



In the Long Run by Steve Manning Level 2 Coach

WHAT IS A LONG RUN ?

Long Runs are the focus of most runners endurance training. While overall mileage, speedwork and races are also vital factors in a successful training program, it is the long run which requires the most respect. In a single session you can simulate the struggle to achieve something not by doing it fast or well but just by doing it.

Long Runs are the source of strength we draw on when we stand on that marathon or half marathon starting line. They give us the confidence to know what we can achieve. It is by the very difficulty inherent in them that we can find that knowledge to aim even higher in a race.

Long Runs are the foundation on which our progression to fitness occurs. It is because of their importance that they can sometimes become the cause of our downfall. While they are one of the most important components of any distance training program they will not by themselves make you achieve your potential. Many runners get caught up in the excitement of going ever further that they compromise the other aspects of their program. Pushing on through a difficult long run will very likely end in injury rather than fitness.

The key to successful long running is to have a planned progressive program with the flexibility to change depending on your bodies response. By following a few simple training principles you can run long and smart and achieve your potential when you want to - in a race.

DURATION, FREQUENCY AND INTENSITY

Perhaps the most important question to ask is what makes a run a 'long run' ? When John Tracey was training for his first marathon he ran a 50km run every fortnight in about four minutes per kilometre. He went on to come second in the Los Angeles Olympic Marathon.

Many top Marathoners run beyond the marathon distance in their long runs but it is risky to draw parallels between elite athletes and runners of more modest ability and experience. For a beginning runner even 10km may be considered to be a long run if their next longest run is only 5km.

Long runs are best described as runs of enough duration to reach the limits of our endurance capacity without overstepping them. This means that you should be tired at the end but if you hit the wall and stagger through the last bit of the run than the training benefits are more likely to be negative rather than positive. Exercise scientists have identified that for most of us the benefits of a long run start at around ninety minutes as our glycogen stores begin to be taxed. As the run becomes longer the extra benefit quickly drops while the risk of overtraining increases.

A good guide is that a long run should be no more than 25% of your weekly mileage to be safe. For John Tracey running 200km/week this means that 50km is within his safety zone. For most of us running under 100km per week This means that 25km is the maximum safe distance if the runs are done weekly.

Another safer option is to do fortnightly long runs rather than weekly. This means that if your weekly mileage is 70 kilometres a week than you can run up to 35km as your fortnightly long run. This formula does not work quite as well on a fortnightly plan so you are safer to not run beyond a third of your fortnightly mileage.

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You should not attempt to run as much mileage as you possibly can just to make your long run 'safe'. As with long runs, your total training mileage should not compromise your ability to maintain adequate intensity and achieve the other vital requirements of a balanced training program.

Another factor you should look at is the total time and distance of the run or the pace of your long run. Running 30km in three hours is not the same as running it in two hours. Long runs are stressful enough as it is without running them at race pace. If you do this you will certainly get injured and it is unlikely that your marathon will be anywhere near the time that you could achieve.

You should start at a pace much slower than your average pace before getting into a rhythm around 30 seconds per kilometre slower than you want to run your marathon or half marathon. Owen Anderson, editor of Running Research News believes that you should run the last 20 to 30 minutes at marathon goal pace to get used to the specific demands of marathon pace without the stress of a marathon itself.

Finding the best pace to run your long runs is difficult and may change depending on how you are feeling and the time of year. While the benefits of the long run increase the faster you run, there is a point where the effect on your total program is negative. If it takes you longer than 48 hours to recover from your long run than you may have run too fast or too far. When this happens the rest of your training will be compromised and you may get chronic tiredness as overtraining takes hold.

PROGRESSION

Like your total training program your long runs should follow a planned progressive series of runs aimed at your major goal race. Early in the season they should be shorter and slower so that the stress level achieved is very low. As you gain in confidence and ability the distance of each long run should be built up to a preset benchmark for example 30km for a marathon program. When you have achieved this level you can gradually increase the intensity of the runs over a period of many weeks.

In the final eight to ten weeks of the program the distance can then be extended without any loss in the intensity of the sessions. By this stage in your program the other factors such as total mileage and speedwork should also be at their peak and you are at your fittest. You should be able to transfer this ability into a race and run faster than you ever thought possible at the start of your program. If you are not able to run stronger and farther with less effort, or if you are feeling tired all the time, then you have probably over done it and must have a break or be broken.

Progression should occur at the rate that your body is able to adapt to the training stress. Adding on a little bit to your long run each week like Atlas and the calf/bull will not succeed because progression is not linear and we are not machines. Keep track of how your body is responding to the long runs and you can take advantage of one of the most effective training elements.

TYPES OF LONG RUNS

While the distance and pace of the long runs are easier to establish there are other factors to consider such as terrain and the effect of weather on long runs. The principle of specificity demands that the conditions you will encounter in your goal race must be reflected in your training.

Constantly running over hills in training will not help you if you want to run a fast flat marathon. In fact it is better for most long runs to be at a consistent effort so you can

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get the best possible training effort with the lowest stress. However if you want to run in a hilly marathon it is unlikely that you will even finish without having run some hills of similar degree in your long runs. Broken rhythm long runs may be of greatest benefit when you are getting ready for shorter races such as track or cross country.

Running at altitude or in the heat may get a more specific training effect for races under similar conditions. Struggling to maintain 30km long runs over summer might get you admitted to hospital while 20km long runs will achieve a similar benefit to a 30km run in cooler conditions. Just remember that the more difficult the long run the greater the stress and the shorter it should be.

