

# Killer Legs with Pilates

PILATES MAY HAVE A LESS THAN STRENUOUS REPUTATION BUT ADAPTING SOME MOVES FROM THE PILATES WORKBOOK CAN HELP INCREASE YOUR PEDALLING POWER.



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## A LITTLE HISTORY

The man after whom this exercise system is named, Joseph Hubertus Pilates, was born in Dusseldorf in 1880. His father was a prize-winning gymnast, his mother a naturopath. Reputedly a sickly, frail child, he determined to build up his body. A family physician gave him an old anatomy book, which he studied closely while flexing the pictured muscles. He experimented with Eastern and Western exercise modalities, including yoga, and ancient Greek and Roman regimes. His determination led to incredible results. By 14, the former weakling was so well-developed, he was posing as a model for anatomy charts.

Pilates went on to practice gymnastics, skiing, weight lifting, dance, self-defence and circus training. Combining features from all of these, he

devised a system that achieved the results he was looking for, and progressed to becoming a fitness trainer.

After moving to England, he was detained in a camp for enemy nationals when WWI erupted, and taught wrestling and self-defence to fellow inmates. During this time, he formulated his unique system, dubbing it 'Contrology'. When he was transferred to another camp on the Isle of Man, opportunity arose for him to work with injured prisoners. Here he started using available resources, such as springs from hospital beds, to provide resistance for exercises. Pilates equipment used today, like the Reformer and Trapeze table, bear resemblance to this original equipment, using springs to provide variable resistance.

Returning to Germany after the war, Pilates trained the

Hamburg Military Police in self-defence and physical fitness, and started taking personal clients. He later travelled to the United States, meeting his wife Clara, a nurse who shared his passion for fitness, during the sea voyage. They opened a studio/gym in New York, in the same building as several dance studios. It was here that the association between Contrology and dance developed. Several choreographers sent their dancers to him for rehabilitation and 'balancing' of the body. He also worked with gymnasts, actors, celebrities, doctors and athletes.

During a fire in their building in January 1966, he returned to the studio to rescue what he could, but damaged floorboards gave way underneath him. The 86 year old hung by a beam for some time, until his rescue by firefighters. He died the following year.

While Joseph loved demonstrating extremely difficult exercises, Clara was able to modify his method to suit more frail or injured clients, consolidating the role of Pilates in rehabilitation. She continued to teach until her death in 1977, when the business was taken over by Romana Kryzanowska, a dedicated student. Other disciples have also gone on to teach the Pilates technique, leading to the variety of methods that exist today, based on the same principles.

## PILATES PRINCIPLES

Many of Pilates' ideas have been supported by contemporary scientific study. These include:

- **Relaxation and concentration**—the stresses of contemporary life render us susceptible to muscle tension in specific areas, particularly the neck and shoulders. A Pilates session brings awareness to where the body is tight, and releases that tension. Mindfulness facilitates maximum benefit from the exercises.
- **Centring**—Pilates talked about a 'girdle of strength' or 'Powerhouse', as the

physical centre of strength from which all movements flow. This correlates with what is now commonly called 'core strength', and assists with preventing back pain, enabling freedom of limb movements from a strong centre.

- **Controlled breathing**—breath is life. Good breathing oxygenates the tissues and allows for elimination of metabolic waste products. Pilates espoused learning to fully utilise the thoracic muscles and expand the rib cage to maximise lung capacity.
- **Alignment**—correct posture is critical to performing the movements accurately, ensuring the right muscle groups are activated and minimising risk of injury.
- **Smooth, flowing movements**—movements should feel like stretching out and lengthening from a powerful core.

## FIRING SEQUENCE

Here's how the muscles are activated throughout the pedal stroke:

- At the top of the stroke, the gluteus maximus is activated to initiate hip extension and

## THE SEAL

WORKS GLUTES, QUADS, HAMS AND CALF.



Lie on your stomach, with your head relaxed and arms by your sides. Make sure your core is contracted to support your spine. Breathe in.

As you breathe out, point your toes and raise both legs a few inches off the floor. Maintaining tension in the gluts, open the legs apart then bring them back together, in a continuous movement.

Be careful not to hyperextend the lower back. Continue to fatigue, breathing normally throughout. Rest and repeat up to five times.

## THE RAINBOW

WORKS THE GLUTEALS AND HAMSTRINGS



Start by resting on your forearms, with your hips level and spine in neutral. Engage your abdominal muscles strongly. Imagine you have a tray of full glasses balanced across your back, and you mustn't spill a drop throughout the movement. Extend one leg out behind.



