SCIENTIFIC JOURNAL OF SPORT AND PERFORMANCE

REVIEW ARTICLE

Easy interval method, an alternative approach to improve anaerobic threshold speed

Bence Kelemen *Doctoral School of Sport Sciences. Hungarian University of Physical Education and Sport Sciences. Hungary.*
Ottó Benczenleitner. *Institute of Sports Sciences. Eszterházy Károly Catholic University. Hungary.*
László Tóth. *Department of Psychology and Sport Psychology. Hungarian University of Physical Education and Sport Sciences. Hungary.*
Teacher Training Institute. Hungarian University of Physical Education and Sports Sciences. Hungary.

ABSTRACT

This paper presents the specific training method in distance running developed by the Dutch running coach Herman Verheul and successfully applied in the 1970s, its historical background, its afterlife, and its possible applications. The Verheul method can be traced back to the Stampfl interval method used in the 1960s. It involves the use of shorter (200 and 400 meters) and longer (1000 and later 2000 meters) interval training sessions on a daily basis. The method is characterised by a low intensity of partial distances compared to traditional interval training and a relatively long active recovery period equal to the interval distance. For these reasons, the workouts remain predominantly aerobic, without significant lactic acid accumulation, allowing interval training to be used daily and avoiding over-exertion. The method allows runners to achieve high weekly volumes at high running speeds, crucial for establishing anaerobic threshold speed (vLT2) and economical running movement (RE), essential for successful distance running performance. The easy interval method offers an alternative means of improving anaerobic threshold speed. It may provide a new tool to the recently used sustained tempo runs and the anaerobic threshold intervals that are prevalent today.

Keywords: Distance running, Anaerobic threshold, Interval training.

Cite this article as:
Kelemen, B., Benczenleitner, O., & Tóth, L. (2024). Easy interval method, an alternative approach to improve anaerobic threshold speed. *Scientific Journal of Sport and Performance*, *3*(2), 220-227. https://doi.org/10.55860/SZDQ4880

Corresponding author. *Doctoral School of Sport Sciences. Hungarian University of Physical Education and Sport Sciences. Hungary.*
E-mail: bencekelemen95@gmail.com
Submitted for publication January 17, 2024.
Accepted for publication February 19, 2024.
Published March 03, 2024.
Scientific Journal of Sport and Performance. ISSN 2794-0586.

doi: https://doi.org/10.55860/SZDQ4880

INTRODUCTION

In recent decades, much literature has been published internationally on the physiological, anthropometric, and morphological factors considered crucial for successful performance in middle and long-distance running (Kovács et al., 2021). Physiological factors that can affect distance running performance include maximal oxygen uptake (VO_{2max}), running economy (RE), the velocity associated with maximal oxygen uptake (vVO_{2max}) (Noakes et al., 1990; Noakes, 2001; Conley & Krahenbuhl, 1980), and anaerobic threshold and associated running velocity (vAt), which are strong predictors of performance (Tjelta et al., 2012). It is essential to consider these factors when assessing an athlete's performance. Since the early 1900s, coaches have developed training methods to improve athletic performance based on empirical observations. There is widespread agreement among coaches and researchers that the development of athletic parameters is influenced by three main factors: training volume, training density, and training intensity. Various studies have shown that the optimal combination of these factors may vary from athlete to athlete, depending on their level of competition. There may also be differences in the training tools coaches use to achieve specific physiological adaptations.

Research objectives

This study examines the distance running training method developed by Dutch coach Herman Verheul in the 1970s, its historical antecedents, and its aftermath. It also aims to compare this method with contemporary training methods and to evaluate its potential benefits and applications.

Historical overview

The interval method developed by Dr Woldemar Gerchler is widely regarded as a breakthrough in training techniques. In the late 1930s, Dr. Gerchler and the eminent cardiologist Dr. Herbert Reindel conducted experiments that led to the development of this method. The training regimen involved runners performing short, fast repetitions of 100, 150, or 200 meters, often up to 40-80 times in a single session. The pace of the repetitions was such that the participants could reach a heart rate of 180 beats per minute after the run. The next faster repetition was started when the heart rate had returned to 120 bpm. It is widely recognised that the rest and recovery period between runs is the most essential part of the exercise, during which the heart adapts, strengthens, and enlarges. If the heart rate did not decrease to 120 beats per minute within 90 seconds of the previous run's conclusion, the exercise was considered too strenuous and had to be modified. Gerschler's interval training has been found to result in rapid performance improvements. This is due to the strengthening of the heart, which leads to a quicker return to a resting heart rate of 120 beats/min and reduced recovery times. The length of rest periods was reduced to increase the difficulty of the training, and the number of partial distances covered was increased, rather than the pace of fast sections (Cobley, 2011a).

