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## Effect of fartlek training for developing endurance ability among athletes

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### Abstract

The purpose of the present study was to effect of fartlek training for developing endurance ability among athletes. 30 athletes between the age group of 18 to 24 years (15 Experimental Group and 15 Control Group) were selected for the study. The six weeks endurance training program for experimental group were specific to experimental group which contains more sand training on alternate days and controlled group was given general training of athletics. The Pre Test and Post Test were proficient through Cooper Test for both group to estimation the effects of sand running. This study explains that the sand training has increased the endurance between the Experimental groups along with Physiological capacity of the athletes. It is optional that sand training is fine for the endurance development of athletes.

**Keywords:** Fartlek Training, Endurance Ability, Athletes.

### Introduction

Fartlek, which means "speed play" in Swedish, is a training method that blends continuous training with interval training. Fartlek runs are a very simple form of a long distance run. Fartlek training "is simply defined as periods of fast running intermixed with periods of slower running." For some people, this could be a mix of jogging and sprinting, but for beginners it could be walking with jogging sections added in when possible. A simple example of what a runner would do during a fartlek run is "sprint all out from one light pole to the next, jog to the corner, give a medium effort for a couple of blocks, jog between four light poles and sprint to a stop sign, and so on, for a set total time or distance." The variable intensity and continuous nature of the exercise places stress on both the aerobic and anaerobic systems. It differs from traditional interval training in that it is unstructured; intensity and/or speed varies, as the athlete wishes. Fartlek training is generally associated with running, but can include almost any kind of exercise.

Fartlek running involves varying your pace throughout your run, alternating between fast segments and slow jogs. Unlike traditional interval training that involves specific timed or measured segments, fartleks are more unstructured. Work-rest intervals can be based on how the body feels.

With fartlek training, you can experiment with pace and endurance, and to experience changes of pace. Many runners, especially beginners, enjoy fartlek training because it involves speed work. But it is more flexible than and not as demanding as traditional interval training. Another benefit of fartlek training is that it doesn't have to be done on a track and can be done on all types of terrains -- roads, trails, or even hills.

To do a fartlek workout, try introducing some short periods of slightly higher pace into your normal runs. Maintain the faster pace for a short distance or time intervals, such as 200m or 30 seconds. The intervals can vary throughout the workout, and you can even use landmarks such as streetlights or telephone poles to mark your segments.

Once you complete a fast segment, slow your pace to below your normal running pace, until you have fully recovered and your breathing has returned to normal.

Then return to running at your normal pace, and incorporate more slightly fast intervals later in the run.

A fartlek workout prepares a runner to handle the uneven paces of a race. In a race, a runner usually runs fast, then slower, then fast again. This variation in pace is due to the race course's terrain and surges used by competitors. The best runners are the ones who can physically and

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mentally respond to variations of pace. Here are some pointers about how to use a fartlek workout to prepare you for great racing. A Fartlek (swedish for "speed play") workouts involves sprinting and jogging off and on during a run. For example, a normal fartlek workout be a 40-60 minute training run. However, instead of keeping the same pace through the whole workout you sprint, then jog, then sprint again whenever you feel like it. You can customize fartleks to how you feel. If you feel sluggish, limit the number of sprints you do, and take more time to recover. If you feel great, run the sprints hard, and sprint again maybe when you don't feel totally recovered.

One good way to run this workout is to pick out objects ahead of you, like a telephone pole and sprint from that pole to the next and then jog. One reason that fartleks are so popular is that it is so flexible.

Before starting a fartlek, make sure that you warm up at least 10-15 minutes to ensure that your muscles are loose enough to handle the accelerations. Also, cool down 10-15 minutes after the workout. The fartlek can be a difficult workout, and if you don't warm up and cool down, you could have some very sore muscles the next day. Starting to run fartleks can be tough on your body if it isn't ready for the faster pace, and can lead to injuries such as achilles tendonitis, IT-Band soreness, and runner's knee To help cut down on the risk of injuries, make sure that you are running in good running shoes and don't have any signs of over-training. After the fartlek workout, it is also very important to refuel your body by drinking water and eating protein-rich foods to get the most benefit from fartleks and help your muscle recovery.

### Structured Fartlek

Although the fartlek's popularity is partly due to its flexibility, many runners like to make the workout more structured and give it more of a track interval feel. For example, a structured fartlek might be: 10-15 minute warm up, 2 minutes hard, 2:30 easy, 3 minutes hard, 2:30 easy, 4 minutes hard, 2:30 easy, 4 minutes hard, 2:30 easy, 3 minutes hard, 2:30 easy, 2 minutes hard, 10-15 minutes cool down. This workout is stated easier by calling it a: 2, 3, 4, 4, 3, 2, with 2:30 rest. A structured fartlek is great because, since it is run on trails or roads, it gives you the benefits of a track workout while also providing you the chance to run hills.

