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## **The Structured Training Program**

*by Phillip Molesworth*

**Are you running at the right tempo?**

**Are you covering the right distances for your stage of development?**

**What is the correct way to train?**

I hear a lot of theories about the right running pace, how often, days off. I am constantly being asked, do I do sprints today? What about the strength component? Should I be running hills? and it goes on.

Budding athletes tend to be bombarded with all of these elements of training and you can throw in the gym for good measure.

All of these do have a place in the program, but not all in the same week or even the same month.

To understand all of this you need to understand the cycles of training. A good coach doesn't just turn up at the track and make up something for their athletes to do. They break the year up into cycles, in most cases three in the year that are developed working back from the point of the year that the athlete has a major event.

This could be the:

- Regional championships
- State championship
- National championships
- Maybe the selection trials for a national team for World championships
- Commonwealth Games or the Olympic Games.

Some are not aiming so high but are simply trying to make a goal they have set themselves for the year, such as a PB or particular time in their pet event.

Whatever it is, it sets a date in the year or a period of three or four weeks when they need to achieve the performance they have set themselves.

In this paper I am going to leave out complexities such as programing the likes of a national team qualification or similar that is then followed by a major event. This is a very complex process and having an athlete ready at the right time is a lot of hard work and planning.

I had a great junior runner that was hearing about her main opponent and what she was doing in training. She would come and see me and say the other runner is doing this or that so I need to do more of that. I would assure her that she was on track and would be ready when she needed to be. Then she would say but she beat me last week, how am I going to win the championship if I don't train harder than her. That was a good question which I would assure her that her plan was on track and she would be ready when it was important.

The State championships came around to be followed a short time later by the nationals. On the day, before she did her warm up, I sat down with her and ran over her race plan as I had studied her

competitor's race strategy and how she could counter it. I finished with "today is your day." **Today you win.** She ran the 3000 metres and followed her plan to perfection and as she charged through the last 400 metres, her competitor was not to be seen.

This was her day.

You see she had been training to a plan with specific phases that would have her at her absolute best when the gold medal was on the line.

This was the competition phase, the period of time where everything is being tuned for the maximum performance. This phase lasts ten to twelve weeks and after that your body goes on strike. You will measure very well in fitness tests but that element that enables you to excel is missing. You have gone stale and need a break.

The 1976, 5,000 and 10,000 Olympic finals were won by Lasse Viren who had successfully defended his 1972 titles. The Olympics were held in July August that year and after his win, Viren went around the world running in events and arrived in Melbourne to run in the Zatopek 10,000 metres in December. I had a young runner in that race and was surprised when I saw my charge lap the Olympic champion.



So what went wrong for Viren? It was quite simple, to the informed he was now 12 weeks past his Olympic win and was stale and should have taken time off to freshen up. He could still run a respectable time but not at his best.

For this reason I tend to plan the annual cycle to hit the competition phase about 8 to 10 weeks prior to the target event date.

This is the phase when you work on the speed element of your preparation. Of course there is also the week prior to the event when the training is targeting freshening the athlete in preparation for the event.

You don't suddenly stop one phase and start another as during the endurance phase you gradually build on the strength phase but still maintain the endurance running. Likewise you slowly build the speed phase during the strength phase and still maintain the endurance you have achieved. You merge from one phase to the next without losing the benefits of each phase as you develop your year.

Now let's go back twelve months before the event and look at what we do before we get to the competition phase.

## Endurance (Cardiovascular) Phase



Each year you go through a phase where you build the platform that will be the foundation for the rest of the year. This is the cardiovascular cycle where the focus is on tempo or rhythm running. In this phase you are focused on completing kilometres at a rhythm that is appropriate to you and your current level. There is no hard days and no easy days and if you want to be a champion there are no days off. Just steady running slowly building on the

number of kilometres you cover in the week.

The idea of this season is to get the heart beating at a steady rate that strengthens the heart muscles and enlarges the chambers so that the heart pumps more blood with each beat. To accommodate

this the arterial system is enlarged enabling more blood to get to the muscles. The muscles also become more efficient at extracting the necessary ATP and oxygen to work efficiently and your nerve system develops to accommodate the work load. The other result is that the lungs also improve their ability to transfer oxygen to the blood. You can measure this by taking your resting heart rate. The better your cardiovascular system the slower your resting heart rate. This is due to the improved efficiency of the system and requiring less beats to achieve the same result.

**This is endurance.** The ability to move at a steady pace is the result of this phase and forms the foundation for the next phase. If you cheat at this time and don't put in the work, then the next phase, and indeed the entire year, will not have the foundation you could have had which can result in you not achieving your goals.

***Remember Champions don't have days off.***

In this phase you are training your body for the future by achieving the following:

1. Increased endurance – or aerobic capacity
2. Training the central nervous system (so the communication pathways between your brain and muscles are efficient)
3. Improving muscular strength to prevent injuries and smooth the transition to more challenging workouts

The benefits of this phase are:

- Denser mitochondria (the “energy factories” of your cells)
- Denser capillary networks to deliver oxygenated blood
- Stronger bones
- More mental toughness and resolve
- Improved muscular strength
- Enhanced running economy (efficiency)
- More energy efficient
- You'll race faster!