During the 1940s and 1950s, interval training gained popularity as the primary method for training distance runners worldwide. The Czech Olympic champion, Emil Zatopek, was known for his rigorous training routine, which included multiple sets of 200 and 400 meters at varying speeds, with a 1-minute 200-meter jog between faster sections. According to Billat (2001), Zatopek eventually increased the number of 400-meter repeats to 50-60. Another significant contributor to the method was the accomplished Hungarian coach, Mihály Iglói. He achieved numerous successes in his home country, training athletes such as Sándor Iharos, László Tábori, and István Rózsavölgyi, as well as in the United States, where he coached Bob Schul, the 1964 Olympic champion in the 5000m, and also in Greece. Iglói's training regime primarily consisted of running short distances in various sets, with up to 14 weekly training sessions lasting up to 1-2 hours. During the intervals, runners were instructed to run at various sub-maximal speeds with active rest periods. The training was

tailored to the athlete's current daily condition and movement. The longer intervals were primarily performed at high intensity, at race pace, with limited repetitions and extended rest periods (Wilt, 1959).

The use of longer repeats (800 to 2400 meters) and the progression of intervals throughout the season is attributed to Franz Stampl, an Austrian who achieved excellent results in the second half of the 1950s and 1960s. The Stampl system was introduced in England by Chris Chataway and Chris Brasher and in Australia by Merv Lincoln and Ralph Doubell. It is closely associated with Roger Bannister and the first 4-minute mile. The athletes' training methods were similar to those of other elite athletes in the 1950s. The training plan consisted of various distances of 10x400m, 6x800m, and 4x1200m on track 4-5 times a week, plus gymnastics and 60-90 minutes of Fartlek running during the preseason. The foundation was laid in November, and the interval paces were gradually increased by 2 seconds per lap per month until the target race pace was reached during the summer. The training for distance running, which consisted of almost weekly and daily interval training, was modified from the 1970s onwards by Arthur Lydiard's 'marathon method' due to the success of New Zealand runners (Cobley, 2011b).

THE VERHEUL METHOD

The Verheul method was confidently developed by Dutch trainer Herman Verheul (b. 1932) in the second half of the 1960s. Like the school of Franz Stampfl, the method mainly consists of shorter (200 and 400 meters) and longer (1000 meters) daily intervals with equal lengths of active rest. Verheul's speciality, however, was to ask his runners to run increasingly slower intensities during the faster sections based on his empirical observations. The coach found that slower paces yielded better results interestingly. The runners could improve their performance by emphasising a loose, easy, and flexible running motion during partial distances. The method does not include long, sustained endurance runs, which result in a slow and cumbersome running motion. The runners were only given a hard, sustained, high-intensity workload during races, but these races were run almost weekly. These were mainly cross-country races, indoor track races of various lengths in winter and outdoor track races in summer.

Verheul followed the guiding principle of Hungarian coach Mihály Iglói, who believed that athletes should never train harder than they recover the next day. The training pace was, therefore, very individual, and the interval times were adapted to the athlete's current condition, with no tables used to set the training pace and little attention paid to heart rate data. He observed and interviewed each athlete and drew conclusions from that runner's recent race results. However, as a guideline, he made the following suggestions for interval paces: the fastest pace for the 200 m interval should be at 3 km race pace or, at maximum, at 1500 m race pace, the fastest pace for the 400 m interval should be at 5 km race pace, and the fastest pace for the 1000 m interval should be at 15 km or half-marathon race pace (or 1-hour race pace).

