

TRAINING AGE, NOT JUST AGE

Why two 15-year-old runners may need completely different training



A Smart Endurance Coaching article for athletes, parents and coaches
Endurance-led, but really about how we make better development decisions for young athletes.

By Gary Johnson

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1. Same age does not mean same athlete

Why I don't think a date of birth or a race result should ever become a training prescription

I keep coming back to a simple example. Put two 15-year-old runners on the same starting line. They are the same age, and they may even run almost the same 1500m time. On the results sheet they look very similar. From a development point of view, though, they could be completely different athletes.

The longer I coach young endurance athletes, the less comfortable I become with the question, 'What should a 15-year-old be doing?' I understand why we ask it, we want a reference point, but I think it can send us in the wrong direction if we stop there. The 15-year-old in front of us may have very little in common developmentally with another athlete born in the same year.

In *Beyond the Result Sheet*, I explored why a race result can never tell us the whole story of a young athlete's development. This article takes that idea one step further. If two athletes can arrive at almost the same result through very different routes, should we really expect their training to look the same?

The first athlete might have trained regularly for five years, gradually moving from two sessions a week to four or five. They have learned what easy running feels like, experienced hills, threshold work and track sessions, and importantly built a history of recovering from that training. The second athlete might have joined athletics only ten months ago after years of football or hockey. They may be quick, coordinated and competitive enough to race alongside the first athlete, but their exposure to repetitive running and structured endurance work is completely different.

Same age + similar performance does not automatically mean the same training readiness.

	ATHLETE A	ATHLETE B
Age	15	15
1500m	4:35	4:38
Training history	5 years	10 months
Current running	4–5 sessions/week	2–3 sessions/week
Background	Athletics since primary school	Football / hockey background
Likely next step	Refine and progress	Build consistency and durability

Performance level does not automatically equal training readiness.

Figure 1. Similar performance can sit on top of very different training histories.

What I take from the research. The 2024 IOC consensus on elite youth athletes describes adolescence as dynamic, non-linear and asynchronous across physical, physiological, psychological and social development. That makes an individualised pathway more defensible than if age alone defines readiness (Bergeron et al., 2024).

Competition age groups organise sport, they do not define development

The recent England Athletics age group changes are a useful reminder of this. From 1 April 2026, U13, U15 and U17 were replaced by U14, U16 and U18, alongside U20. The stated aims include better progression, retention and more age-and-stage-appropriate competition. I think that distinction matters: an age group helps us organise competition, but it still doesn't tell us everything we need to know about the athlete standing in front of us.

For the 2026/27 competition year, U16 covers athletes born from September 2011 through August 2013. So, two athletes in the same U16 race can already be almost two years apart in chronological age before we even start talking about biological maturity, training history or what else they do outside athletics.



Two athletes in the same U16 age group can be almost two years apart in chronological age.

Before we even consider differences in biological maturity or training history.

Figure 2. Relative age within one competition category can be substantial.

What the athletics data adds. Kearney, Hayes and Nevill analysed 77,571 UK track-and-field records and found relative-age effects across athletics, with the strongest effects in the youngest formal competition category studied. Event, sex and performance level also influenced the magnitude of the effect (Kearney et al., 2018).

For me, the answer is not to compensate by pushing the younger or later maturing athlete harder. It is to put the performance into context. A result tells us something useful, but it is still only one piece of information. It is not a verdict on potential, and it certainly isn't a training prescription.

Age tells us who competes together. It does not tell us who should train identically.

