

The Third Principle of Pilates

Lateral Breathing

There are many principles of Pilates. Every book you open will state them slightly differently. Most books list seven different principles. I would like you to concern yourself with these three:-

1) Alignment

Think first about holding the **spine in neutral**. Then align other body parts e.g. feet facing forwards, knees **hipbone** distance apart etc.

2) Contract core muscles

A number of muscles make up 'the core'. I would like you to think about the core as being like a chandelier. Each light bulb represents a muscle. The group of light bulbs together make up the chandelier. The switch for the chandelier is the **pelvic floor**.

During a Pilates lesson our aim is to **strengthen around the core muscles which support us in neutral spine and create enough flexibility to get into neutral**. In both the strength and the flexibility exercises the pelvic floor should be contracted at all times. With practice you will gain more control of your pelvic floor muscles and will be able to hold a 25%- 50% contraction constantly.

3) Lateral (Thoracic) breathing

- Is not a natural breath. It is a **training breath** that allows you to use your core muscles constantly.
- Never hold your breath. That will push up your blood pressure and will cause your muscles to contract (not helpful when you should be using flowing movement or are trying to stretch).
- I am not strict about when you breathe. However, when you are learning it helps to breathe out on what **you** find is the hardest part of the workout. I tend to cue this during my teaching but please don't worry if you are breathing the other

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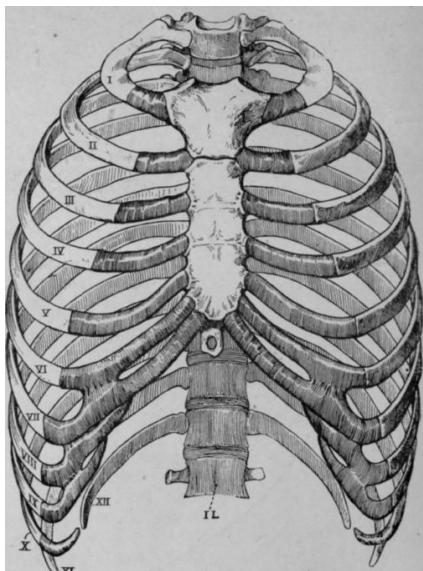
way round. Concentrate on **how** you are breathing i.e. make sure it's laterally (thoracically).

- Because your breath is deeper you will need to breathe more slowly or you will become light-headed.
- **If you feel light-headed stop immediately.** You may be breathing too high in the chest or too fast.

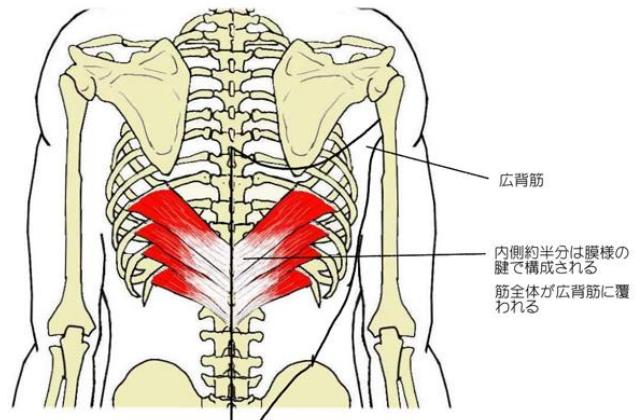
I have always called this breathing technique 'lateral breathing'. However, I have never been happy with this name as not only do we encourage the ribcage to move laterally (out to the sides) during Pilates but we also expand posteriorly too thus lengthening the serratus posterior inferior muscles in particular (see the picture of this muscle below).

"Thoracic Breathing" is another term used to describe lateral breathing. I feel this name is probably more appropriate but as I've been teaching for over a decade I want to avoid confusing people by changing the name now.

Front view. Everything shown in this picture (ribs, breast bone and these particular vertebra) make up 'the Thorax'.



Rear view. Can you see how these 'Serratus Posterior Inferior' muscles will stretch as you inhale and focus on breathing into them?



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Instructors will have differing approaches to teaching the principles. To me it makes sense to make you aware of them and set your body up with these three principles in this specific order before challenging how well you've done this with movement of the limbs i.e.

1. Neutral spine
2. Engage core muscles
3. Breath laterally
4. Challenge 1, 2 and 3 by moving an arm or leg

Your pelvic floor muscles work at their best when you are in neutral so it stands to reason to set up neutral spine before contracting them. You breathe thoracically because you are unable to 'belly breathe' if you are keeping your abdominals firm and therefore I suggest you set up your core muscles before breathing laterally.

These three principles must be present in every exercise for you to be doing Pilates!

The other principles should just fall into place when taking part in my classes. These might include relaxation, focus, precision and the use of flowing movement.