This foundation prepares you for the strength and speed phases.

As mentioned above, phases blend into each other. Once you have developed your cardio vascular you need to maintain it during the next phase of increasing your strength elements. You then maintain the endurance and strength elements as the focus moves to the speed or competition phase where you develop your race pace.

Your program will include these elements in each phase but the phase dictates the focus. If you try to do too much strength work while in the foundation or cardio vascular phase, you risk injury and will be sacrificing the benefits that you would have achieved if you kept your focus on the purpose of the phase you are in.



In the strength phase you will transition into it by cutting back on the endurance runs and gradually increasing the strength training. At this time you will start doing more challenging hill running or running stairs or sand dunes. In this phase you build up more strength and lower some of the endurance work doing sufficient endurance to keep the base you worked so hard for.



The next phase is where you start doing speed sessions on the track with repetition runs at varying distances, running at or better than your goal pace for the event of your choice. It is in the speed phase that you need to develop the ability to run at the speed that is required to run at the pace that your goal requires. It is in this phase that you run at goal speed doing repetitions that add up to your event distance or longer at the pace required or even a little faster.

For example if you were training for a four minute mile you will run 400 reps at sub 60 seconds ie 57 to 58 seconds each. This would also apply to 200 reps, 600 reps and so on. You are wasting your time running slower. This is where your body learns to run at your goal pace. The repetitions will be equivalent to the race distance plus, depending on the distance you are targeting. This is the most complex part of the season as you try to maintain your endurance and strength while developing race speed.



When you set your goals, you break down the event into small chunks and work out the pace required for the shorter training distances. Lets look at how this works for an athlete wanting to run the 5,000 at 15 minutes.

- 5,000 meters is twelve and a half 400 meter laps.
- 15 minutes for 12.5 laps
- This is 72 seconds per lap or 1min 12sec



If you are doing a speed session of 400 metres per rep, you would run at 68 to 70 seconds or even a little faster and gradually build up until you can do 15 of these in a session, doing a walk jog lap to lower the pulse rate below 120 before starting the next rep. Once you can achieve this you are ready to run the 5,000 in sub 15 minutes.

The 400 rep can be replaced by 200's 300's 600's 800's etc. or a mixture but the rule is that you complete the distance at that pace and distance so if you are doing 200's you are looking at 30 of them with 200 rest between etc. Naturally you don't go out and try to do this on day one. You build up to it the same way you build up on the endurance runs or strength sessions. This is a complex process and is where the coach comes in. Your coach will decide on the work load and watch while you do it. There are many signs the coach watches for to decide when you have reached your limit. Get it wrong and injury and fatigue will be result.

These sessions start with a run of 3 to 5 kilometres as a warm up followed by stretching and some run throughs to get the legs moving at speed, and finish with 2 to 3 kilometres to cool down and get the blood flowing through the muscles to flush out the lactic acid. These runs are done at a more leisurely pace than your tempo pace but help to maintain your cardiovascular.

The next day would be an endurance run at your tempo pace. This enables you to recover from the hard session and gets blood through the muscles to flush out any lactic build up that causes tightening of the muscles.

***There is a note I should put in at this time.***

Your upper body strength is worked on all year with push ups, sit ups, etc. This element of your strength work is isolated from your other training. These exercises continue throughout the year. At no time does a gym session replace the focus on running. The danger to the distance runner is becoming muscle bound due to hitting the gym and pumping weights. Heavy weights are detrimental to smooth running and often are the cause of muscles becoming inefficient or even injured. The distance runner should focus on lighter weights and more repetitions. This is why I suggest using your own body and not artificial weights as you can overdo it if you are not careful.

The strength I am talking about during the strength cycle is strength developed in the legs with hills, stairs and sand where you are maintaining the endurance while developing the strength. This can't be done in a gym as there is no endurance involved so that part of your development suffers.



A graph of the year would look something like this.

- Volume is the cardiovascular
- Intensity is strength.
- Performance is speed.

## Summary

There are three basic phases to a training cycle: base, strength, and speed. The problem that most athletes have is that they think [the phases] are mutually exclusive, or they try to blend all three phases into one. I think that the phase of training is defined by what you are focusing on during that phase.

*Phase number one is to gradually but steadily increase your running mileage...*

*This is where you are establishing a foundation of neuromuscular fitness and can include very small doses of maximal-intensity running and beginning the long process of developing efficiency and fatigue-resistance at race pace with small doses of running in the race-pace range.*

*But you always do a little of all of those things. There's never a time of year when you're just running mileage or you're just doing strength or speed. You're always doing all of it, it's just a matter of the ratio and to what degree.*

*The program is different for all. It depends on your current stage and maturity in the sport. There is no fix all program which is why you need the coach who acts as:*

- *Someone that can pick when to increase the load and when not to.*
- *Someone who knows when you are ready to move from one phase to another.*
- *A mentor that works on the mental approach as well as the physical.*

*Work hard and have fun. Enjoy your successes from your hard work but remember that if it is too confusing, there are coaches that have the training and experience to help.*