

Why will Training my Core Muscles Improve my Running? (Part 2 of 2)

You've probably heard the term "core muscles" in relation to fitness training, and may well have been told of the importance of "core strength" for good running.

But have you ever wondered what core strength really means, **why** it is so important and **how** to train your core to improve your running?

Well this article will answer these questions and set you on a path to make you a faster, more efficient and less injury prone runner.

The first part of this article improved our knowledge and understanding of the role of the core when it comes to running. With what we learned there, we can now present 'running specific' core exercises to get you running faster, more efficiently and more resistant to injury.

So what is involved in 'good' running?

Most people think that running is just about the legs. In actual fact when we run, we run with the **whole body**. Every part has a role to play from top to toe (quite literally), with the core playing a particularly important part.

So the next time you run, try using your mind like an on-board computer and become aware of what parts of your body are working, when during each stride cycle they are working, and how they are working.



For example, ask, "are the muscles being used to?":

- **Produce a movement?** Such as the hamstrings bending the knee to start the swing phase;
- **Prevent a movement?** Such as the quadriceps muscles of the thigh keeping the leg from collapsing underneath us on footstrike;
- **Provide stability?** Such as the muscles of the core providing correct torso alignment in the face of numerous external forces acting on it as you move from footstrike to footstrike, whilst also providing optimum transfer of energy between the upper and lower body.

You will also benefit from observing runners of all abilities. Try to see what makes some better than others:

- **Are they tense or relaxed?**
- **Strong yes, but Rigid or flexible?**
- **Do they flow effortlessly over the ground or are they 'muscling' their bodies and making unnecessarily hard work of it?**
- **Do they appear in control of their movements or at the mercy of the forces they generate (especially the rotational ones in the hips and shoulders)?**
- **Do they carry themselves tall or hunch over?**
- **Do they appear flexible or is their running style limited by tightness in joints and muscles around the body?**

Then think about the type of runner you **probably** resemble and who you **would like to** resemble. You might even want to get someone to video you running to see if how you thought you run matches the reality (we often find out we aren't the graceful 'Olympian in the making' we always imagined!).

By increasing your awareness of how you run you will begin to notice when your technique changes when for example you begin to fatigue, increase your speed or hit an incline. This gives you the opportunity to try and regain good technique even though your body wants to adopt less efficient posture and movements. If you give in, you will reinforce poor movement patterns and let those muscles that have fatigued first off the hook. If you make a conscious effort to regain that good technique in the face of fatigue onset, you will have laid down good movement patterns which will eventually become an automatic and subconscious action and given those weaker muscles a workout.

So how do I train the core for running?

I'd like to say that the good news is that training the core is easy! Quite simply all you have to do is make sure that every movement you make is executed properly. This could be sitting in the cinema,



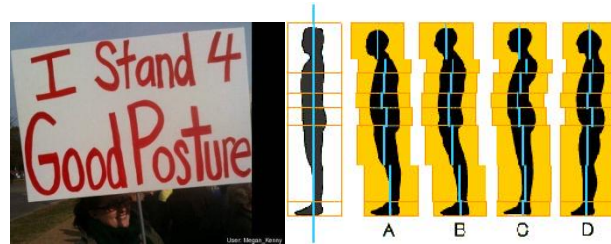
riding a bike or vacuuming the house. As long as we carry ourselves correctly and move efficiently we will be training our cores.

Unfortunately although this is all true, finding correct posture and moving with effortless grace is generally not quite as easy for us as it sounds. Our modern lifestyles mean that for most of the time if we are not asleep in bed, we are in the car between home and work, punctuated with hours sitting at office desks, finally finishing the day off on the sofa in front of the TV.