2. What training age actually means

What I mean when I talk about training age

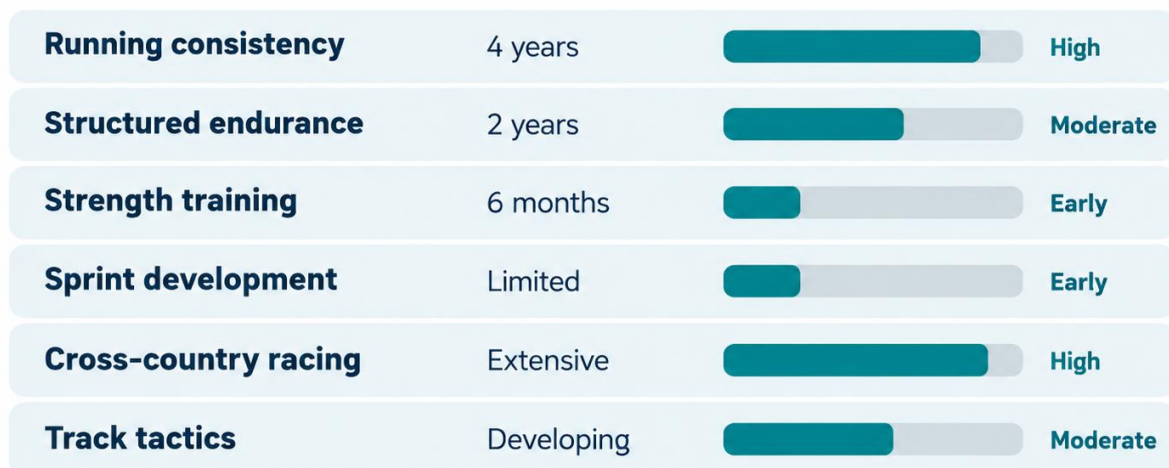
When I talk about training age, I am not simply counting the number of years since an athlete first walked through the club gate. I mean their accumulated exposure to regular, structured and progressive training. How often have they trained? How consistent has it been? What volume and intensity have they experienced? What about surfaces, strength work, sprint exposure, racing and recovery? All that shapes what they may be ready for next.

That is why two athletes who both say they have 'trained for four years' may still have very different backgrounds. One might have attended one club session a week. Another may have gradually built to three or four sessions and experienced a much wider range of training. And a 15-year-old coming from football may be new to distance running while already having years of movement, acceleration, change of direction, competition and repeated high-intensity work behind them.

I have probably become more interested in what sits behind the number as I have coached more athletes. 'Four years of training' can sound reassuringly precise, but it tells me very little until I understand what those four years contained.

Training age is specific: experienced at what?

I don't think an athlete really has one single training age. The same runner can be highly experienced in one area and almost a beginner in another. They might have four years of consistent running, two years of structured threshold work, six months in the gym and very little true sprint development. So, whenever we say an athlete is 'experienced', I think the obvious follow-up is: experienced at what?



Ask “experienced at what?” before deciding what to progress next.

Figure 3. “Experienced at what?” is often more useful than asking only how many years an athlete has trained.

Training age is descriptive, not a target

There is a trap here as well. Once we decide training age matters, it is easy to turn it into another target: build it faster, add another session, move the athlete on. I think that misses the whole point. Training age comes from repeated exposure, adaptation and time. It is not a score we need to rush to increase.

You cannot fast-track three years of adaptation by squeezing three years of progression into twelve months.

Training age is also about what the athlete has learned to do. Exposure matters, but simply completing something for a period of time does not automatically mean it has been mastered. One idea that stayed with me from the England Athletics Event Group Endurance course was competency-based progression: before moving training forward, the athlete should have developed enough understanding, skill and consistency in what sits underneath it. In that sense, training age is not only about time served. It is also about what the athlete can execute well, repeatedly and with appropriate control.

Load naive, load tolerant and load sensitive

One piece of research I find useful here is the Developmental Training Model from Jayanthi and colleagues. Rather than assuming every young athlete responds to load in the same way, it asks us to think about whether an athlete is relatively load-naive, load-tolerant or load-sensitive. I wouldn't use those as permanent labels. I see them as a reminder that previous training, injury history, maturation, strength, aerobic fitness and coordination all change the way an athlete may respond to the same session.

How I would use the research. Jayanthi et al. (2022) argue that training prescription in specialised young athletes should reflect biological maturation, previous workload exposure, injury history and motor/coordination qualities. Their model suggests closer monitoring and more cautious progression for load-naive or load-sensitive athletes, while load-tolerant athletes may be able to progress with less intensive monitoring.

