

BACK TO RUNNING SCHOOL



Surely you don't need to learn how to run? Putting one foot in front of the other is as easy as falling off of a log. Well falling off of a log can hurt and poor running technique can do the same – creating back, hip and leg injuries. ultra-FIT went back to a very special school in west London to learn how to run smoothly, faster and with significantly reduced risk of injury. Now, these are lessons worth learning.

The Running School uses video to analyse running technique. For your first session you'll be filmed from all angles whilst running on a treadmill. This will be done at various speeds and with an element of fatigue. Fatigue will usually lead to the break down of running technique (or any physical skill for that matter) and thus it is important to see what happens to your legs, arm and hip positioning, for example, when you tire. You'll then immediately be shown the video of your running as a Running School coach takes you through what they see. Most runners are surprised by the accuracy and insight of the Running School teachers. ultra-FIT witnessed a couple of runners receive their eureka moments.

One serious recreational runner was told what her injury problems were before she had time to say what they were. The video of her running action when slowed right down from behind showed that her pelvis 'dipped' to the left by a couple of cm's on every other stride – this informed the Running School tutor that this runner had back problems which she did. A number of exercises and drills would then be prescribed to correct this.

An international athlete who was in need of technical advancement in terms of her running was brought to the Running School by her coach. Although the coach knew what was basically wrong with the athlete's technique, he was able to be provided with a much more scientific and biomechanical rationale for what was needed to correct the athlete's running action. Basically it was explained that she was 'quad dominant' – this meant that most of her propulsive force came from these muscles on the front of her thigh. Her glutes and hamstrings consequentially had become lazy and were not 'firing' properly. Not only did this limit her running range of movement, resulting in a somewhat up and down running action, rather than a horizontal one, but also created forces through her knees and ankles that created tightness and pain. The latter was again confirmed by the athlete after the analysis. Specific exercises were again prescribed to sort out the biomechanical and technical issues.

Interview with the head master

**Running School founder
Mike Antoniadis**

UF: What was your inspiration for the Running School?

MA: It came from an idea I had many years ago, when I was coaching young sprinters. Most of the initial coaching was movement coaching, trying to get them to coordinate their movements and teaching them running technique.



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I realised that people are not taught how to run. We think it's something that we should be able to do naturally but not everyone can do it correctly. Just have a look at the hundreds of thousands of recreational runners running for fitness every day, it's very painful just watching some of them let alone running their way! Running is a skill that can be learned and the sooner we teach it the more people will enjoy it. I actually had the idea many years ago. Over the past 15 years - whether I was working with elite athletes, professional footballers or rugby players, kids or people who had surgery or an injury – I found I had to teach people the basics in running technique and movement efficiency, before we could progress to fitness or speed work.

UF: So how does the Running School work?

MA: The first session is the most

important, we analyse the biomechanics, the way people move and run and identify the weaknesses they have. We then explain to them how we are going to change them for the better. The next five sessions focus on changing technique and is related to what they want to achieve. We also give them 'homework' – strength exercises and running programmes based on their level of fitness and what their target is for example, fitness, running, a 10k or a marathon.

UF: How long does it take to make a runner better?

MA: It takes 6-8 weeks to change the metabolism of the body. Although running technique can be changed in as little as 2-3 sessions, it takes a little longer for these to become permanent.

UF: How do you develop technique?

MA: Running technique (and sprinting technique) is simple to learn. The



problem is not many coaches know how to coach it. And personal trainers are very unlikely – in my experience – to address this element, when setting clients fitness programmes, including running. The basics are the same for youngsters from 8-9 years old to mature runners and even World Champions.

If we take running and sprinting, if your arms and legs are moving efficiently going backwards, then they will generate forward horizontal momentum and maintain maximum velocity for longer, if they are not moving efficiently then forward momentum is lost because the body is making adjustments to compensate for the vertical and lateral movements created by the arms and the legs. You're wasting energy – and placing strain on parts of your body that could consequentially become injured.