More about Breathing

Breathing is the essence of life and promotes good health when it is performed in a relaxed manner. Most of us breathe shallowly, into the upper chest, or we may have learned to practise abdominal (belly) breathing, to promote relaxation and reduce stress. Neither of these breathing methods is suitable for Pilates. In Pilates, we try to use our lungs and chest capacity to the full, while maintaining good muscle tone in the abdomen for support. The best way to breathe efficiently while you exercise is to draw the air into the back and sides of your ribcage, making use of your full lung and chest capacity. This is called "thoracic/lateral breathing". The more oxygen-rich blood is delivered to your muscles and organs, helping them to work efficiently, effectively and for longer.

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In the Pilates approach, your breath is synchronized with your movements. This will help the movements to flow. Over a decade ago I did my training with the Pilates Institute. Their breathing training often clashes with that I've been taught in my later training with Stott Pilates. For example the Pilates Institute taught me to breathe out as I came into Swan Dive as that would help me to engage my pelvic floor muscles whereas Stott Pilates taught me to inhale at this point as our spine naturally lengthens when we inhale thus relieving stress through the vertebral joints. My advice is not to worry about when but **how**.

Never hold your breath!! "When you hold your breath, you start to store up more carbon dioxide in your lungs. This does not get expelled from the body with the out breath. Instead, it builds up in the muscles, especially the core muscles, and weakens them. Keeping up a good breathing rhythm when you perform the exercises promotes good oxygen-carbon dioxide exchange" (McKone, W. 2001, p28).

In addition, the physical movement of lateral breathing is a mechanical action that helps to pump blood around the body. Thus, while you work your chest movements, you are moving the fluids around your body at the same time, helping to take nutrition to your body tissues.

If we breathe poorly, our lungs don't take in enough fresh oxygen for optimum health, the ribcage region can become stiff (serratus anterior in particular will become like string). This can lead to back problems. If we breathe well, we oxygenate the blood, dispel toxins and our circulation improves.

Thoracic Breathing exercises

- A. Breathe in slowly and gently through your nose, allowing your ribs to expand **backwards** and outwards laterally into your hand/hands/against the tie.**
- B. Exhale slowly through the mouth keeping your jaw relaxed and purse your lips.**
- C. Take 6-10 breaths in this manner.**

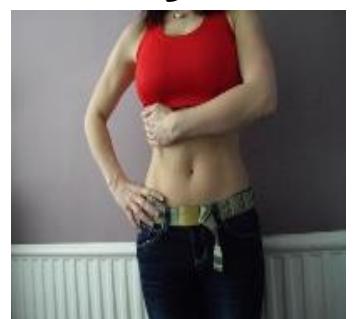
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D. Repeat 6-10 breaths but this time just allow your arms to rest by your sides and feel the ribs move towards and away from the upper arm as you inhale and exhale.



A

Compare the picture on the right to the one on the left - Can you tell in which one I am exhaling?



B

In these 2 pictures below you can tell when I'm inhaling as the in breath causes the ribs to expand and the fingers to part.



The picture on the left shows how you could use a dressing gown cord, tie, tape measure or such like to monitor the expansion of your ribcage on inhalation.

It is important not to keep your hands in these positions for too long as it puts stress on the neck and shoulders.

It can take a while for lateral breathing to come naturally, particularly if your upper and mid-back are tight. Just keep practising and it will eventually become second nature. Plus the practising will help loosen up those tight back muscles!

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If you feel you have fallen into bad breathing habits and can't seem to get the hang of lateral breathing even after practising diligently, it would be well worth while taking a private lesson with me or another Level 3 Pilates teacher or perhaps look at joining one of my smaller classes.

Test

1. List in order the 3 principles of Pilates.

2. Complete this sentence:

During a Pilates lesson our aim is to.....

3. Lateral breathing is a natural breath. TRUE / FALSE.

4. Is it more important to concentrate on how or when you breath?

5. What is the pelvic floor's relationship to the core muscles?

6. Which direction should the ribcage move when you are breathing laterally?

7. Is Jo breathing in or out on picture A page 5?

8. What is Jo's advice for people who feel they have fallen into bad habits and just can't seem to get the hang of lateral breathing?

9. What is the maximum capacity Jo will take in her smallest class?

10. How do most of us tend to breath?

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11. Breathing laterally can help to reduce shoulder & neck pain. TRUE/FALSE
12. Breathing laterally can help reduce lower back pain. TRUE/FALSE
13. Breathing laterally can help reduce blood pressure. TRUE/FALSE
14. Breathing laterally can be used to help lengthen muscles that attach to the ribcage. TRUE/FALSE.
15. Super Jo Southgate was a voluntary worker at Darent Valley Hospital Paediatric Centre working alongside Physiotherapists. TRUE/FALSE
16. Super Jo Southgate modelled in her friends book Pilates The Way Forward. TRUE/FALSE
17. It is dangerous to participate in Pilates exercises when you are not breathing laterally. TRUE/FALSE
18. Where is Jo's smallest Pilates class held?
19. Jo teaches aerobics TRUE/FALSE
20. Super Jo Southgate is the best Pilates teacher in the world. TRUE/FALSE