### **Re-establishment of natural balance:**

Our lifestyles have grown increasingly less active, affecting the condition of our bodies. Pilates believed that regular mobility would bring back the natural balance and harmony in our bodies and only a disciplinary program will bring back the mobility, strength, endurance and purify our bloodstreams.

#### **Combination of Eastern and Western traditions:**

The Pilates method includes the Eastern exercise philosophy, which involves the training of the mind to control the body. The Eastern exercises focus on stretching and limberness. The Western traditions, which emphasize motion and strength, are also included in the exercise program. Pilates combines both approaches by involving the mind in each exercise from beginning to end, and by taking the body in a wide range of motions.

#### **Low-stress method:**

The exercises do not involve quickly or jerky movements. The movements are performed slowly to avoid any strain. This method, contrary to other programs, does not increase in intensity or frequency, rather it concentrates in efficiency. All this characteristics makes Pilates safe and easy for anyone.

#### **The Six Basic Principles**

1. *Concentration*: the mind must be engaged in every movement. One must visualize the movements. The objective of the program is to have mind and body working as a team.
2. *Control*: all motions must be controlled by the mind. One must be aware of every movement that is part of an exercise, otherwise the exercises will be counterproductive.
3. *Centering*: Pilates focuses on the creation of a strong center. This center, called by Joseph H. Pilates, the "Power house" is formed by the abdomen, low back and the buttocks. It supports the spine, internal organs, and determines posture. The aim of all exercise is to stabilize the torso and allow the individual to stretch and lengthen the body with the low back protected.
4. *Flowing Movements*: the exercises include a wide range of movements. These must be performed in a control, smooth manner. Rush or hurry movements can lead to damage of muscles and joints.
5. *Precision*: you must concentrate in each movement you make. After you learn all the steps of the exercises you must concentrate in the precision of the movements.
6. *Breathing*: it is important to keep the bloodstream pure by oxygenating the blood and eliminating the noxious gases.

#### **Exercises**

**Navel to spine**: this exercise teaches the stabilization of the lumbar spine which is crucial in all Pilates movements. The exercises requires the practitioner to make the distance between the stomach and spine as small as possible.

1. Lie down on your back on a soft mat.
2. Bend your knees and relax your arms.

3. Imagine a large weight pressing down on your stomach.
4. As you pull your navel back feel how your lumbar spine lengthens.
5. Keep breathing without letting your stomach rise, feel how your ribs rise and fall.



**Breathing:** Often when someone takes deep breathing, he will use the upper part of the lungs. He will lift the upper chest, raise the shoulder and arch the back. If he uses the diaphragm the lower abdomen will expand with air, this leave the low back unprotected. For these reasons Pilates teaches lateral breathing. You must use the thoracic and back muscles to breathe. To get an idea of the movement, one can practice this exercise.

1. Hold a towel around your ribs, cross it over at the front.
2. Breath in and feel the towel expanding.
3. Gentle squeeze the towel as you breath out.



Breathing can be practiced without the towel.

1. Lie in a relax position.
2. Maintain the stomach in.
3. Put your arms on the sides of your lower ribcage and breath in and out.



## **The Rolfing Method**

Rolfing is a technique to reorganize all segments of the body (head, shoulders, thorax, pelvis, and legs) closer to the vertical alignment. Rolfing lengthens the body, allows the weight of the trunk to fall over the pelvis, and creates a more horizontal balance between left and right.

Rolfing was develop by Dr. Ida P. Rolf, born in New York City , she earned a PhD in Biochemistry. Motivated to improve her own health, she studied osteopathy, yoga, homeopathy. Though her studies she develop Rolfing. In 1973 she established the Rolf Institute.

### **Theory**

#### **The body and its relation with gravity:**

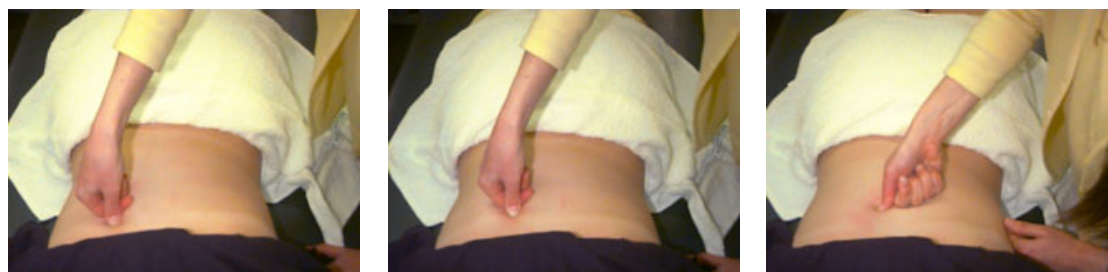
Our bodies cannot escape the influence of gravity. To make our movements more efficient with the least energy required, humans have align the body closer to the vertical line. The closer a weight is to its vertical axis the less energy requires to move. When the body loses this vertical alignment the pull of the gravity is asymmetrical. The end result of the unequal pull of gravity is a progressive deterioration of the structures. Dr. Rolf believed that, "structure determines function." Therefore, a deterioration of the structures will influence the body's function. Gravity becomes a destructive force that can lead to compressions and strains of the human body.