The number of repetitions was never increased above 15x200m, 10x400m and 6x1000m; the increase in workload was mainly due to the switch to faster paces and faster running in races, as well as a second and third 6×1000m training sessions a week during the winter base period. Reduced part distance numbers were recommended for young, novice and older (masters) runners and athletes returning from injury. A typical "*reduced program*" training session was 12×200 m, 8×400 m and 4×1000 m. Between the sub-distances, the athletes rested for a distance equal to the distance run (200 m for 200 m, 400 m for 400 m and 1000 m for 1000 m), walking for 10-20 seconds after the fast sections and before the next interval to give the muscles an additional opportunity to recover. In between the walking periods, the runners jogged at a light jogging pace (in the case of Klaas Lok, this was 5 min/km). These deliberately long active recovery periods were designed to lighten the load and to ensure that the training was predominantly aerobic, maintaining efficient,

relaxed running during the intervals. Verheul, like Ernest van Aaken, another successful German coach of his time who emphasised endurance training, believed that heart rates above 150 beats per minute (around 85% MHR, or close to the anaerobic threshold) during exercise should be avoided and were more harmful than beneficial. The weekly competitions were, of course, an exception to this. After the races, he emphasised recovery not based on sustained easy runs but on relaxed 200-metre intervals.

In addition to interval training, the other two elements of the training program were strengthening and gymnastic exercises, which were part of the warm-up and were performed once a week in the hall during the winter, and Fartlek running, which was also performed during the winter preparation period. The latter was carried out on Saturdays in a wooded area and consisted of an average of 16 mixed-paced runs of varying lengths (aerobic and anaerobic) and gymnastic and strengthening exercises, lasting between 75 minutes and 1 hour 45 minutes in total. The easy interval sessions were preceded by 10-15 minutes of jogging, short gymnastics, and 4-6x80m of acceleration running; at the end, the runners reached a speed of 1500-800m. This approach has won several national championships with his club and has seen his athletes set national records. His most successful students were Ad Buijs (10,000m- 29:11), Joost Borm (1500m- 3:38.3; 2000m- 5:01.27) and Klaas Lok (1500m-3:38.8; 2000m- 5:03.90; 3000m-7:51.4; 5000m- 13:30.3; 10,000m- 28:24.7) (Lenferink, 2007).

Table 1. Typical training week in the Verheul method during the competition period.

Day	Training session
Monday	10x400m
Thursday	6x1000m
Wednesday	15x200m
Thursday	6x1000m
Friday	10x400m
Sunday	Rest
Saturday	Race, or Fartlek with anaerobic paces

THE EASY INTERVAL METHOD

The Easy Interval Method was applied successfully by several Dutch coaches and runners after the 1970s, building on the foundations laid down by Herman Verheul. Klaas Lok, Verheul's most successful runner, is a prominent advocate of the method. During his racing career, Lok experimented with the method and increased the workload. He later applied these innovations in his coaching work and explained them in a book published in Dutch and English (Lok, 2019). The coach has suggested incorporating long interval training several times a week, with up to 4-5 sessions per week during the preseason and increasing the length and number of intervals. For elite racers, completing up to 8 sets of 1000 meters with 800-meter rest intervals or 4-5 sets of 2000 meters at marathon race intensity with 1000-meter rest intervals on a weekly or bi-weekly basis is often recommended. In addition, the author suggests 100-meter intervals similar to Gercheler's for middle-distance runners. These intervals can supplement traditional easy interval training sessions (6-8 repeats) or as a stand-alone workout (e.g. 20x100m with 100m rest at middle-distance race pace). These intervals aim to develop coordination at race pace and an economical running movement.

Additionally, the author mentions that he used two training sessions a day during their career. These intervals could consist of either brisk 7-10 km runs at marathon pace in the morning with half-minute changes of pace every 5-10 minutes or easy intervals twice a day (longer intervals in the morning and shorter ones in the afternoon). During the spring race-specific period before the summer track season, it is recommended to

incorporate traditional anaerobic interval work every 7-10 days to prepare the athlete for competition fatigue and help develop anaerobic skills (Lok, 2019).

Table 2. Easy Interval sessions (* traditionally not included in the Verheul method).