UF: Is there such a thing as 'perfect running technique'?

MA: No, there is no such thing as perfect running technique as we are all made differently with limbs having different lengths, for example, but there is a perfect running technique for each individual and their body shape. Muscle imbalances and previous injuries can change the biomechanics of the arms and legs and we need to re-teach the body how to work efficiently again.

That is something a lot of coaches don't coach, they focus on volume of training and intensity of training but ignore the efficiency generated by correct biomechanics.

UF: How can you help a runner who has been injured?

MA: After injury or surgery the biomechanics of how we move can change, and if not corrected and addressed this can lead to further injury or a slower recovery from the initial



ultra-FIT spoke to some of the school's pupils:

Vanessa (33) has been running for 6 years and has run the London Marathons twice: *The coaches at the running school are fantastic - I found my experience very relaxing, lots of fun and I progressed in 6 weeks, more than I had in 6 years.*

John (27) is a recreational Rugby player who summarised his Running School experience as follows: *I am only half-way through my course at the Running School but already I am noticing a big improvement in my running technique and am running easier.*

injury. The Running School techniques can also be used to re-train and re-educate runners post injury or surgery and as part of their rehabilitation programme.

Most of the injuries that runners get are because of landing shock. The running style that many novice runners and many seasoned recreational athletes adopt is very inefficient biomechanically and causes stresses and strains on the body. That is understandable because they haven't been taught how to run.

UF: What kind of people come to the Running school?

MA: All kinds we get kids from the age of 8 years old upwards, recreational runners who want to run for fun, what I call serious amateurs, runners who do triathlons or regularly run 5k, 10k and marathons and of course elite and professional athletes who want to get faster.

UF: You now work with children in schools...

MA: Because of the success we have had with children we have also been asked to go into a few schools, we are now involved with four, where we go in 2-3 times per week and teach the children

(and teachers) how to run and put on running games and education sessions.

UF: Do you also work with elite athletes on technique?

MA: Yes, we work with many UK athletes and their coaches. Youngsters as well as elite level athletes including World and Olympic Gold medallists, I prefer to work alongside the coaches but this not always possible as some coaches are reluctant to let their athletes work with another coach or feel threatened because of their lack of knowledge. The changes we make depend on the level and experience of the athlete. With elite athletes the changes are small but can be very significant in their times and their running technique. With young athletes the changes can be enormous and in just 6-8 weeks. **UF**

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Running homework: how to master your running lessons

The most efficient running motion is one when the body has very little up and down bouncing movement. The arms should be moving relaxed, like mini-pistons backwards and forwards, with the legs cycling beneath the body with the heels coming up above knees when off the ground.

Feet: The feet should land under your body (centre of gravity) not ahead of your body, if your feet strike in advance of the body then you are over striding, which causes a braking action.

Landing: You must land lightly on your feet. The best and most efficient way is to land on the balls of your feet, not on your heel. But this is not for everyone and if you are a 'heel-toe' runner then practice landing lighter on the ground. This can improve your foot-strike and make you a faster runner. If you want to change to running on the balls of your feet (that's without touching the heel down first) then you need to practice 10 minutes at a time to get used to it.

Lower Leg Cycling Motion: When your foot leaves the ground bring your heel up to towards your backside to contract the hamstring muscles and your glutes. This creates a cycling motion and will mean you shorten your stride length.

Arms: The coordination of the arms with the legs is the one that will eliminate the bounce and get you moving forwards rather than upwards. The arms should be bent at the elbow at about 90 degrees and the movement should be backwards and forwards. The fingers should be lightly closed but relaxed (like you are holding an egg). On the forward swing the hand should be moving to the chin and the hip and behind the body up to shoulder level.

These are not instant fixes, but you can change your running technique and run more efficiently with practice. It should take about 5 or 6, 45-minute sessions to change your technique. Try incorporating one change at a time and then at the next training session make another change until it all becomes fluid.