For me, that changes the coaching question completely. Rather than asking, 'What should a 15-year-old do?', I want to know: What has this athlete consistently tolerated? What have they adapted to? What is new? What is changing around them? And what is the smallest, sensible progression from here?

3. Growth and maturation change the picture

This is where a simple age-based progression can quickly fall apart

Training history only gets us so far. Growth and maturation can change the picture again. Two athletes can share the same birthday and still be at very different stages physically, and that matters when we are deciding what training they can absorb.

Peak height velocity (PHV) is the period of fastest growth in stature during adolescence. On average it happens earlier in girls than boys, but the individual variation is huge. That variation is the bit I think matters most to coaches. In one same-aged group we can have an athlete who has not yet entered a major growth phase, another growing rapidly right now and another already well beyond it.

What this makes me think about in practice. The Youth Running Consensus notes that rapid growth changes the musculoskeletal system and that PHV occurs before peak bone mineralisation, creating a period of transient vulnerability. Towlson et al. (2021) similarly emphasise large individual differences around PHV and the need to interpret training load with maturation in mind.

Growth can alter how training feels

A runner may have handled four sessions a week perfectly well for two years and then suddenly start reporting tightness, awkwardness or soreness around knees, heels or shins during a rapid growth phase. I don't think the answer is automatically to stop training. The point is to recognise that the athlete has changed, so the same programme may now create a different response.

This is one of those moments where I think good coaching sometimes means resisting the urge to keep the plan moving forward on paper. Holding something steady for a few weeks can look like doing less, but it may be exactly what allows the athlete to keep developing.

There is some useful research behind this. Parry and colleagues reviewed 30 studies involving young athletes in elite pathways. What stood out to me was not that growth automatically creates injury, the evidence is much more nuanced than that - but that periods of rapid growth appear to change the injury picture. Injury incidence and burden generally rose with maturity status, growth-related injuries tended to cluster around the adolescent growth spurt, and faster growth was associated with greater burden in several studies (Parry et al., 2024). For me, that reinforces the need to notice when an athlete is changing rather than simply progressing the programme because they are six months older.

Training development is not a staircase

It is very easy to build a staircase in our heads: they are a year older, so training should go up; training goes up, so performance should improve. Development is rarely that tidy. It looks much more like develop, grow, adapt, consolidate, progress, grow again, adjust and then progress again.

Sometimes the right progression is more training. Sometimes it is holding things steady while the athlete adapts to growth, exams or a new sporting load. Sometimes it means reducing one element for a while and keeping another ticking over. I am quite comfortable with a stable load if the athlete is learning to absorb it better. That is still development.

Development is not always additive. More experienced does not automatically mean “more training right now”.

Female adolescent athletes require the same individual lens

The same individual lens matters with girls and boys because maturation does not follow an identical timetable. With adolescent female endurance athletes there are also important considerations around energy availability, menstrual function and bone health. The Youth Running Consensus highlights low energy availability and menstrual dysfunction as factors worth paying attention to. That is another reason why chronological age alone is never enough to guide training.

For me, this is less about turning the coach into a clinician and more about being prepared to notice change and create an environment where the athlete can talk. A sudden drop in energy, persistent soreness, changes in recovery, repeated illness or concerns around fueling should not simply be treated as a motivation problem or solved by pushing harder.

This is another example of why training age cannot sit on its own. Two athletes may have the same running history and similar performances, but if one is moving through a period of rapid growth, low energy availability or disrupted menstrual function, their response to the same training load may be very different. The training history may look similar on paper; the readiness to absorb that training may not be.

The practical point is the same as elsewhere in this article: development is individual. Two girls of the same age can be at very different stages of maturation, and training that looks sensible for one may not be the right dose for the other at that moment. Good coaching starts with seeing the athlete, not just the age group.

4. Performance is an outcome, not an explanation

Race time tells us what happened. It does not tell us why.

This is one of the reasons I am cautious about reading too much into a result sheet. Two young athletes can run almost the same time for very different reasons. One may have a strong aerobic base and excellent running economy. Another may be getting there through speed and power. Another may currently benefit from maturation-related changes in size and strength. Another may simply have had much more event-specific practice.

