

IELTS PRACTICE TASK**Champions of the track**

Researchers investigate what makes some athletes faster than others

With the next Olympics in sight, athletes, their trainers, and sports fans alike are wondering just what new records will be set in the marathon. In this event, runners must cover a distance of just over 26 miles, and what's amazing is that today's champions are running at a pace that could only be achieved for the 10,000 metres run a mere century ago. So have humans become better built in some way? Is it to do with better nutrition or training routines? Research teams have been looking into why these accomplishments have become possible.

Professor Eileen Atkinson is at the forefront of such studies. She has concluded that there are a number of key factors responsible for improved speed and pace. A hundred years back, there was no such thing as training every day. The widely held belief amongst athletes and coaches was that three or four times per week was sufficient, otherwise athletes could risk 'overtraining' and actually get worse rather than better at running. In the years since, that view has been completely rejected and the amount of training has increased: now runners are out on the track for hours at a time, each and every day. Atkinson is also keen to point out that athletes are no longer just from the developed world; perhaps partly due to sponsorship, athletes from developing countries are also able to compete, and with increasing frequency, win.

Atkinson and her team have also looked at what kind of treadmill times first-class athletes have achieved in the past and now. What they have found is that there is very little difference between current and previous generations when it comes to performance on a running machine. So why the big difference on the track? Atkinson puts it down to the fact that the design and construction of racetracks have come a long way, and sport shoe technology has seen similar improvement. Both these developments could be giving today's runners an edge. Atkinson's team have also been carefully measuring the oxygen consumption of athletes compared to non-athletes while on treadmills. In top athletes, the maximal oxygen uptake (the maximum capacity for oxygen consumption) will be far higher than the capacity of non-athletes, meaning that cardiac output, the amount of blood pumped per minute, will also be better. This all helps indicate a runner's level of aerobic fitness.

Another interesting aspect of successful marathon running that Atkinson explored was the impact of ageing on performance. Although the generally held view is that peak performance is normally achieved somewhere between the mid-twenties to mid-thirties, and that runners will experience a decline thereafter, this is an average, and not necessarily true for all individuals. Some runners in their forties, even fifties, are able to go the distance due to their commitment to tough training programmes. In other words, there is no set point at which an athlete should announce retirement.

TASK TYPE 11 Matching Sentence Endings

Atkinson is also keen to dispel another popular myth. The belief that there is a specific gene that guarantees athletic superiority is an idea that has no scientific foundation. Many genes play a role in enhancing athletic performance, but the likelihood of any one person having the exact grouping of genes required to become a natural champion is minimal. Rather, for many young athletes, it comes down to internal motivation and external incentives.

Questions 1–5

Complete each sentence with the correct ending, **A–G**, below.

Write the correct letter **A–G** below.

- 1 It is wrong to assume that runners' performances
- 2 The speeds of modern runners compared to earlier runners
- 3 The amount of oxygen the best runners can utilise during a race
- 4 The chances of older runners performing well in a race
- 5 The combination of genes in an individual runner

- A** can be linked to the performance of their hearts.
- B** may depend on what running style they adopt.
- C** will probably not play a role in their overall success.
- D** might be better because of superior equipment and facilities.
- E** can be weakened through daily practice.
- F** will gradually decrease over long distances.
- G** will depend on how hard they continue to train.