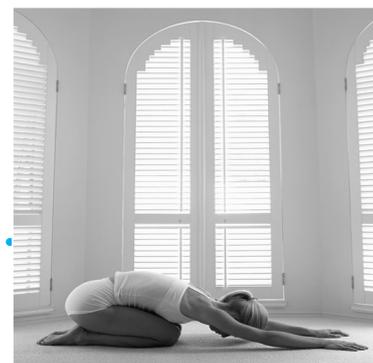


Pilates

By Alison Thompson

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Pilates Principles

The philosophy of Pilates centres on strengthening the Core. The use of the TVA, PF, and ML leads to the development of the Core or Power House.

There are 8 Pilates Principles to remember:

Concentration – focus on each movement flowing into next. Block out all thoughts and bring body and mind together.

Breathing – lateral thoracic breath (LTB) - focus on breathing into the rib area; effective breathing prevents muscles fatiguing too quickly; correct breathing assists with correct performance.

Control – ensures correct alignment and stability; each repetition is as important as the first; go down a level to maintain good control.

Centring – all movements need to be performed from a strong and stable base – Transversus Abdominis, Internal obliques; Multifidus, Diaphragm and Pelvic Floor.



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Quality (Precision) – accurate technique enables appropriate muscles to work together.

Flow – Pilates should be performed in a slow, controlled, continuous flowing way; this improves in direct proportion to improvement of stability, strength, flexibility, knowledge, understanding, body awareness and breathing.

Stamina – practice repertoire regularly to see and feel an improvement. With practice, repetition and frequency, skill level increases and strengthens mind and body

Relaxation – learn to release any stress, by recognising any tension and trying to release this to produce fluid, flowing

Special points of interest:

- TVA— Transversus Abdominis
- PF—Pelvic Floor
- ML—Multifidus Lumborum
- LTB—Lateral Thoracic Breathing
- RA—Rectus Abdominis

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Why is breathing in Pilates so important?

Lateral Thoracic Breathing in Pilates is very important. Understanding how to use the breath properly will help you perform the exercises in the right way.

The correct way to breathe during Pilates exercises is as follows: Breathe in through the nose and out through the mouth. Keep the shoulders down to reduce tension and imagine your ribs are like a

bellows. Breathe in and out full and wide. Exhaling fully helps contract the muscles.

Participants who do not understand how this works will tend to hold the breath which will lead to exercises being performed incorrectly.

Correct breathing is all tied up with ensuring that the Core muscles are engaged,

together with the pelvic floor muscles in order to ensure that the spine is stabilized.

Mastering the breathing, and engagement of the RA and PF, will lead to better posture. You will look and feel taller and more confident.

The **Rectus Abdominis** needs to be kept engaged. The muscle fibres slide across each other to support the spine.

Lack of control of these important muscles will lead to “doming” of the abdomen. Once mastered, students will find it easier to advance to the more difficult exercises.

Muscles tighten as we get older. We need to improve our core strength and the range of movement.

Ribcage Closure:

When performing certain types of exercises eg raising the arms, it is important to maintain the length between the ribs and the hips so that the mobility is not going into the back.

Set Up: getting set up correctly whether in a standing, lying down or sitting position is very important before each exercise. Always think

Neutral Spine – imagine a plumb line running from the ear lobe through the bodies of the cervical vertebra, to the shoulder joint (tip of shoulder blades); through the bodies of the lumbar vertebrae to the slightly posterior of hip joint; down to the slightly anterior of the centre of the knee joint to the slightly anterior of the outside of the ankle bone (lateral malleolus).

When you have Neutral Spine, the head is central and straight. The hips and knee joints will be level,

Multifidus Lumborum and Posture

This is a posterior group of muscles which support and stabilize the Lumbar Spine.

It accounts for 70% of spinal stability and will atrophy quickly.

Multifidus is a set of short, polysegmental muscles. They extend the vertebral column, laterally flex it and rotate it to the opposite side.

Multifidus works closely with the Transversus Abdominis, and forms a corset to increase intra-abdominal pressure which stabilizes the vertebral column.

about the breathing and the engagement of the Rectus Abdominis and Pelvic Floor.

Posture—it is important to recognize your posture type so that you can understand why certain muscles ache or cause pain. Continual poor posture lead to muscle imbalance and dysfunction. Pilates exercises can help redress that imbalance over time.



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feet are hip width apart and weight is evenly distributed on both feet.

In other words, Neutral Spine is where there is correct alignment of the spinal vertebrae, pelvis and soft tissue when exercising which ensures encouragement of sound recruitment patterns so that joints remain healthy.

Neutral spine therefore encourages bilateral even muscle development and flexibility.

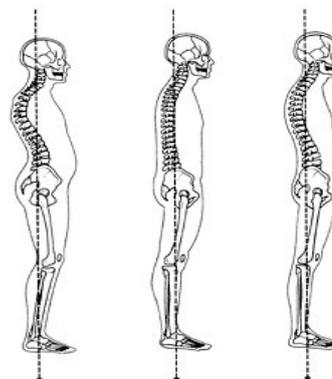
Lower back problems are caused by an imbalance between the **Postural** and **Phasic** muscles.

Postural muscles are the Spinal erectors (Erector Spinalis). These have a high percentage of slow twitch muscle fibres which are resistant to fatigue.

On the other hand, Phasic muscles fatigue quickly because they have a high percentage of fast twitch muscle fibres. Examples are the Abdominals (Rectus Abdominis), the Quadriceps, biceps, hamstrings and the External Obliques. Most

Check your posture type

Kyphotic-lordotic Flat back Sway back



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What is Neutral Spine?

Neutral Spine ...“is the position in which the vertebrae and pelvis are aligned and maintained with the least amount of stress placed on the supportive tissues”.



mature people need to stretch their postural muscles and strengthen their phasic muscles