I have seen athletes produce a better performance while looking less developed in training, and others make positive developmental progress without the stopwatch immediately rewarding them. That is why I try not to let one result become the whole story.



Figure 4. Current performance can emerge from multiple interacting qualities and histories.

That is why I don't see a personal best as a simple measure of whether the coaching is 'working'. Training may have helped. Growth and maturation may have helped. Technique, confidence or race craft may have changed. Often several things move together. The reverse matters too: a period where the stopwatch moves more slowly does not automatically mean development has stopped.

A useful reminder from the research. The 2015 IOC youth-development consensus notes that positive and negative changes in youth performance can sometimes be more related to biological clocks than to coaching and training. It also argues that development frameworks should be flexible and multidimensional rather than age-prescriptive (Bergeron et al., 2015).

Middle-distance evidence shows development is multidimensional

There is a useful middle-distance study from Jones and colleagues, who followed ten highly trained adolescent athletes across nine months. They saw changes in time-trial performance, critical speed, VO2max, running economy, reactive qualities, vertical stiffness and jump power. It is a small observational study, so I would never use it to prescribe an exact programme. What I take from it is the bigger coaching message: a developing middle-distance runner is changing in several ways at once, so simply asking whether we can add more mileage is far too narrow a question.

I see the same principle across events. Two 800m runners can need very different work if one has come through cross-country and the other through sprinting. Two cross-country runners can post similar times while one needs more speed and the other needs more aerobic durability. The event tells me what they compete in. Their development tells me what I should be thinking about next.

Do not confuse current performance with the process that produced it.

5. How much should a young endurance athlete train?

There isn't a simple mileage by age table and I think that matters

This is probably one of the questions I hear most often from parents and coaches: how many kilometres should a 13, 15 or 17-year-old run each week? The frustrating answer is also an important one: there is no universal evidence-based table that can tell us.

I have probably become more conservative about adding training as I have coached more athletes, not less. That is not because I think young athletes are fragile. It is because I have seen how much progress can still come from improving the quality, consistency and understanding of what they already do before we add another session.

One thing the research makes clear. The international consensus group concluded that evidence-based guidelines for age-specific running distances and training volumes are lacking. It states that readiness for running, especially longer distances, should reflect growth and development rather than chronological age alone, alongside physical, biomechanical, psychological, social and cognitive factors (Krabak et al., 2021).

That doesn't mean anything goes. It means the training dose must come from the athlete's history, current capacity and response, not from an age-group norm. For me, the question is not, 'What can a 15-year-old survive?' It is, 'What can this athlete absorb, recover from and repeat while still moving forward?'

Completing training is not the same as absorbing training

Young athletes are often capable of doing far more on one day than we should necessarily ask them to repeat every week.

Completing a 60-minute run, six hard repetitions or an extra club session tells us that they could do it on that particular day. It does not tell us whether they can recover from it, fit it around school and other sport, arrive ready for the next session, repeat that pattern consistently and continue adapting positively over the weeks that follow.

That distinction matters because a successful session is not always the same thing as successful training.

I have seen athletes complete every repetition, keep up with the front group and walk away feeling pleased with the session only to be unusually tired, sore or flat for the next couple of days. The session itself looked successful. The bigger training picture tells us something different.

For me, that is where the idea of *absorbing* training becomes useful. It is not just about surviving the workload. It is about what happens afterwards.

Can the athlete:

- recover well enough for the next planned session?
- repeat similar training without a growing accumulation of fatigue?
- maintain good movement and technique rather than simply getting through the work?
- manage school, sleep, other sports and normal life alongside the programme?
- remain motivated and engaged rather than gradually becoming drained by the training?
- continue improving rather than simply becoming better at tolerating tiredness?

Those questions are harder to answer than simply asking whether the athlete completed the session, but they tell us far more about whether the training dose is appropriate.

This also explains why two athletes can complete the same session and have very different responses to it. One may already have years of exposure to that type of work. The other may be relatively new to it. One may be well rested and physically settled. The other may be growing quickly, carrying school fatigue or arriving from another sport.