Where are the daily demands on our core? General activities of standing, walking, bending, squatting, lunging and reaching are what our bodies have evolved to thrive on and are what normally develop good posture and core stability. If your daily routine bears a close resemblance to the modern lifestyle described above, plus you fit in an hour of BMF to give yourself that all round

work out, you cannot automatically expect to do your session exercises and run around the park with good form if your core muscles spend 23 hours a day in unchallenged and unused, and then unsurprisingly exhaust themselves within 10 minutes of the session starting.

The good news is that many of the exercises your BMF instructor is so keen to make you do have a large degree of core strength and control element to them. So when you do these exercises, first think about getting your pelvis,



spine, shoulders and head in the correct position. Do this before you start the exercise as it's much harder to correct poor alignment mid-exercise or mid-run than getting it right beforehand.

Some key pointers for good form are to:



Watch out for tight or tired lower back muscles. This indicates they are working too hard and that you are not using lower abdominals to support the spine. Gently scoop in your abdominal muscles (like a greyhound) and relax your tailbone.

This helps to engage those supporting abdominal muscles and relax the lower back muscles. Become familiar with this feeling so that you are aware if you lose it.

Before starting any exercise (or running), lengthen your body by growing tall through your spine. Sometimes visualising a helium balloon attached to the crown of your head can help you attain this length.

Don't go rigid or tense! You should feel strong but supple (like a palm tree in strong winds), not unforgiving like a rigid structure.



not



Quite often we can tell if we are holding tension in our bodies if our breathing stops or goes shallow. Focusing on smooth, rhythmic breathing will spread relaxation through the body.

Always aim to execute every movement to the best of your ability. These are all skills and the better you do them the more skilful you will become. Do not worry if other people are finishing their reps faster than you. It's often better to prioritise Quality over Quantity, Don't forget: **Form is Everything!**

Below you will find a number of exercises that you will no doubt be familiar with from your BMF sessions. See if you can incorporate the tips as to how to execute them to gain even more benefit from them, which you will soon see in the quality of your running.

1. **The Plank** – seen as a fundamental core exercise and therefore often used as a starting point for core training – quite simply the body should be aligned nice and straight from heel to head with the body propped up on the elbows or in the press up ‘up’ position. There is nothing wrong with the Plank, but the problem with this approach is that it’s actually a very demanding exercise for beginners.

As a result, the correct alignment can’t be held for more than a few seconds before the bum starts being drawn up to the sky or down to the ground. As soon as the correct body alignment cannot be maintained it means that the muscles we are trying to challenge (the lower abdominals and glutes)

are no longer engaged, and often the only way you are maintaining the Plank is by using your lower back muscles, so there’s no point in continuing. Instead, drop your knees to the ground, take a few seconds to recover yourself before going back into the correct alignment again, ensuring you are using the muscles you are supposed to be engaging.



2. **Assisted Falling Plank** – following the logic of what a Plank is, the maximum core effort is required when you are in a virtually horizontal position (i.e. the exercise described above). So the Assisted Falling Plank is great for beginners to get a feel for correct core muscle coordination without being overloaded.



You need a training partner for this one. Stand tall with your arms by your side lightly engaging your glutes and lower abs to support your spine. Have your partner stand in front of you with their hands flat on your upper chest and feet positioned to brace themselves for the next part. You now begin to tilt from the ankles whilst all the time retaining a long body from heel to crown of the head.

As your angle of lean increases your partner will need to take more of your bodyweight and you will simultaneously find that you need to increase the effort in your glutes and lower abs to maintain correct alignment.

By communicating with their partner, an angle of tilt can be found which provides the ideal effort level. Obviously make sure the partner doesn’t fatigue before you, as you could end up doing a mouthful of dirt when they give way!

3. **Tuck Jumps (knees to chest)** – these are great for runners as they work the hip flexors (the muscles that raise the knee to words the chest), the hamstrings (which are pulling the heel under the bum). How do they work the core? Well, the challenge when doing Tuck Jumps is to ensure that your upper body doesn’t collapse forwards when your knees come up (hence why they are called ‘knees to chest’ and not ‘chest to knees’).