Interval	Race pace	Recovery distance
20x100m*	1500m-800m	100m
15x200m	3000–1500m	200m
10x400m	10.000–5000m	400m
6-(8-10)x1000m	Half Marathon- 15km	800-1000m
4-5x2000m*	Marathon	1000m

DISCUSSION

The research of Casado et al. (Casado et al., 2021) shows that the development of aerobic skills primarily characterises the preparation of modern elite distance runners. This is carried out with a high volume (70-80% of the weekly training volume of 120-180 kilometres) of easy, continuous runs below the aerobic threshold (vLT1) and with tempo runs that develop the anaerobic threshold speed (vLT2), and also the use of short (>800 meters) intervals at close to racing speed is essential (Kelemen et al., 2023a). The purpose of the latter training device is primarily to maintain the coordination and anaerobic endurance associated with competition speed during the base period (Haugen et al., 2022). Athletes only start using the more extended, aerobic capacity-developing (VO_{2max}), competition-specific intensive interval training during the 4-8 week conditioning period before the competition season. In parallel with this finding, numerous empirical descriptions and articles in the literature were published, in which elite long-distance runners during their preparation performed so-called "*Sub-Threshold runs*" between their aerobic and anaerobic threshold (vLT1 and vLT2) several times a week (2-4, or even more often) (Tjelta & Enoksen, 2001; Enoksen et al., 2011; Tjelta, 2016, Casado, Hanley & Ruíz-Perez, 2020; Casado et al., 2022). These efforts below the anaerobic threshold cause less central and peripheral fatigue than the intensities performed at the anaerobic threshold (vLT2). At these still relatively fast paces, a higher weekly volume can be achieved without overtraining, thus "*pushing the anaerobic threshold speed up from below*" (Casado et al., 2023). In the 1970s and 1980s, athletes often performed these "*spontaneously*" as progression runs during their sustained daily runs on the days between the traditional interval training sessions. At that time, they started running at a leisurely aerobic regeneration pace, then as they warmed up as the run progressed, the pace increased, and in the last 20-30 minutes of the run, they ran at marathon and half-marathon pace. Examples of this are the British Steve Cram (Poole, 1995), the Norwegian world record runner Grete Waitz (Tjelta et al., 2014), the 1500m world record holder Hicham El-Guerrouj (Bakken, 2001), or the training of Kenyan athletes (Billat et al., 2003). Nowadays, these Sub-Threshold workouts are carried out according to plan, structured on certain days of the week, with precise intensity monitoring. In contrast to sustained runs, elite competitors increasingly use the interval format, during which the effort can be controlled much better (Tjelta, 2013). A great example of this method is the specific approach developed by Norwegian runners in the 2000s, which is getting the most attention today (Kelemen et al., 2023b). The peculiarity of this system is the use of so-called "*Double-Threshold days*". The runners perform interval training a total of 4 times a week, twice on one training day (morning and afternoon) below the anaerobic threshold (< 4 mmol/L blood lactate). During this training, 10-12 kilometres are covered each session (workouts are typical: 25x400m; 10x1000m; 5x2000m), with short rest periods of 0.5-1 minutes. Between partial distances, the intensity is kept in the appropriate zone with the help of a lactate meter and heart rate monitors. By observing these zones, they can cover up to 30-40 kilometres per week at relatively high speeds. In addition to the high-volume easy, sustained aerobic runs and mentioned anaerobic-threshold intervals, during the base period, runners also perform one weekly

exercise producing higher lactate values (~8 mmol/L) in the form of faster but shorter interval training (ex.: 2x10x200 meters uphill), and short alactic sprints (Casado and et al., 2023; Kelemen et al., 2022; Bakken, 2021).

CONCLUSIONS AND PRACTICAL APPLICATIONS

The Easy Interval Method, developed by Herman Verheul and later refined by Klaas Lok, is a potential alternative for improving anaerobic threshold speed, a crucial value for successful distance running performance. Intensity is challenging to control in sustained, paced runs, and there is a risk of over-exertion if they are not performed correctly. For less fit runners, the speed and biomechanics of endurance run lasting between 20 and 60 minutes are often outside the race pace. Additionally, the anaerobic-threshold intervals commonly used today and measured by lactate levels require devices (lactate monitor and strips), which are not always available and are expensive. Longer, easy interval training sessions, lasting 1-2 km, are predominantly aerobic due to their low intensity and relatively longer active rest periods. As a result, they do not lead to significant blood lactate uptake and can be performed multiple times a week (2-5). In this way, achieving high weekly volumes around the anaerobic threshold is possible, similar to elite athletes. This conditions the transitional IIb muscle fibres for aerobic energy production (Plotkin et al., 2021), which can lead to excellent distance running performances. The shorter, predominantly aerobic 100-200-400 m easy intervals can help develop an economical running motion at race speed. Easy intervals should be supplemented with a traditional high-intensity interval workout every 7-10 days in the base period to maintain anaerobic fitness and with short alactic sub-maximal sprints (lasting 10-15 seconds). In the 4-6 weeklong pre-competition period, longer, race-specific sessions with higher lactate values are recommended 1-2 times weekly to prepare the runners for race fatigue. Due to their less strenuous nature, easy intervals during the race period can also provide an alternative way to maintain the endurance gained during the base period.