The session is the same. The cost of the session may not be.

That is one reason I am cautious about using a single workout as proof that an athlete is ready for more. Readiness is better judged across a period of training: how consistently the athlete copes, how well they recover, whether niggles are appearing, how their energy and motivation look and whether the programme is still producing the adaptations we want.

The developmental goal is not to find the maximum amount of training a young athlete can complete. It is to find an appropriate amount they can absorb, recover from and build upon.



Figure 5. The relevant question is not only whether an athlete can do the session, but whether they can recover, repeat and develop from it.

**Training readiness is not just: Can they do it?
It is: Can they recover, repeat it and continue developing from it?**

The whole week matters

This is something I think we can underestimate. The athletics programme may show three runs, but the athlete's body may also be dealing with school PE, football, hockey, gymnastics, gym work, competition, travel and a few poor nights of sleep around exams. The body doesn't separate that load according to which coach wrote it down. It experiences the whole week.

I have had plenty of weeks where the running programme looks light on paper until you write down everything the athlete has done. Once school sport, another club, competition, travel and life are added in, the picture can look very different.

That is why I think the whole week matters more than the athletics programme in isolation. A session that looks sensible on paper can feel very different once everything else the athlete is carrying is taken into account.

The body experiences the whole week - not just athletics sessions

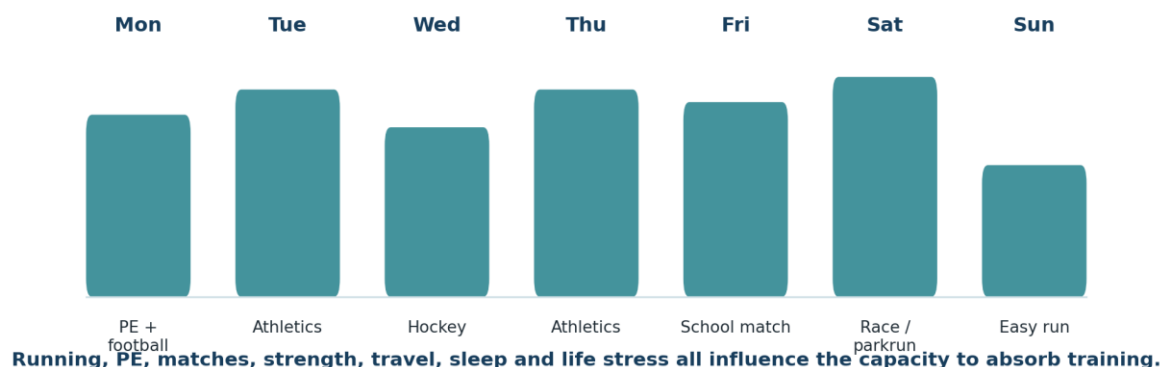


Figure 6. Total weekly load can be much larger than the athletics programme alone suggests.

This is also where the research feels very practical to me. Towlson and colleagues highlight the importance of communication between the people around a young athlete, so the total weekly activity is understood, particularly around rapid maturation. I read that as a reminder that the athletics coach cannot work in a bubble. For a multi-sport athlete, another run can sometimes add repetitive loading without being the most useful next stimulus.

Progress the dose only when there is a reason

Experience alone is not a reason to add more training. If an athlete is improving, recovering well and enjoying three or four runs each week, I see little value in rushing to five or six simply because they could probably manage it. Training history tells us something about what an athlete may be capable of tolerating, but it does not mean we have to use all that capacity now. I would rather leave something for later than spend every training option too early.

Progression can take many forms. It might mean extending one easy run slightly, adding a small amount of controlled quality, improving the consistency of the existing week, introducing strides or strength work, or simply becoming better at recovering between sessions. Sometimes the progression is in the athlete's ability to execute the same training more effectively rather than doing more of it.

The important point is that progression should come from the athlete's response, not from a formula. Fixed rules such as adding a set percentage of mileage each week can look reassuringly precise, but they still ignore the athlete in front of us. The next step should reflect what they have already adapted to, how they are responding now and what we are actually trying to develop next.

