

Training Cycles

Periodized Training of Endurance Athletes

Periodization is cyclical training that leads the athlete through carefully planned phases of development toward a specific goal. An athlete will follow several successive cycles during an entire running career. These cycles gradually increase in training volume and intensity.

The Ayala training season is based on an approximate 6 month cycle. Within this cycle we will progress through 4 phases of training: Recovery, Pre-Competitive (Base Fitness), Competitive (Specific Fitness), & Peak Performance (Tapering).

Each phase represents a specific type and amount of stress applied to the body. A cycle should always progress gradually in stress volume and intensity. Too much or too little stress will result in a failure to reach full potential. The high point of stress volume is reached about 2-3 weeks before the target race for peak performance. At this point volume is cut by 25-30% in order for the body to rebound completely and reach a fitness peak. The body's recovery to a higher level of fitness is called "over-compensation".

Within the framework of cycles and phases are the workouts themselves. Daily workouts should generally be organized so that easy (light) days follow hard (heavy) days in continuous succession. Keep in mind that without adequate recovery time the athlete does not benefit from, and will ultimately be harmed by the application of high volume and high intensity stress.

Workout Explanations

The individual workouts within a specific training cycle can be separated into three major categories in order to better understand their specific purpose. The categories are as follows: Easy/Recovery, GCP and Hard Training. Hard Training can be further broken down into the following subcategories: Recovery Reps., Intervals, Threshold, and speed.

Starting with Easy Runs, we will discuss the what, why, and how of each workout category with the intent of establishing a good basis on which you can set goals, design a total training schedule, & evaluate performance

Easy, or Recovery Run

This is low intensity training lasting 30 to 60 minutes that elevates the heart rate just enough to promote faster tissue repair, muscle relaxation, and higher metabolism. It is exactly what your body needs in order to generate stronger muscles and greater oxygen volume capacity (Max VO2) the day after high intensity training.

Better than complete rest, these easy runs quicken the regeneration process by stimulating nutrient absorption from food, and allowing oxygenated blood to penetrate deeper into muscle fibers. It is specifically this type of work that enables an athlete to reap the greatest benefits from hard training. In addition, Recovery Runs prevent soreness and stiffening from excess lactic acid.

For these reasons you should have at least 2 low intensity Recovery Run days per week. Basically, Recovery Runs should always precede & follow high intensity training.

GCP or General Conditioning Pace Distance Run

Slightly higher in intensity and much longer in duration is the GCP Run. These long distance runs of 40 to 90+ minutes are used to develop & maintain an "endurance base". This base is the foundation on which the season is built. Ideally making up 20% of your total weekly mileage, these GCP Runs develop efficiency in oxygen uptake, fuel transference (both carbohydrates and fat), and heart rate to blood volume. They also contribute to a higher mileage total essential to an end of cycle tapering plan (more on tapering later).

Because the GCP Run is a medium intensity workout that also allows for recovery, it can be used effectively in many places in your schedule.

Hard Training

In each phase of a cycle (except the recovery phase) there should be some form of Hard Training scheduled each week. As the fitness level of the athlete gradually rises, and the target races loom closer, Hard Training will progress through four categories.

Recovery Repetitions are designed as an introduction to fast pace running. Consisting of short 200 to 300 meter intervals, "30-30" segments of equal rest and speed, or hill charges at 1600m to 5k pace with full recovery jogs of equal distance (or longer), these sessions will develop a muscle strength base for greater speed and running economy. It is important to remember that although the intensity level is high, the recovery jogs should be long enough to keep you relatively fresh through the end. 10 to 16 Recovery Repetitions is optimal. Again, you should be consistent throughout the workout. If you can't maintain the pace then you started out too fast!

In the second quarter of the cycle, Recovery Reps will be replaced by **Intervals**. Instead of several short repeats, Interval Training is made up of fewer and longer distance segments at race "date pace" or "goal pace". These workouts make up half of the critical portion of the training calendar as they build on the strength and endurance base laid down in previous weeks. If you think they look tough, you're right. The longer distances of the Intervals not only force your body to develop greater Max VO2 and lactic acid tolerance, but also hone mental toughness.

Intervals usually range between 4 to 1600 meters run at your current race pace with equal time recovery between each. The total volume of an Interval workout should be 1.5 to 2 times your race distance.

Making up a critical portion of the calendar, **Lactate Threshold Training** puts an evil twist on the above. That's because the best indicator of performance is the body's ability to endure high amounts of lactic acid released by tiring muscles. And the best way to improve this lactic acid Threshold is by pushing the training intensity while you're fatigued.

Have you ever experienced that helpless feeling of exhaustion when your mind wants to keep pushing but your body inexplicably refuses? It seems as if your feet are magically turned to bricks. This is the effect large amounts of lactic acid has on the muscles. Fortunately, with Threshold Training, this phenomenon can be overcome.

Lactate tolerance can be raised by running 3 – 7 mile segment runs each week at 85% effort. In these workouts, the emphasis is on quality performance of intensity while lactic acid is present in the muscles.

Speed

Speed Training has its own heading because it is not hard training in the same sense as the three types listed above. High intensity short duration Speed workouts or drills are essential in developing the neuromuscular pathways needed to improve performance. 100m strides or sprints, quick feet drills, plyometric exercises all enhance neuro-response and develop efficient body mechanics.

New coaching philosophy places Speed Training at the top of the list of components for successful distance athletes. All elite athletes possess the tools for high performance speed regardless of their race distance. Therefore, Speed development will be addressed daily throughout the training cycle.

Reality

You can't stay at your peak year round. If all you ever did were short speed intervals you'd quickly lose endurance and threshold tolerance. Inevitably you must go back to the beginning and start the process over again. But with each new cycle your body will be able to tolerate increases in volume and intensity, resulting in improved performance, assuming that you maintain your fitness level through the recovery phase!

Remember, your body begins breaking down unused muscle fiber within 48 hours. The rewards of all the hard work you put in over the course of a season can be lost in a matter of weeks.