AUTHOR CONTRIBUTIONS

Bence Kelemen developed the theoretical formalism, conducted a systematic review of the research and summarised the data. Authors Bence Kelemen and Ottó Benczenleitner contributed to the final version of the manuscript. László Tóth supervised the project.

SUPPORTING AGENCIES

Supported by the ÚNKP-2023 New National Excellence Program of the Ministry for Innovation and Technology from the source of the National Research, Development and Innovation Fund.

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

REFERENCES

Bakken, Marius (2001). Maroccan training - El Guerrouj. Retrieved from [Accessed February 21, 2024]: https://www.mariusbakken.com/training-corner/maroccan-training-el-guerrouj.html

Bakken, Marius (2021) The Norwegian model. Retrieved from [Accessed February 21, 2024]: http://www.mariusbakken.com/the-norwegian-model.html

Billat VL, Lepretre PM, Heugas AM, Laurence MH, Salim D, Koralsztein JP. (2003) Training and bioenergetic characteristics in elite male and female Kenyan runners. Med Sci Sports Exerc. 2003;35(2): 297-304. https://doi.org/10.1249/01.MSS.0000053556.59992.A9

Brandon L. J. (1995). Physiological factors associated with middle distance running performance. Sports medicine (Auckland, N.Z.), 19(4), 268-277. https://doi.org/10.2165/00007256-199519040-00004

Casado, A., Foster, C., Bakken, M., & Tjelta, L. I. (2023). Does Lactate-Guided Threshold Interval Training within a High-Volume, Low-Intensity Approach Represent the "Next Step" in the Evolution of Distance Running Training? International Journal of Environmental Research and Public Health, 20(5), 3782. MDPI AG. https://doi.org/10.3390/ijerph20053782

Casado, A., González-Mohíno, F., González-Ravé, J. M., & Foster, C. (2022). Training Periodization, Methods, Intensity Distribution, and Volume in Highly Trained and Elite Distance Runners: A Systematic Review. International Journal of Sports Physiology and Performance, 17(6), 820-833. https://doi.org/10.1123/ijspp.2021-0435

Casado, A., Hanley, B., & Ruiz-Pérez, L. M. (2020). Deliberate practice in training differentiates the best Kenyan and Spanish long-distance runners. European journal of sport science, 20(7), 887-895. https://doi.org/10.1080/17461391.2019.1694077

Casado, A., Hanley, B., Santos-Concejero, J., & Ruiz-Pérez, L. M. (2021). World-Class Long-Distance Running Performances Are Best Predicted by Volume of Easy Runs and Deliberate Practice of Short-Interval and Tempo Runs. Journal of Strength and Conditioning Research, 35(9), 2525-2531. https://doi.org/10.1519/JSC.0000000000003176

Cobley, J. (2011a). Coach Profile: Woldemar Gerschler. Retrieved from [Accessed February 21, 2024]: https://racingpast.ca/john_contents.php?id=129

Cobley, J. (2011b). Profile: Franz Stampfl. Retrieved from [Accessed February 21, 2024]: https://racingpast.ca/john_contents.php?id=143

Conley DL and Krahenbuhl GS. Running economy and distance running performance of highly trained athletes. Med Sci Sports Exerc 1980; 12: 357-360. https://doi.org/10.1249/00005768-198025000-00010

Foster, Carl & Daniels, Jack & Seiler, S. (2007). Perspectives on Correct Approaches to Training.