That also means being comfortable with periods where the training does not visibly increase. Holding a programme steady while an athlete becomes more consistent, more robust or better able to recover from it can still represent meaningful progress. Development does not always need to look bigger on paper.

There is a useful distinction between progressing the athlete and progressing the load. A

young runner can progress by pacing better, maintaining technique for longer, becoming more relaxed at a given speed, recovering more consistently or understanding the purpose of the session more clearly. None of that automatically requires another kilometre or repetition. Sometimes the next step is more load; sometimes it is simply doing the current work better.

For me, this is where the idea of training age becomes useful again. Greater experience gives us more information about what an athlete has adapted to; it does not create an obligation to keep adding more. The progression still must serve a purpose.

What will this extra training give the athlete that the current programme is not giving them?

6. Endurance development should stay multidimensional

A young distance runner is still an athlete

Endurance development can become too narrow surprisingly quickly: run more, run further, run harder, repeat. Endurance is clearly central to the development of a distance runner, but if it becomes the whole programme, other qualities that may support long-term development can easily become underexposed.

For a developing middle-distance or cross-country athlete, the picture is broader. Aerobic capacity and durability matter, but so do running economy, speed, coordination, mechanics, strength and power, tactical skill and confidence. The balance will vary between athletes and events, and those qualities do not develop completely in isolation from one another.

One idea that stayed with me from the England Athletics Event Group Endurance course is that endurance itself was presented as multidimensional. The athlete is not simply trying to keep an aerobic engine running for longer. They are trying to maintain the required force, apply that force in the right direction and continue doing so in the necessary timeframe as fatigue develops. That brings strength, coordination, running mechanics and technique into the endurance picture alongside energy-system development.

Put more simply, a young endurance athlete is not only developing the capacity to keep going. They are developing the physical and technical qualities that help them keep moving effectively as the race goes on.



Figure 7. Middle-distance development is multidimensional; mileage is only one part of the picture.

What the research adds. The Jones et al. (2021) middle-distance study observed simultaneous changes in aerobic, mechanical and neuromuscular qualities. The Youth Running Consensus also recommends high-impact and multidirectional activity through puberty to support neuromuscular control and bone health and discourages premature single-sport specialisation in running.

What variety can look like

For me, variety does not mean throwing random sessions into an endurance programme simply for the sake of doing something different. It means keeping purposeful exposure to qualities that may matter later, rather than allowing a young athlete's development to become too narrow too soon.

A young endurance athlete should continue developing as an athlete, keeping the speed, strength, coordination and movement qualities that can support their endurance performance later. That is why those qualities should remain part of the development picture, even when the athlete clearly sees themselves as a distance runner.

Easy and steady running still provides much of the foundation. It develops aerobic capacity, durability and the ability to tolerate regular running. Controlled threshold or tempo work can help athletes learn rhythm, pacing and how to work hard without turning every session into a race.

But endurance development should not stop there.

Broad development does not mean equal training time

The England Athletics / UK Athletics Endurance Athlete Development Model I was taught from describes roughly the 12-16 period as a multi-event stage and says young athletes *"should be exposed to a range of Athletics events across as many event groups (running, jumping and throwing) as possible."* That matters. Broad exposure can give a young athlete movement skills, physical qualities and experiences that may be useful later. But the word exposure matters too. The model describes breadth; it does not prescribe an equal share of training time for running, jumping and throwing (Endurance ADM V1.2b, pp.10-11).

The endurance-specific course discussion also shows how breadth and an emerging endurance direction can sit together. It describes a young athlete who is already predisposed towards endurance racing 600m, 800m, 1200m and 1500m, doing cross country and plenty of sprinting activity, while still trying areas such as hurdles and jumping. An athlete can lean towards endurance before they become an endurance-only specialist.

That distinction matters for an U14 athlete who enjoys cross country and is increasingly drawn towards 800m or 1500m on the track. Endurance can be the main training emphasis while broader athletic development is deliberately retained. That might mean more time learning rhythm and pacing, developing aerobic capacity, running hills, racing cross country and learning endurance race craft, while still maintaining purposeful exposure to speed, jumping, coordination, strength and throwing-type physical preparation.