This places great demands on your core muscles to retain good posture and a stable platform from which you can perform the exercise.

I'm reminded of the Chief Brody's line "We're going to need a bigger boat" in the film Jaws when he first spots the big fish. He knew their vessel (your core in this analogy) wasn't a stable enough platform to withstand the forces of a giant thrashing shark (your legs). Do Tuck Jumps correctly and you will get your more stable platform.

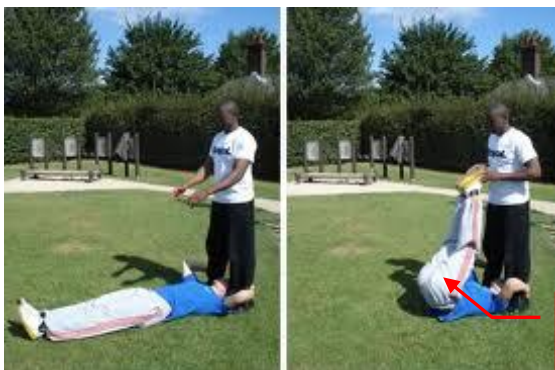


4. **Squat thrusts** – similar to Tuck Jumps in that they work require the lower body to move relative to a stable upper body. Again keep weight out of the feet, instead loading up your shoulders through vertical arms.



Focus on using your abdominals to bring your knees up to the level of your hands. Put a deep bend in your knees and try not to let your bum stick up in the above the height of your shoulders. Aim for a rapid backwards and forwards movement like a piston. Focus on fast, light feet instead of a slow, heavy-footed movement.

5. **Partner throwdowns** – we love these ones! You lie on your back, holding onto your partners ankles who is stood by your head. Raise straight legs up towards your partner and they will throw your feet back to the ground – choosing to the left, right or back down the middle.



Your partner is aiming to make your feet touch the ground and you've got to stop that happening by using your core muscles. Beware you don't overload the lower back muscles – it's better to let your feet touch the ground (or asking your partner to ease

Actually, poor technique exhibited here: Bottom should remain on the ground to ensure upper abdominal muscles are not used instead of the lower abdominals we want to focus on.

up slightly) than replacing your fatigued abdominals with those of the lower back. This is a particularly good exercise for the oblique muscles since the sideways throwdowns demand a degree of resisted twisting motion which is key to running.

6. **Commando Crawls (or leopard crawls)** – and let's not forget those good old commando crawls we talked about earlier. They are great for developing upper body strength, not by simply isolating muscles we know are needed for good running form, but in a functional way. By functional, we mean the co-ordination of different muscles that match the activity we are aiming to improve.

So, with commando crawls we are linking the muscle groups that form a diagonal from one elbow down the back, chest and abdominal muscles, into the pelvis and then across into the glutes, adductors and quadriceps on the opposite side of the body in order to shift our entire



bodyweight forwards. When running, we have the same 'cross-over' in a diagonal line through the body where the opposite arms and legs move backwards and forwards in unison. However, of course commando crawls, when done correctly, add much greater loads to the core muscles that you couldn't get from running alone.

Core Training for Runners - Summary

So, what have we learnt?

1. The core is the part of your body between your shoulders and buttocks;
2. Rather than being just something that your arms and legs are attached to, it's absolutely vital to human movement, providing the source of power, as well as stability for running;
3. Our modern lifestyles are in conflict with developing good core stability, so we need to focus on it as much as we can – both when we are training and also during everyday activities;
4. A strong and stable core benefits general human movement (including running), through exercises that enhance the function of the movement – so for better running we need to maintain good postural alignment under loading and for long periods, work the legs relative to the upper body, and incorporate some twisting loads;
5. Certain exercises can really hone in on improving your core strength and stability. When doing these during your BMF class, try focusing on executing them as perfectly as possible. There are times when racing the guys next to you isn't going to get you the long term results you want – ***not if you are trying to make yourself a better runner!***

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