

Training

Tom Coniglione, MD

There is enormous, physical and psychological value to exercise: any form. Physical activity carried out in a graduated manner is safe. Excessive physical activity can lead to injuries. Injuries can occur with any form of physical activity carried out to the wrong degree, by the wrong person or are at the wrong time.

TRAINING PROGRAM

Existing, is a wide variety of training programs for 5K, 10 K, half and full marathons. Some of the programs have schedules for novice and more experience runners. In all programs, there is a gradual escalation in the number of miles run per week culminating in the proposed event. Many local coaches and running clubs have their own programs.

More intense programs recommend running 5 to 6 times a week. Less aggressive programs recommend running 3 to 4 times a week. Most programs include days of rest and cross training. Experienced runners can offer anecdotes with various training programs.

Research into the various programs cannot afford head-to-head comparisons of the programs. However, there are a few generalizations

Number of runs per week

Irrespective of the training program, the goal is to get the runner to the starting line while minimizing the chance of injury.

Research conducted through our office and several other large running clinics around the country, provide guidance for runners.

The highest number of injuries occur in those running five or six time a week. Running one or two times a week produces a rate of injuries equivalent to running five or six times a week.

Injury rates are the lowest when running three or four times a week.

Of course, there are runners who can run five or six times a week, and not have injuries. Those runners are the exception, and not the rule.

Novice runners have injury rates considerably higher than experienced runners. For example, runners training for the first half or full marathon will not get to the starting line 25 to 30% of the time; **the injury rate in first timers is 25 to 30%.**

Runners, training for their 10th half or full will get to the starting line 90 to 95% of the time. The logical conclusion from these facts is that the body must adapt to the stresses of running.

Number of miles per week

As the number of miles run per week increases so does the injury rate. The number of injuries is gradual and low up to about 40 miles per week. Above 40 miles per week the rate of injuries rises sharply.

SPEED AND DISTANCE: running “Intensity”

“Intensity” is the total volume of stress on the body

There are multiple variables involved with running intensity: speed, distance, type of cross training, flexibility, strength, etc.

Both speed and distance = intensity of running. Increasing the intensity (running distance) over time is the standard way to prepare for a distance event. What is not recognized or emphasized in the training programs, is the fact that we should increase the intensity gradually

To gradually increase the intensity, we increase the distance OR the speed separately, NOT both at the same time. Therefore, keep the speed constant while increasing the distance. Or, when increasing the speed, we should keep the distance constant. When we increase both the speed and the distance at the same time, injury rates increase.

SUMMARY: Increase the speed while maintaining the distance constant, or, keep the speed constant while increasing the distance.

Likewise, when we introduce intensity, such as hills, repeats or fartleks, it is advisable to decrease other portions of the running program to keep the total intensity constant. The goal is gradually increase the total volume of running constant during the times of increased intensity

INCREASING MILEAGE

All training programs recommend the runner have a base of mileage prior to starting. The base is variable from program to program. The general rule of thumb is that a runner should be able to run 25 miles per week for a minimum of four weeks before starting a half or full marathon training program.

After the program starts, the mileage is increased. The overall goal is to increase the (intensity) number of miles and a very gradual manner. Another general rule of thumb is to increase by 10% per week. This is a “rule of thumb” not an established medical fact. Some runners can increase their mileage more quickly, while others must increase their mileage more gradually.

However, there are 2 facts to bear in mind. First, increasing distance by 30% over 2 weeks is associated with increased injuries. Second, increasing the distance by 10% per week is associated with a very low number of injuries.

LISTEN TO YOUR BODY

If you have been ill, not slept well or just feel tired, don't run. There is nothing to be gained by forcing a run. one runner commented that he feels badly when he “wimps out” and does not run on those days. However, the next run is a better than usual.

LAYOFFS

When taking time off from any form of exercise, conditioning is lost. How much is lost and how fast it is lost varies among the research studies. The research is limited by experiments with small numbers of subjects and different experimental conditions. We know the enzymes involved in the biology of exercise drop significantly in 2 weeks. After not running 2-4 weeks, 50% (or more) of conditioning is lost.

To be conservative and to protect runners, we use the rule that after not running for two weeks, runners lose about 50% of their conditioning. The meaning is clear. After a layoff, return to running must be scaled in proportion to the amount of time lost. There are no rules or research analyses to provide guidance. Common sense must prevail.

LONG RUNS

All training programs include longer runs: 18-20-milers for marathons and 10-11 miles for half marathons.

Rationale: long runs build strength and confidence

Distance: long run 25-50% of total weekly mileage

20-miles: arbitrary distance

Galloway's program initially included 26 and 28 mile runs

Higdon: 1 20-miler

Many programs: 18 is longest

Long runs should be 3 – 3 ½ hours in length at a slower pace

Philosophy of "one size fits all" does not apply

CROSS TRAINING: any form of aerobic exercise using different muscles than those used in running

Biking, rowing, swimming

REST DAYS: 1-2 per week

Hydration and nutrition are important.

These comments and research analyses apply to normal adult runners. Many collegiate runners, elite level runners and Kenyans, whom some of us have interviewed, are not "normal" runners. The foregoing does not apply to them.

SUMMARY

RUN 3-4 TIMES A WEEK

RUN 40 MILES A WEEK OR LESS

CHANGE DISTANCE OR MILEAGE SEPARATELY: NOT BOTH AT THE SAME TIME