

Pilates and Sports Yoga

**The unanswered questions
surrounding your core**

by

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I wonder how many fitness and health professionals have told you that you need to “strengthen your core”. And, I also wonder how many of these same professionals have ever explained to you what your core is, and then, most importantly, why you need to strengthen it. My personal and professional experience has been that possibly very few, if any, have ever explained this to you. That’s why I decided in this article to spend some time discussing what makes up your core, and why it is important to strengthen these muscles.

What is your core? In Pilates the core muscles lie within the group of muscles referred to as the powerhouse muscles. Right away, this tells you that your core is more than a ripped 6 pack abs; it is more than your Rectus abdominis. The powerhouse muscles are all of those muscles which circle your body starting from just below your ribs and finishing at the end of your pelvis. When they are engaged by you, they act as a tight protective corset around your trunk providing support and stability to your back, hips, and pelvis, when you are moving or standing still. These muscles, as their name implies, also give you the power for dynamic movements. When all of these muscles are working together in harmony you have the foundation for moving and weight bearing.

In contrast, when you have just a ripped 6 pack, this single abdominal muscle can’t provide the necessary protection to your back, hips and pelvis when you are moving. Learning how to activate these powerhouse muscles is referred to as “centering”. According to Joseph Pilates in his 1945 book, **Return to Life Through Contrology**, bringing your mental and physical focus to the centre of your body as you perform his exercises will help you to learn how to activate the powerhouse muscles. He also states that if you do this, over time you will find that you will need to put less effort into each movement because your muscles will become stronger and more efficient. You are thus able to do more with less effort as you are moving from a stable base with strength, control, and dynamic energy.

So, how do you do this? The simple answer is through lateral breathing and contraction of the powerhouse muscles. When most people breathe, they use only a very small percentage of their lung capacity. In other words, our breathing is very shallow. In Pilates the emphasis is on long, slow, deep breathing. Before you begin a Pilates exercise, you prepare by inhaling, which in turn starts the contraction of your powerhouse muscles. By doing this it helps you to bring your mental and physical focus to the centre of your body, and as you perform the movement you exhale. In general think of exhaling on the exertion.

In case you are interested, the powerhouse muscles include the Transverse abdominis, Rectus abdominis, Internal and External obliques, Multifidus, Erector spinae (Sacrospinalis), the deep pelvic floor muscles, the hip rotators, Gluteus maximus, medius, and minimus, Quadratus lumborum, and Diaphragm.

Why the term “powerhouse”? According to the Random House College Dictionary (1984), powerhouse is defined as “a person, group, team or the like, having great energy, influence, strength or potential for success.” This group of muscles when working together certainly has energy, influence, strength and potential for success. The powerhouse muscles perform two very important functions. Their first function is to provide support and stability to the centre of your body at the same time protecting your spine and its surrounding muscles from injury when you are actively moving or stationary. And their second function is to produce and transfer the energy necessary for dynamic movement while at the same time maintaining pelvic and thoracic stability.

When you have strengthened these muscles then your production and transfer of this needed energy will be done more effectively and efficiently which you will find allows you to do

more with less effort.

What are some exercises to strengthen the powerhouse muscles? Before you engage in any exercise in mat or apparatus Pilates you will learn how to activate these muscles through lateral breathing. Lateral breathing helps you to lengthen your abdominal muscles thus expanding your ribcage to allow more space for air to flow into. Correct posture during your lateral breathing also allows your lungs to expand which helps in creating more air space. If you have a tendency towards rounding your shoulders or leaning forward from the top part of your body as you stand or perform an exercise, you are unintentionally reducing part of your available lung space. On your exhale, the abdominals shorten, the ribs move downwards, the upper ribs rotate slightly and the lower ribs move to the centre causing the chest to narrow from side to side and from back to front which forces more air out. Breathing correctly during your exercising gives your body the energy source it needs. On the other hand, diaphragmatic breathing (shallow breathing) does not engage the abdominal muscles and actually pushes them outwards, rather than inwards, which raises your susceptibility to injury in your back, hips or pelvis.

Some examples of exercises used in Pilates which help to strengthen the powerhouse muscles are small pelvic tilts, large pelvic tilts, and leg slides. These exercises are all performed in the semi-supine position which make it a little bit easier, especially in the beginning, for you to learn how to engage these very important muscles. As you progress and become more confident in your ability to engage your powerhouse muscles, the exercises that you perform in Pilates will also advance. For example, the hip twist with stretched arms and double leg stretch are considered more advanced exercises and not ones that you will attempt as a beginner. Your ability to engage your powerhouse muscles will develop with focussed practice over time and especially, practicing with consistency.

So, what have you learned about your core? Hopefully, the first concept you have learned is that your core is more than a “6 pack abs”. Having a ripped Rectus abdominis might look attractive to some people, but it will not give you a stable base standing or moving, nor will it protect your spine, hips, and pelvis from injury. Secondly, whilst it is not that important that you remember all of the powerhouse muscles by name, it is important that you learn how to engage them.

Over time the ability to engage these muscles will help you in your daily life as well as when you are exercising. Learning how to engage these muscles as a group teaches you how to focus on what you are doing and helps you improve your bodily awareness.

If you transfer this bodily awareness into your daily life, you’ll find that you have more strength, better balance, and more energy which will all contribute to your daily activities taking less effort and energy to complete. You will also find some of your daily activities which require lifting, carrying, or even simple ones such as getting up from sitting without the use of your arms, become easier as you start performing them properly with the use of your powerhouse muscles. And, all of this because you now know how to utilize your core!

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