Haugen T, Sandbakk Ø, Seiler S, Tønnessen E. (2022). The Training Characteristics of World-Class Distance Runners: An Integration of Scientific Literature and Results-Proven Practice. Sports Med Open. 2022 Apr 1;8(1):46. https://doi.org/10.1186/s40798-022-00438-7

Kelemen, B., Benczenleitner, O., & Tóth, L. (2023b). The Norwegian double-threshold method in distance running: Systematic literature review. Scientific Journal of Sport and Performance, 3(1), 38-46. https://doi.org/10.55860/NBXV4075

Kelemen, B., Benczenleitner, O., Gyimes, Z., & Toth, L. (2023a). Polarized training intensity distribution in distance running: A case study of the 2021 Olympic long-distance runner. Sustainability and Sports Science Journal, 2(1), 58-66. https://doi.org/10.61486/CKLI8600

Kelemen, Bence és Benczenleitner, Ottó és Tóth, László (2022) A norvég állóképességi modell közép- és hosszútávfutásban: Szisztematikus irodalmi áttekintés = The Norwegian Endurance Model in Middle and Long-Distance Running: A Systematic Review of the Literature. Magyar Sporttudományi Szemle = Hungarian Review of Sport Science, 23 (4). pp. 19-25. ISSN 1586-5428.

Kovács, B., Kóbor, I., Sebestyén, Ö., & Tihanyi, J. (2021). Longer Achilles tendon moment arm results in better running economy. Physiology International, 107(4), 527-541. https://doi.org/10.1556/2060.2020.10000

Lenferink, Herman (2007). The Verheul Method. Retrieved from [Accessed February 21, 2024]: https://avphoenix.nl/topsport/trainingsmethoden/de-verheul-methode/

Lok, K. (2019). Easy Interval Method, The Choir Press; Updated December 2022 ed. edition (July 20, 2019).

Midgley, A. W., McNaughton, L. R., & Jones, A. M. (2007). Training to enhance the physiological determinants of long-distance running performance: Can valid recommendations be given to runners and coaches based on current scientific knowledge? Sports medicine (Auckland, N.Z.), 37(10), 857-880. https://doi.org/10.2165/00007256-200737100-00003

Noakes T. Physiological capacity of the elite runner. In: Bangsbo J and Larsen HB (eds) Running and Science: an interdisciplinary perspective. Copenhagen: Institute of Exercise and Sports Sciences, University of Copenhagen, Munksgaard, 2001, pp.19-47.

Noakes, T. D., Myburgh, K. H., & Schall, R. (1990). Peak treadmill running velocity during the VO2 max test predicts running performance. Journal of Sports Sciences, 8(1), 35-45. https://doi.org/10.1080/02640419008732129

Plotkin, D. L., Roberts, M. D., Haun, C. T., & Schoenfeld, B. J. (2021). Muscle Fiber Type Transitions with Exercise Training: Shifting Perspectives. Sports (Basel, Switzerland), 9(9), 127. https://doi.org/10.3390/sports9090127

Poole, N. (1995). How Steve Cram Trains. British Milers Club Journal, 1995 Spring, p. 6-10.

Tjelta, L. I., Tønnessen, E., & Enoksen, E. (2014). A Case Study of the Training of Nine Times New York Marathon Winner Grete Waitz. International Journal of Sports Science & Coaching, 9(1), 139-158. https://doi.org/10.1260/1747-9541.9.1.139

Tjelta, L.I. (2013). A Longitudinal Case Study of the Training of the 2012 European 1500m Track Champion. International Journal of Applied Sports Sciences, pp. 25, 11-18. https://doi.org/10.24985/ijass.2013.25.1.11

Tjelta, L.I., Enoksen, E. (2001). Training volume and intensity. Running and Science- in an Interdisciplinary Perspective, 2001, 149-177. Publisher: University of Copenhagen

Tjelta, Leif I. (2016). Review article The training of international level distance runners Leif Inge Tjelta University of Stavanger, Department of Education and Sports Science, N-4036, Stavanger, Norway E-mail: leif.i.tjelta@uis.no International Journal of Sports Science & Coaching, 11(1), Jan/Feb 2016. Accepted for publication, 27.03.2015. International Journal of Sports Science & Coaching. 11. https://doi.org/10.1177/1747954115624813

Tjelta, Leif Inge & Rønning Tjelta, Asle & Dyrstad, Sindre. (2012). Relationship between Velocity at Anaerobic Threshold and Factors Affecting Velocity at Anaerobic Threshold in Elite Distance Runners. International Journal of Applied Sports Sciences. 24. 8-17. https://doi.org/10.24985/ijass.2012.24.1.8

Wilt, F. (1959). How they Train. Half Mile to Six Mile. Track & Field News. First Edition (January 1, 1959) p. 64.