What I do not take from the model is that running, jumping and throwing should receive equal training time, or that every event group needs to appear equally often across a monthly programme. Broad exposure does not mean dividing an athlete's available training time equally between event groups. The emphasis can increasingly reflect the direction in which the athlete is developing while useful qualities from the wider sport are retained.

The same Endurance ADM then says that around 15-16 athletes will probably begin to focus on a specific event group, before later specialising more closely in one or two events. I see the overlap between the multi-event and event-group stages as important: development is a transition, not a switch that happens on a birthday. The balance can evolve as the athlete's interests, experience, maturity and training age become clearer.

Course detail. As athletes begin to specialise in the endurance event group, the Endurance ADM describes general preparation as being delivered *"mainly through circuits based activities incorporating multiple jumps and throws"*, while running and sprinting mechanics continue to be maintained (Endurance ADM V1.2b, p.15).

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That is an important distinction for an endurance programme. Jumping and throwing qualities do not always need to sit in separate, isolated event-group sessions. Some of those qualities can be retained within endurance-led preparation through circuit-based multi-jumps and multi-throws, hopping and basic plyometric work, medicine-ball activities, progressive strength work, hills, sprinting, running-mechanics work and coordination tasks selected because of the physical quality they develop.

The course material on multi-throws makes the same point from another angle. It describes the force-generation, fundamental-movement and physical-conditioning components of throwing as “*widely applicable across event groups*” and specifically presents throwing as a physical-preparation tool that can be used in endurance-focused contexts. The multiple-jumps material similarly presents jump training as a means of developing balance, coordination, speed, power and rate of force development across event groups. The value is in the qualities being developed, not simply in whether the athlete is training for a jump or throws event.

Broad development should therefore not become a timetable rule that overrides the athlete’s emerging direction. For an endurance-oriented young athlete, the question is not whether running, jumping and throwing appear equally often in a month. It is whether the programme still develops the underlying speed, strength, coordination, force-production and movement qualities the athlete needs while providing enough endurance-specific exposure for them to progress in the event family that motivates them.

This brings the discussion straight back to training age. Two U14 athletes should not automatically need the same balance simply because they share an age-group label. One athlete may be relatively new to athletics and benefit from substantial multi-event exposure. Another may already have several years of broad experience, a clear interest in endurance and the readiness to place greater emphasis on endurance while maintaining the wider qualities around it. Chronological age helps organise competition; it does not, on its own, decide the exact balance of the training programme.

Questions parents can reasonably ask

- What quality is this session or activity intended to develop for this athlete?
- Does that quality require a separate event-specific jump, hurdle or throws session, or could it be integrated within endurance-led preparation?
- How have the athlete’s training age, previous exposure, maturity, motivation and emerging event direction influenced the balance of the programme?
- Is the athlete receiving enough endurance-specific exposure to learn the pacing, rhythm, aerobic, tactical and racing skills required by the events they increasingly want to pursue?

Direction is not the same as specialisation. Broad exposure does not require equal training time. Endurance can be the priority while broader athletic qualities are deliberately retained within the programme.

For a parent, the practical message is simple: an U14 athlete can increasingly lean towards cross country, 800m or 1500m because that is where their interest and development are pointing, without broad development being abandoned. The programme can be endurance-led while speed, jumping, throwing-type physical preparation, strength and coordination continue to support that direction.

Short sprints, strides and acceleration work help retain speed, posture, coordination and the ability to apply force quickly. Hills can develop strength and running mechanics in a way that still feels very relevant to running. Jumping, coordination work and basic plyometrics can expose young athletes to movements and forces they may not experience if every session is simply running forward at a steady pace.

Strength training has a role too, but again I would see this as progressive development rather than simply adding adult gym work earlier. Good movement, sound technique and appropriate supervision matter more than chasing numbers.

