

Cancer Exercise Specialist – Pilates Focus

Pilates Postures



Pilates is a perfect way to exercise not only for general fitness and health, yet also in the rehabilitation and recovery from cancer medications, procedures, and surgeries. Hence making it a perfect solution for cancer patients, survivors, and everyone in general. The movements support and prepare the body for activities of daily living as well as progressing to athletics and athletic endeavors. With cancer and cancer treatments, the focus on posture and core strength are critical to recovery and will help to ease muscle and joint pain as well as aid in the prevention or lessening of lymphedema and other side effects of cancer and cancer treatments and surgeries. It is something that you can do every day with amazing results. It is an exercise designed to elongate and strengthen the body by emphasizing balance, alignment, proper breathing, and core stability and strength. Joseph H. Pilates understood that a healthy body leads to a healthy mind: "Physical fitness is the first requisite of happiness."

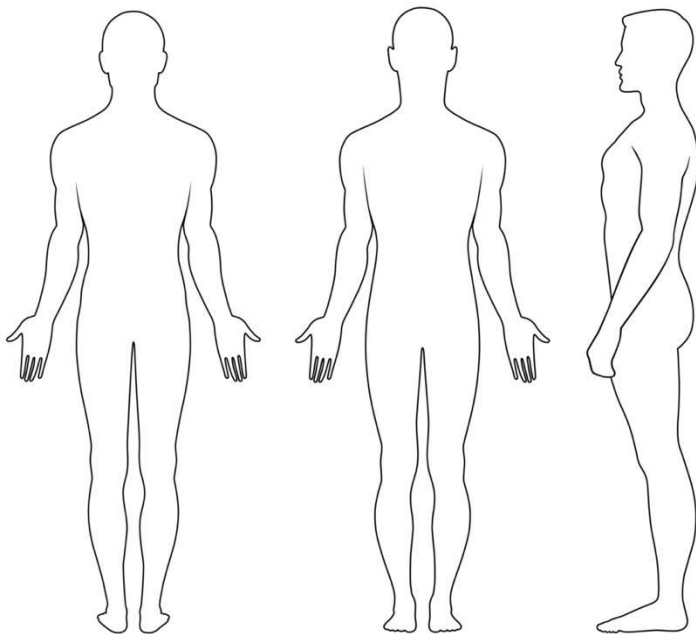
The benefits of Pilates (called Contrology by Joseph Pilates) are summed up nicely in this quote from its creator: "Contrology develops the body uniformly, corrects wrong postures, restores

physical vitality, invigorates the mind, and elevates the spirit." The following are just a few of the benefits of doing Pilates:

- ▶ Creates body awareness
- ▶ Develops long and strong muscles
- ▶ Leads to easier and more agile movements
- ▶ Increases flexibility
- ▶ Strengthens the entire core
- ▶ Improves overall posture

These six benefits go a long way to developing a more fit and active body as well as a deeper connection with the mind and spirit – benefits that only escalate in importance with cancer patients, clients, and survivors.

With a regular Pilates practice, the use of precision with every movement helps create an acute awareness of your own body. This is critical to attaining the most from your workout and for cancer patients helps with redefining how their body moves differently under the effects of cancer diagnosis, treatments, and survivorship. Once body awareness is attained, strength can be built. This strength is gained in long and lean musculature that is not bulky or restrictive. Once the muscles are moving in unison and with length and strength, all your body's movements, small and large, will be more graceful, easier to perform, and more efficient. Pilates also increases overall flexibility of the body and limbs. This in turn helps with ease of movement and will improve movement and decrease tightness in areas such as the back, hips, and shoulders. Core strengthening is one of the biggest goals and benefits in Pilates as everything is generated and conducted from the center, or powerhouse, of the body. If one has a strong powerhouse, then strong limbs and organs naturally develop.



Good posture is one of the most noticeable benefits of Pilates and can be attained in the first session. A small difference in posture-moving the head and neck slightly back and up, rolling back the shoulders, lifting the rib cage off the hips-can make a huge difference in a person's outside appearance and in the way he or she moves. This posture awareness and positioning helps with the overall recovery and continuance of daily activities for these clients.

Pilates Principles

Pilates is a method of exercise that connects the mind and the body as one and allows the body to move in a more efficient way. This form of exercise uses your body to its greatest advantage, utilizing your own strength, flexibility, and coordination, and requires that you pay attention to your body throughout each movement. To help achieve this powerful mind-body connection, the following six principles should be kept in mind.

► **Breathing.** Controlling the breath and breathing correctly are extremely important tant to understanding Pilates and obtaining the fullest benefits from the exercise. Breathing properly is the first thing you should focus on, and you should maintain this focus throughout the movement. Focused, controlled breathing will help you maintain proper alignment as well as allow you to contract the muscles that need to be contracted and release those that don't need to be used. Breathing fully and correctly will also help with the flow of the exercise and movements and allow you to continue a program all the way through. Breathing brings in oxygen to your system and clears the head, thus facilitating movement.

► **Concentration.** This involves the important connection between the mind and the body. Paying attention to what you are doing is critical for moving correctly and easily. Concentration allows the mind to control and move the body efficiently and appropriately.

► **Control.** Each movement in Pilates is controlled and should never be wasted. Keeping the movement within your capabilities is important for maintaining alignment and stability throughout the body during the exercises.

► **Centering.** Everything in Pilates is initiated from the center of the body, called the powerhouse or core. To perform the movements correctly, begin from the center. Building a strong, stable, and flexible center is one of the best outcomes of doing Pilates on a regular basis. A strong center makes for a strong body overall.

