

# The Fartlek Training Method with Multiple Valences: A Review

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**Abstract:-** Running is concomitantly training, it is an opportunity to meet everyone's need for solitude, but also a socializing factor; it can be practiced anywhere and anytime by social categories and at any age. Starting from the primary method of continuous effort, running is an exercise has been maximally exploited, it is a basic element in designing professional training sessions. Fartlek is a type of training that help both beginner or advanced runners to obtain a stronger favourable ground reaction and a faster pace. The paper reviews is the literature on this simple but efficient training means. It highlights the benefits of using fartlek and gives examples of fartlek sessions. This article can help normal population those who run for health, it also provide guideline for those who make the transition from leisure to organized training, in their attempt to complete a long-distance training.

## I. INTRODUCTION

Fartlek training has reached the age of 100. A Swedish word that means 'speed play', it designates a popular training method, which is widely used nowadays by many runners.

The founders of this training methodology were the Swedish GösseHolmer, a medallist in the 1912 Olympic Games and later the coach of multiple world record holders, and the well-known Gösta Olander, a specialist who turned a small hamlet, located at 300 km away from the Arctic Circle, into a famous training place in the 1960s.

Gösse Holmer is the inventor of the concept based on which the content of a fartlek session is established and which was created to get the Swedish cross-country team out the Finnish domination. His idea is simple: a simultaneous speed and endurance workout, specifically an endurance training session intermixed with short moments when the race speed is higher than that used in a competition (Schatzle, 2002).

The precursor of fartlek was a long and slow run on uneven ground. Because in the Northern hemisphere there are only two seasons, summer and winter, and by that time there were no indoor tracks for training speed in order to stay in shape, the Swedish people had to improvise.

Gösta Olander became famous for the ambiance in which the training sessions were performed and, together with him, Vålådalen, the training centre sought by world-class runners, skiers, hikers, canoe/kayak athletes. Compulsory preparation was in opposition to interval training, which was considered out-of-date, and took place

in the forest. Olander, a filmmaker, writer, lover of nature and big fan of cross-country skiing, but never a champion in any branch of sport, implemented his own revolutionary ideas (at that time) in the training methods. He thought that running on a cinder track or an asphalt road was totally contraindicated and therefore recommended to run on soft ground, even in the mud and marches, and in winter, in so deep snow that each step had to force the knee to raise towards the chest.

Using this method, the Swedish people broke all world records in non-classical events (2-3-4 miles, indoor and outdoor); thus, the records of the famous Paavo Nurmi (Finland) over the distances of 5,000 m and 10,000 m were exceeded by 30 seconds, and in the summer of 1942, GunderHaegg, the most successful Swedish runner, set 10 new world records over 7 different distances (Vollmer, 2014a).

## II. PROBLEM STATEMENT

Fartlek is based on the change of pace and the athlete's sensations, it being an excellent alternative to the rigidity of training sessions and, at the same time, an enjoyable method for the runners.

## III. RESEARCH QUESTIONS

We check if the fartlek method provides an environment that breaks the monotony of track training and it avoids mental stress that is often associated with preparations.

## IV. PURPOSE OF THE STUDY

This paper aims to highlight the benefits of using fartlek. It can be help those who are run for health and can also be a guideline for those who make the transition from leisure runners to organized the training.

## V. RESEARCH METHODS

This study is a monographic treating about the fartlek and is based on the literature review.

## VI. FINDINGS

The fartlek method, runners learn more about their physical and mental abilities. During such a sessions, runners do not have to follow as a predetermined training plan, with a certain number of repetitions and/or performed at a certain intensity, but they must take into account their own sensations, because the slogan of fartlek is the word "freedom".

Intended for the achievement of performances, fartlek also has a psychological component; it is not the miraculous recipe that brings success, but a means to make the runner aware that the way to success is hard work.

The Swedish fartlek did not last too long in its original form, because the achievement of performance seemed too distant in time. For the same reason, it was rejected by coaches from the American universities, who, working with athletes (only) during their studentship, could not afford to wait for this method to produce results (Vollmer, 2014b).

Among the great coaches who are to adapt this method, we are mentioned Percy Cerutti, an Australian specialist who considerably increased the intensity and toughness of sessions, leading to the training to a very high level of the physical demand, and the Arthur Lydiard, a Neo-Zealander coach who programmed the fartlek sessions on the sloping ground (to produce a strong additional stress).

Gösta Olander moved to the fartlek into the woods, on the beach or a football field using their natural configuration, which was pleasing for the lovers of leisure-time movement. For the athletes and/or non-athletes, the method involves using slopes (going uphill/downhill) and the nature of the soil (sand, grass) for sprinting, running at a sustained pace, recovery (walking or jogging), but in a totally free way, according to each one's desire or the will of teammates.