In his excellent book "Daniel's Running Formula," Coach Jack Daniels suggests the following workout when feeling lethargic: Run 10 steps (counting one foot, not both) then jog 10, run 20 and jog 20, run 30 and jog 30, and so on up to running 100 and jogging 100 (or more if you wish). This is a great way to get obtain a good workout when your body simply does not feel like exerting itself.

Endurance (also related to sufferance, resilience, constitution, fortitude, and hardiness) is the ability of an organism to exert itself and remain active for a long period of time, as well as its ability to resist, withstand, recover from, and have immunity to trauma, wounds, or fatigue. It is usually used in aerobic or anaerobic exercise. The definition of 'long' varies according to the type of exertion – minutes for high intensity anaerobic exercise, hours or days for low intensity aerobic exercise. Training for endurance can have a negative impact on the ability to exert strength unless an individual also undertakes resistance training to counteract this effect.

When a person is able to accomplish or withstand a higher amount of effort than their original capabilities their endurance is increasing which to many personnel indicates progress. In looking to improve one's endurance they may slowly increase the amount of repetitions or time spent, if higher repetitions

are taken rapidly muscle strength improves while less endurance is gained. Increasing endurance has been proven to release endorphins resulting in a positive mind. The act of gaining endurance through physical activity has been shown to decrease anxiety, depression, and stress, or any chronic disease in total. Although a greater endurance can assist the cardiovascular system it does not imply that any cardiovascular disease can be guaranteed to improve. "The major metabolic consequences of the adaptations of muscle to endurance exercise are a slower utilization of muscle glycogen and blood glucose, a greater reliance on fat oxidation, and less lactate production during exercise of a given intensity."

The term stamina is sometimes used synonymously and interchangeably with endurance.

Endurance may also refer to an ability to keep going through a tough situation involving hardship, stress, etc

Sand running offers the following benefits.

- Helps develop power and muscle elasticity.
- Improves stride frequency and length.
- Promote strength endurance.
- Develop maximum speed and strength
- Improves lactate tolerance

### Objectives of the Study

The objective of the study is to find out the effect of fartlek training for developing endurance among athletes.

### Hypothesis

It was hypothesized that there would be significant difference in fartlek training for developing endurance among athletes.

### Methods and Materials

The subject for this study is 30 college level athletes of Jat Colege, Rohtak between the age group of 18 to 24 years (15 Experimental Group and 15 Control Group) were chosen for the study. Cooper's 12 Min Test is used for collection of Data.

### Procedure of Data Collection

The 12 Min Cooper Test were used for Pre Test for Experimental Group and Controlled Group and results was recorded. The six weeks training were specified to Experimental Group which consists of Fartlek Training Sessions on alternate days. The Fartlek Training Sessions includes Short Sand Sprints, Continuous Running in Sand and Sand Hills were given training to experimental group. The controlled group was specified the general training. After Six weeks Training the Post Test were accomplished experimental group and controlled group. The athletes normally hail from different socio-economic status, different dietary habits, mode of living etc. confident factors like daily routine, life style and food habits which would have an impact on the presentation of both groups could not be controlled.

### Result and Discussion

12m Run/Walk test was used to assess cardio respiratory endurance before and after both of the experimental conditions. Items on this time are weighted such that a decrease in score is indicative of increase in fitness level in cardio respiratory endurance.

**Table 1:** Descriptive statistics of different groups measured in post-testing

Group	Mean	Std. Deviation	N
Control Group	3472.59	172.69	15
Experimental group	3599.27	130.38	15
Total	3535.93	151.53	30

Table 1 shows the values of mean and standard deviation for the data on 12m R/W between the control and experimental groups during post-testing. The control group mean was

3472.59 (SD = 172.69) and the experimental group mean was 3599.27 (SD = 130.38).

**Table 2:** Pair wise comparisons on Cooper Test

Group	Group	Mean Difference	Std. Error
Control Group	Experimental group	-126.68	42.31
Experimental group	Control Group	126.68	42.31

Table 2 shows the pair wise comparisons of 12m run/walk among both groups. The control group showed a MD = -126.68 and the experimental group showed a MD = 126.68.

### Conclusion and Recommendation

Fartlek training results in the calf muscles learning to pect more quickly and thereby generating work at a higher rate, they become more controlling. The calf muscles get this by recruiting more muscle fibers, around two or three times as many when evaluated to running on the flat. Sand Running is recommended for endurance athletes more in off season and less in season.

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