► **Precision.** Practicing concentration, control, and centering will make each movement precise and totally correct. Be conscious and aware of every part of your body, and continually check your alignment and form to ensure that you are performing each exercise with precision.

► **Flowing movement or rhythm.** Having all your muscles working together with precision from your center and with concentration and control as well as correct breathing creates a rhythmic and flowing movement pattern. This means you are moving with extreme efficiency and flow

and with just the right amount of effort. Be patient with yourself. Allow yourself the time needed for your body and mind to work together to produce flowing movement.

Pilates' progressions and exercises build strength & control, flexibility & range of motion, and lean muscle tone with an emphasis on lengthening the body and aligning the spine versus building bulky and short muscles. The attention to breath in every movement, builds focus and concentration and aids in relaxing and calming the mind and the nervous system, enabling it to clear negativity and tension in mind and body.

Focusing on the core or middle of the body, referred to as the 'powerhouse' by Joseph Pilates, the exercises build a strong body from the center outward. The focus on strengthening by lengthening means that long, lean muscles are created and developed around a solid center – the core. This helps with general range of motion around the joints, better balance, coordination and mental as well as physical agility making activities of daily living easier and more accessible to everyone. For the cancer patient, client, or survivor; this is a necessity.

Pilates also develops a better sense and awareness of posture and alignment while enhancing breath control and better breathing all together which helps with calming the nervous system, relieving anxiety, and lifting the spirits - as well as helping the bodily systems work with better ease (i.e., digestion and metabolism as well as boosting the immune system). The focus on the center or powerhouse provides a strong, solid center from which to work the entire body and with cancer side effects as well as treatments and surgeries, the entire body is affected thus the need to focus on whole body movements and muscle balance to bring the body and its systems back into harmony.

The following grid is a short list of side effects and the Pilates benefits for the client:

Side Effects of Treatment/Cancer	Benefits of Pilates/Movement
Fatigue	Increased energy
Decreased lean muscle mass	Increased lean
Increased pain	Decreased pain
Increased body fat	Decreased body fat
Diminished self-confidence	Improved self-confidence
Decreased appetite	Improved appetite
Increased anxiety & depression	Decreased anxiety & depression
Decreased immune function	Improved immune function
Increased risk of lymphedema	Decreased lymphedema
Increased risk of heart disease, osteoporosis, diabetes, future cancers, and lung damage	Decreased risk of heart disease, osteoporosis, diabetes, future cancers, and lung damage
Reduced functional capacity	Improved functional capacity
Decreased strength, flexibility, and range of motion	Increased strength, flexibility, and range of motion
Diminished quality of life	Improved quality of life

The importance of breathing and the fact that we do it without thinking is summed up in this quote from Joseph Pilates: "Breathing is the first act of life, and the last." Even so, simply knowing that you are breathing is not enough. Breathing correctly and fully will make all the difference in your Pilates practice. Pilates exercises require you to breathe fully and deeply, using every inhale to take in lots of fresh air and every exhale to get rid of stale air. This process oxygenates the blood and gets the circulation going. Breathing fully and deeply can energize your every move. Breath is the very foundation of Pilates movement. The breath will be used to initiate and support movements as well as facilitate and energize the movements.

There are multiple breathing techniques are to use in Pilates and each will provide a different effect and result and can be used interchangeably depending on the desired effect and/or result needed:

Lateral Breathing: Lateral breathing means breathing deeply and fully into the sides and back, or the lower lobes of the lungs. With this type of breath, you can keep the abdominal muscles contracted, providing support for the lower spine and back.

Diaphragmatic Breathing (belly breathing): On the inhale – fill up the belly (allowing the belly to protrude, fill up, expand) and exhale – pull the lower belly in towards the spine (without moving the lower back). This helps with creating a relaxed state of mind allowing the client to focus on the movements and proceed with an alert and calm state of mind.

One Lung Breathing: This is used for side bending exercises and helps to open the exposed side to more oxygen and room to move. This aides in freeing up the shoulder, ribs and side body; creating a better movement pattern and more range of motion in the exposed side.

Sniffing Breath: Typically used for pacing and adding energy to a movement; yet is also fantastic for adding more range of motion and muscle length in the limb being moved. Can be done as a double sniff (inhale & exhale) or even as in an exercise such as the Hundred, 5 counts in, 5 counts out enhancing the focus and precision as well as intensity in the movement.

General Pilates Anatomical Terms & References:



Inner Unit:

The inner unit is comprised of the following four muscles that support and prepare the spine and trunk for movement:

- Transverse Abdominus
- Pelvic Floor
- Diaphragm
- Multifidus

These muscles do not actually move the spine, instead they help to support and ready the spine for force and/or movement. It is also referred to as the Stability Core as it supports and protects the spine and spinal column.

Outer Units:

The outer units are the four muscular groups and connections that move the spine or trunk with the arms and legs. The Outer Units are the fascial and muscular connections and units that help to provide lumbo-pelvic control during movement. The Outer Units move the trunk (and spine) and keep the spine safe during movement, aiding in ease and efficiency in activities of daily life.

- Anterior Oblique System: connects the serratus anterior of one side through the external and internal obliques to the opposite adductors of the leg.
- Posterior Oblique System: connects the latissimus dorsi of one side to the opposite glutes.
- Lateral System: the abductors of one leg and the adductors of the opposite leg – balances the pelvis over the femurs.
- Deep Longitudinal System: the muscles in the back line of the body (back of the head and neck down to through the spinal extensors, back of the legs and to the soles of the feet) that hold us up against the effects of gravity.

The Outer Units are also known as the Mobility Core as they move the trunk and integrate the limbs during movement while keeping the spine safe throughout the movement.