Breathe in. As you breathe out, raise the leg, keeping the knee extended. Touch the toe down from one side to the other, making an arc shape with your foot. Breathe normally and keep your pelvis level



throughout. Ensure the extended leg stays long and strong by tensing the quads and calf. Aim for ten arcs, then repeat with the other leg. Build up to three sets with each leg. Add an ankle weight to increase resistance if you can do three sets easily without moving your pelvis.

## THE SUMO SQUAT (PLIE SQUAT)

STRENGTHENS THE GLUTEALS, QUADRICEPS AND CALF MUSCLES.



Make sure your spine is in a neutral position i.e. not tilted excessively forward or backward. Stand with the feet wider than the hips, with toes pointing outwards. Breathe in. As you breathe out, slowly bend the knees, making sure they go out over your toes. At the bottom of the squat, pause and focus your attention on the power in your quads. Breathe in.

Breathing out, press down through your heels as you straighten your knees. Squeeze your buttocks tightly as you come back up to standing,

holding tension in your glutes. Continue the movement into pushing up onto your toes, tightening your calves. Pause and breathe in, holding tension in your calves, quads and glutes.

Relax back down to the starting position as you breathe out.

Repeat 10-12 times, aiming for three sets. Once you can perform this easily, add dumbbells, or a weighted vest/belt.

If you have knee problems, reduce the depth of the squat to within your pain free range.

## SPINE CURLS

STRENGTHENS THE HAMSTRINGS AND GLUTEALS. AN ADDED BONUS IS IMPROVED SPINAL MOBILITY.



Lie on your back, with arms relaxed by your sides, palms facing upwards. Bend your knees, with feet hip width apart. Breathe in.

As you breathe out, tighten your abdominals, flattening your lower back to the floor. In a continuous movement, peel your spine off the floor, pushing your pelvis towards the ceiling. You should feel tension in the hamstrings and glutes. Hold that tension as you breathe in.

As you breathe out, lower down by rolling the spine back onto the ground one vertebra at a time.



Relax. Repeat three sets of 10-12.

To increase workload on the glutes, use a resistance band or a Pilates ring just above your knees. Press your thighs firmly outward against the band or ring throughout the movement. To work the adductors, place a thick pillow between your knees, and squeeze it continuously as you curl up and down.

If you have lower back issues, perform the movement only within a range that is comfortable for you.

drive down the pedal. This is assisted by knee extension from the quadriceps at about 3 o'clock, and then the calf muscles from 5 o'clock. In combination, these large muscles thrust the pedal down, generating the power phase of the revolution.

- From 6 to 8 o'clock, the tibialis anterior (lateral muscle of the shin) pulls the toes up towards the shin, in the ankle movement known as dorsiflexion. From 8 to 10 o'clock, the hamstring group bend the knee, drawing the heel up towards the buttocks. Finally, from 10 to 12 o'clock, the hip flexors pull the knee up, finishing the stroke.

Developing strength in these large muscle groups will help with power generation throughout the stroke cycle.

## THE MOVES

For this routine you'll need clothes suited for a workout, enough space to stand and lie down, and the mental muscle to focus on excellent form throughout the moves.

Don't be fooled by how simple they seem—when performed correctly, you'll get an awesome core workout in addition to loading up the legs.

The benefit—a strong, stable core with potential for explosive leg power and improved endurance.

The deep abdominals are designed to operate at lower loads for extended periods. Activate these core muscles at about 25% capacity throughout each exercise to support your back. Maintaining good spinal alignment reduces any risk of back injury.

Do a light warm up first to kick-start your circulation.

Remember, these exercises are most effective when performed slowly and with control, maintaining strength in the core, and generating power through the legs. Consult your qualified health professional if you have any concerns. Perform the exercises two or three times per week for optimum improvement in pedal power. 🌀

## STANDING LEG LIFTS

WORKS THE HIP FLEXORS AND QUADS



Stand with feet hip width apart, spine in neutral and shoulders relaxed. Breathe in as you lift one knee. Ensure your pelvis stays level by activating your core.

Breathing out, use your quads to stretch your leg out from your knee, keeping your abdominals powerfully engaged.

Breathe in as you lower the extended leg back to



the floor. Repeat with the other leg. Alternate legs, concentrating on maintaining a level pelvis throughout. Continue to fatigue, building up to 15 with each leg. Add ankle weights once you can manage 15 reps without losing control of pelvic position.

Hold onto a stable object if you feel unsteady standing on one leg, and work up to maintaining your balance unsupported.