GOALS OF LONG RUNS

The major training effect of a long run is the improvement of the endurance aerobic capacity. Contrary to popular opinion long running does not improve your max VO₂ as well as speedwork and short racing. Most marathoners have Max VO₂'s at a lower rate than track runners and even many middle distance runners. The specific demands of a marathon are to run at as close to your anaerobic threshold for as long as possible. Max VO₂ occurs at a pace much faster than this around about most peoples 5km race pace or the fastest pace able to be held for 15 minutes.

So the goal is really to increase the pace at which you can run while staying under your anaerobic threshold indefinitely. Long runs are a vital factor in this equation. The capacity of your lungs is not as important as your ability to transport oxygen from the lungs to the working muscles. Long runs enhance capillary development and improve the intercellular efficiency of the muscle fibres. The cardiovascular benefits are a lowered resting heart rate thanks to improved efficiency and stroke volume. The major affect of this is to allow you to train more in the future.

RECOVERY FROM LONG RUNS

I believe that the foundation of a good training program is recovery. Quantity and Intensity can not be improved unless recovery is achieved after hard sessions. While you may feel good the day after a long run you will not have recovered sufficiently to get the full benefit of the long run. Improvements in fitness do not occur when you are doing a training session. They are a response to the stress of a session while your body struggles to adapt to that stress. Without full recovery, improvements in fitness will not happen, because they only happen while you are recovering.

A good rule to follow is to attempt no races or hard training sessions the day after a long run. That means no Saturday long run followed by a Sunday race. Long training races can double as long runs if done easy. Fortnightly long runs will let you do fortnightly races in between so you get the best of both worlds.

NUTRITION FOR LONG RUNS

A major factor in recovery from long runs is your nutrition. The most important thing to do is immediately begin replenishing your fluids and carbohydrates as soon as you finish. The ability of your body to replace muscle glycogen is lost the longer you wait. This is because the ability of the cells to absorb the glycogen is dependent on the activity and heat within the cell. As your muscles cool down your heart rate and stroke volume decrease and the diameter of arteries and capillaries decrease all affecting your ability to replace muscle glycogen.

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The easiest and quickest way to replace this energy is with sports drinks initially followed by more substantial carbohydrate rich foods.

Sports drinks during a run can help extend your glycogen stores but will have less effect on recovery than performance. What is vital to recovery is fluid replacement during the run. It is much more important to stop to get a drink during a long run than to worry about the result of a few breaks during a long run. Remember that increased fitness occurs when recovery is greatest.

Finally good nutrition is important before long runs too. Having a low carbohydrate or a small meal the night before can wipe out any chances of a good long run. Make sure that you have something high in carbohydrate and with some protein just before going to bed. A smoothie is often a great long run meal for the night before.

THE LURE OF THE LONG RUN

Long Runs become a great challenge to many runners. Many people get obsessed with doing their long runs. They feel guilty if they miss one or have to cut back on one. They push for ever longer and harder runs and are never satisfied with what they have done. They try to see how fast they can do them, sometimes running them faster than they will even do in their race. They try to run them regardless of whether they have an injury or how tired they are.

For some people the long runs become an end in themselves leading to NOS eating disorders or exercise addiction. This is when the training is no longer of benefit to their goals but is something they feel compelled to do. Long runs are a trap for obsessive people.

Neither mileage or any other part of a training program is the only thing required to achieve your potential. Races should be the goal and focus, not long runs. If you are running really long runs without any improvement, then stop! If you are running just as fast or faster in long runs than races, then stop! If it takes you all week to feel normal again after a long run, then stop! If you are considering dropping out other aspects of a balanced program such as speedwork and races so you can do more long runs, then stop!! Long Runs are just one element of a good training program. Without the other elements you will not ever come close to your potential and you will be training much harder then your results will show. Train smart rather than a lot.

LONG RUNS FOR BEGINNERS

While elite athletes and experienced marathoners may do some runs of beyond 35km in training, for most of us this is unnecessary and dangerous. First time marathoners should do a few runs of 30km in training before raceday. Running 40km, 42km or even further is simply silly and counterproductive. Save your marathon performance for race day. You will feel much more enjoyment conquering this challenge in the race if it is the first time rather than having already done it in training. Do not worry if you have only run up to 32km before. If you have trained properly you should feel much better in the race and the extra 10km will be no problem.

WHEN LONG RUNS BECOME NO RUNS

Long Runs have been identified as the most common training related cause of injury. The stress levels during a long run may be low but they add up to a lot of total stress. Long Runs suppress the immune system while speedwork gives it a boost. Testosterone and Human Growth Hormone is not produced as well during long runs or high mileage

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training. This all contributes to greater risk of injury and illness. It is important that you watch your response to your long runs and cut back or skip one if you are suffering.

LONG CYCLING

For triathletes Long Cycles may offer a similar benefit to long runs. They deplete the muscle glycogen and stress the system in similar if not the same ways. It is often safer to do a long cycle than a long run and easier to fit in to a training program. Long Cycles must be of about two to three times the duration of a long run. It is not that hard for many people to do a five hour cycle while a five hour run is beyond the ability of most runners. Cycling has a lower metabolic demand and has much less muscle destruction so stress levels are less. I know of many Ironman Triathletes who ran their first marathon at the end of an Ironman race.

WHEN LONG RUNS WORK

Long Runs if done right will help you to expand your endurance capacity. This will allow you to train more and harder with less stress and ultimately to race faster. The key to successful long running is to have a planned progressive program with the flexibility to change depending on your bodies response. Long Runs are the challenge that many people use to maintain their training. Enjoy your long runs for upon them rests all of your endurance success.

Next Issue Hills and Strength Development