Fartlek is preferred by the leisure runners, because it takes them back to their childhood, to the play, when most movements are fast, even if they are performed over very short distances.

## VII. TYPES OF FARTLEK

Although the sensation was primarily important in the beginning, this method has developed over time in three directions: it started with the usual, free fartlek, passed through the semicoded (semi-programmed) exercise and arrived at the perfectly planned running (Gaillard, 2016).

In variant 1 (free fartlek), to the best known and most used one, the running pace and the duration are not predetermined. Exercise is performed in full freedom, as the athlete feels: uphill, downhill, on flat ground, over short and fast distances or over long but slower distances. The runner can use the relief or can integrate running exercises (with knees up, with heels to the buttocks), jumps, steps, everything being left to their will. The focus is less on the amount of effort and more on its intensity.

The playful nature of this variant ensures uniqueness to the preparation of leisure runners. Free fartlek perfectly fits the skilled athletes who want to make the transition to interval training, or who resume their training after an injury or a poor shape period. It has the advantage of a rapid progress in the knowledge of one's physical potential, but also the disadvantage that it does not stimulate specific work towards reaching the established performance goal.

In variant 2 (semi-programmed fartlek), the amount and toughness of physical exercise are largely predetermined. Even if the runner is not limited to a certain speed, the proposed running time implicitly gives indications on the intensity and sets the objective of the training session. However, the perception of exercise intensity is a sense that the athlete must improve.

This variant is not only allowed, but even requires working at an appropriate intensity to reach the proposed objective. It has the disadvantage of claiming a certain level of experience, because the athlete often tends to use a wrong pace (generally, too fast), which leads to difficulties in performing the next sessions.

The third variant (perfectly planned fartlek) is least playful training method, similar to track training. This is the situation where the name does not match the content, the athlete's sensations losing their importance, because everything is dosed in advance. The athlete must cope with many constraints: exercise timeframe, recovery time, intensity that has to be reached and maintained.

The feature of this type of training is the perfectly planned route, supported by a watch that displays real-time heart rate (running intensity). Using workouts based on percentages of heart rate is recommended when the routes are difficult (slopes or surfaces of different consistencies) or after training interruptions (either voluntary ones or caused by injuries).

The perfectly planned fartlek has the advantage of encouraging the specific training in running events, with a low margin of error relative to the target. Among its disadvantages, we remind the necessary logistics (watch/GPS phone, heart rate tracker, possibility to measure the covered route) and the fact that it is too little playful, putting the athlete in the position to focus more on the watch than on his/her own sensations.

Although it is a flexible training method, minimum organization is required to successfully approach this type of training:

- Fartlek is always practiced after appropriate warm-up (for about 20 minutes);
- athletes should not get blindly involved in this type of training, but should start with a period of adaptation, during which they have to build landmarks;
- It is compulsory to comply with the principle of progressivity. If 5-6 accelerations are enough for the first sessions, their number can gradually increase to 10-12 after 3-4 training lessons, until the total working time reaches about 60 minutes;
- for runners, the heart rate tracker is a plus, because it helps them not to exceed the ideal 90% of maximum HR and to resume exercise when HR drops to 80% or even 75%. If needed, the athlete may include walking sequences;
- this type of training is recommended to leisure runners, but also those with tendon problems resulting from the numerous workouts performed on the track (Newsholme, Leech, & Duester, 1998).

## VIII. FARTLEK SESSIONS

Fartlek is often used by occasional (leisure) runners because they can structure the session as they like, being free to run with the speed they want and when they want, to accelerate and decelerate, to sprint and recover using mild running or walking.

The objectives pursued by fartlek runners are similar to those of the joggers: preventing the effects of a sedentary lifestyle and combating stress by leaving the daily routine.

For a non-athlete, a typical session is structured as follows:

- warm-up for 15-20 minutes;
- selection of a landmark (for instance, a tree or a public lighting pole) to which the athlete runs with the proposed speed (for example, 75% of maximum speed), then the intensity (speed) is reduced to that used in the recovery jogging;
- The runner will then choose another landmark to which they run with another predetermined speed (for instance, 90% of maximum speed), and this alternation of pace continues until completing the training with the proposed speed.

Exercise intensity will gradually increase. The runner must end the sessions without experiencing excessive fatigue; they will give up accelerating as soon as the effort becomes difficult and will continue in a sub-moderate regime until they feel ready to resume it. Exercise parameters (intensity, amount, toughness) may differ from one session to another, and the variety of training field will enable progress through the adaptation to diversity.

From the coach's perspective, creating a fartlek session pursues two objectives:

- contributing to the runner's physical development;
- providing the runners a friendly environment, different from the classical one, during a quality workout.

By their very nature, athletes often use overtraining, and when/if they do not reach the proposed target in a training session, they may resort to an exaggerated increase in intensity. It is here that fartlek intervenes as a solution that, taking into account the athletes' sensations, provides them the necessary break.