### **Fascia is the main tissue of support and shape.**

Fascia is a tough connective tissue which forms a three dimensional web from head to foot without interruption. It surrounds every muscle, nerve, bone, vessel and organ of the body down to the cellular level. The fascia's tendency is to remold by the forces applied to it. This tendency explains why the imbalances are created and maintain. Forces that can produce such imbalances in the human body are: repetitive movements or habitual patterns, accidents which can cause shifting of our weight to protect the injured part, and emotional states. The imbalances cause the tissue to tighten and lose its flexibility. Fascial restriction does not remain localized, soon it affects other areas away from the restriction because of its strong connections. The binding down of fascia results in abnormal pressure on nerves, muscles, bones, organs, and may lead to poor cellular efficiency.

### **Techniques**

Rolfing is a soft tissue manipulation. It takes advantage of the tendency of fascia to hold the shapes induced by applied forces. Rolfing is administered independent of specific pathologies, it does not treat the client's disease or symptoms. The goal is to assist the client in setting up a vertical relationship to gravity. This is done by working the entire fascia structure, starting by the superficial and work toward the deeper layers.



### **Rolfing Series**

The technique involves 10 one-hour sessions, each session is spaced one week or more apart. All work is performed in the fascia tissue.

#### Sessions

1. Respiration: to free the rib cage.
2. Balance under the body: to improve foot, ankle and knee.
3. Lateral line: to balance front and back.
4. Medial line: to balance left and right sides of the body.
5. Front of Pelvis: to lengthen psoas and rectus abdominis for pelvic balance.
6. Back of Pelvis/sacrum: weight transfer from head to feet.
7. Balance head, neck and shoulder.
8. Upper and lower half of the body.
9. Upper and lower half of the body (part 2).
10. Balance the entire body.

### **Alexander Technique**

The technique was created by F. Matthias Alexander an Australian actor. He was concerned with a habitual loss of voice when he worked. Alexander believed that something he was doing was the cause of the problem. He began to observe himself in a mirror and analyze his posture when he spoke. He noticed that when he was speaking he would lift his chin, pull his head back, down and tighten his throat. By studying his posture, movement and balance. He discovered that his usual poor posture felt normal and the new posture, which reduced stress on his throat felt strange. Over time, Alexander was able to avoid the poor posture of the head and neck, and he soon felt healthier, more clear-headed, and more self-confident. His hoarseness disappeared and never return. The Alexander technique encourages people to use their bodies and mind more effectively in the day-to day activities to avoid stress. The focus of the AT treatment is the proper position of the head, neck and back.

The technique is based in the idea that most people have lost the ability to determine whether their bodies are being properly used. The prolonged contraction of the muscles causes the muscle spindle to send the wrong information to the brain. The kinesthetic sense has become so distorted that the bad postures feel more right than the correct ones.

## Treatment

The teacher using verbal, manual and visual cues, guides the student to the correct posture, which minimizes the mechanical stress of the muscles and structures of the spine. The teacher encourages spinal lengthening with the head balanced over the neck. The goal of AT is to make the student aware of the habitual pattern of misuse, eventually the student will learn to inhibit those patterns. Alexander technique does not include exercise training. Instead, it involves the inhibition of the poor and the arranging of the body into the best alignment.

## Principals of Alexander Technique

### The primary control or the head, neck and back relationship:

The position of the head with respect to the neck and back is the focus of AT. The primary control coordinates movements throughout the entire body. The student must learn to activate the primary control in any day-to-day activity.

### The end-gaining:

It is a quick reaction to a stimulus. Alexander believed one must inhibit this expontaneous reactions and learn to concentrate in our bodies and movements.

### Means-whereby:

Alexander believed we are able to inhibit patterns of misuse and learn new ones. The student will learn to assume the optimal posture in every motion.

## Daily Activities

Incorrect postures of the spines can be observed in all our daily activities. With practice the student can learn to control the poor postures.



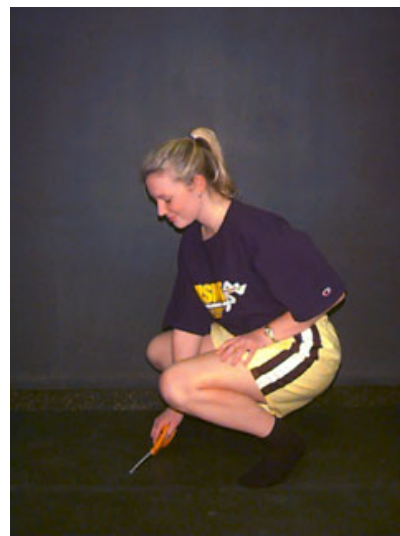
**Incorrect sitting**



**Correct sitting**



**Incorrect reaching**



**Correct reaching**



**Incorrect posture eating**



**Correct posture eating**