A timeframe can be set for the training session (for example, 45 minutes), during which all energy systems used by endurance runners (the anaerobic, aerobic and mixed ones) will be engaged. For this, running can be performed on uneven ground (field, park, forest, hill, sawdust track, road) and/or in difficult conditions (snow, soft ground) and will consist of 50 m uphill sprinting, sustained repetitions over the distance of 1,000 m, downhill running with large strides, all of them interspersed with jogging or even walking (Tifrea, 2002).

Fartlek training was intended to be a non-structured phenomenon, but coaches gradually gave up this approach and developed specific programs, such as those presented below.

Gilles Dorval, a French cross-country coach, replaced the landmarks with time sequences. In this case, the content of a session is the following:

- 20' warm-up running at 70-75% of maximum HR;
- 3 accelerations of 30" each at 95-100% of maximum aerobic speed, with 1' of slow jogging between them;
- 3 accelerations of 1' each at 95% of maximum aerobic speed, fragmented by 1'30" of slow jogging (or more, if necessary);
- 3 accelerations of 2' each at 90-95% of maximum aerobic speed, with 2' of slow jogging (or more, if necessary) between them;
- 3 accelerations of 1' each at 95% of maximum aerobic speed, fragmented by 1'30" of slow jogging (or more, if necessary);
- 3 accelerations of 30" each at 95-100% of maximum aerobic speed, with 1' of slow jogging between them;
- 15' of slow jogging at 75% of maximum HR (Dorval, 2016).

The fartlek used by Steve Moneghetti (a marathon runner, multiple medallist at major competitions) consists of:

- 2x90 seconds at a slightly faster pace, with 90 seconds of mild running between series;
- 4x60 seconds, with 60 seconds of mild running between series;
- 4 x30 seconds, with 30 seconds of mild running between series;
- 4x15 seconds, with 15 seconds of mild running between series (4Run, 2016).

The fartlek recommended by Jack Daniels (the world's best running coach, according to Runner's World magazine, in 2005) does not use distance or time, but strides. It involves a pyramid that starts with 10 fast strides, 10 slow strides, continuing with 20 fast strides, 20 slow strides, 30-30... until 100 fast strides, 100 slow strides, and then decreasing by 10 until the starting series is reached (Daniels, 2013).

The fartlek with halved recovery time consists of faster running sets and rest periods representing half of the running time.

Fartlek for the development of maximum aerobic speed:

- *variant 1*
  - 10x45" of high-speed repetitions alternating with 1'15" of rest, slow jogging (Yadav & Yadav, 2013)
- *variant 2:*
  - 30 seconds fast / 30 seconds slow
  - 1 minute fast / 1 minute slow
  - 1 minute and 30 seconds fast / 1 minute slow
  - 2 minutes fast / 1 minute slow
  - 2 minutes fast / 1 minute slow
  - 1 minute and 30 seconds fast / 1 minute slow
  - 1 minute fast / 1 minute slow
  - 30 seconds fast / 30 seconds slow (Dorval, 2015)

Although the purpose of training is to run fast in short sequences, fartlek is not a very easy training method. It is estimated that the efficiency of training sessions is maximum when they discipline the athletes, helping/forcing them to exceed their limits. If correctly used, fartlek can become a valuable part of training.

## IX. CONCLUSION

The essence of fartlek is running with changes of pace. The method does not involve running over precisely measured distances, but relies more on the variation in speed over different sections. Fartlek is not only suitable for different levels of training, but can be adjusted according to personal preferences and the existing situation.

Physiologically, the difficulty is reduced and the risk of injury is lower than in the case of track training. The main disadvantages consist in the difficulty to build the stable and durable landmarks needed by competitive runners (10 km, half-marathon, marathon) and the necessity for the athletes to know themselves very well.

Fartlek training can be used in any period of the year by runners of all ages, experienced or not. Athletes are recommended to use, during a training year, all three ways of practicing the fartlek, depending on the proximity to competition or simply to add extra quality to the training lesson. For a young runner, variant 1 is more suitable. In variant 3, the fartlek session must be programmed only for those athletes who are basically well prepared.

To progress appropriately, fartlek must follow an ascending trajectory along the athlete's career, with progressively higher length of workouts and number of repetitions.

Training sessions have infinite variations due to the exercise timeframe (from 10 seconds to several minutes), intensity and duration of recovery.

The founders' idea was revolutionary for the years 1920, but fartlek still remains, for middle- and long-distance runners, the most accessible and playful speed training, with or without a coach, dictated by instinct and with many variations.

Fartlek training is recommended because, by its very nature, provides an environment that breaks the monotony of track training, avoiding mental stress often associated with preparation. It represents an already checked method easy to use by a great diversity of runners with different objectives, levels of training and personality traits.

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