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Different surfaces and cross country exposure can also be valuable. Running on grass, trails, hills and uneven ground places slightly different demands on coordination, balance and force production. For many young athletes, involvement in other sports can provide some of those qualities naturally through jumping, changing direction, accelerating, decelerating and reacting to what is happening around them.

So, a developing endurance programme might still include:

- easy and steady running to build aerobic capacity and durability;
- controlled threshold or tempo work when the athlete has enough experience to execute it appropriately;
- short sprints, strides and acceleration work to maintain speed and mechanics;
- hills for strength, posture and force application;
- jumping, coordination and basic plyometric activity appropriate to the athlete;
- progressive strength training with good supervision and technique;
- different surfaces and cross-country exposure;
- and, for many younger athletes, continued involvement in other sports.

The balance of those elements will obviously change.

A developing 800m runner may need more regular exposure to speed and power than a young 5000m athlete. A cross-country runner who already has a strong aerobic background may benefit from maintaining more speed and strength. Another athlete arriving from football or hockey may already possess good acceleration and movement skills but need time to build running durability.

That is where the individual athlete matters again.

I do not see sprinting as wasted time for a future 5000m runner, or cross-country as wasted time for a future 800m runner. A young cross-country athlete can benefit from strength, jumping and other sports as well.

The research on adolescent middle-distance athletes also supports the idea that development is multidimensional. Improvements in performance can sit alongside changes in aerobic qualities, running economy and neuromuscular characteristics rather than coming from one training quality alone.

That is the key point.

Variety is not about avoiding event-specific development. It is about making sure we do not become one-dimensional before we need to.

And perhaps more importantly, it means leaving the athlete with qualities we can continue to build later, rather than trying to maximise one part of the performance puzzle too early.

7. What individualisation looks like in practice

Individualisation does not mean writing 20 completely different sessions

This matters in club coaching because 'individualisation' can sound impossible when you have a big group, limited facility time and athletes who quite rightly want to train together. I don't think every runner needs a completely different workout. Often the session can stay shared while the dose, number of reps, recovery, pace or expectation changes.

This is how I think about most group sessions. The athletes can share the environment, the purpose and even the same rep, but they do not all need the same dose. Individualisation can be a small coaching decision rather than a separate programme.

The adjustment does not always have to be volume either. Individualisation might mean a different recovery, pace range, surface, technical expectation or complexity of the task. Sometimes two athletes complete exactly the same number of repetitions, but one is being asked simply to establish rhythm while another is being challenged to execute the same work with greater pace control, relaxation or technical consistency.

One session, different dose

Example	Newer / lower exposure	Established	Higher exposure	Coaching principle
Threshold session	3 x 5 min	4 x 5 min	5 x 5 min	Same purpose; volume matched to experience and readiness
Hill session	6 reps	8 reps	10 reps	Same hill; different total load
Long aerobic run	35-40 min	45-50 min	55-60 min	Duration reflects running history, not age alone
Strength	Technique / bodyweight	Intro loaded patterns	Progressive loading	Competence and strength-training age matter
Speed exposure	4-6 relaxed strides	6-8 strides	Strides + short accelerations	Maintain speed without turning every session hard

I would read those examples as illustrations, not prescriptions. The important point is that athletes can share the same session, the same group and the same purpose without everybody having to complete the same volume.

Importantly, these are not fixed groups that an athlete belongs to. The same runner might be ready for a higher endurance dose but still be relatively new to strength training or speed development. Their appropriate dose can also change over time as they grow, recover, gain experience or deal with other demands outside athletics. Individualisation is not about deciding which 'level' an athlete is. It is about continually matching the training dose to what they are ready for and what we are trying to develop.

That leaves the more difficult coaching question: how do we decide what the right dose is for this athlete, at this moment? For me, that is where a simple development check becomes useful.



Figure 8. A practical check before progressing the training dose.

Before I add more training, I would want to understand what has changed over the previous six to twelve months. Are they recovering well? Are they growing quickly? Is a previously comfortable load suddenly creating unusual soreness? What is happening at school and in other sports? Have they mastered what they are doing now? Do they understand and want progress? And the question I keep coming back to is: what specific adaptation am I trying to create by adding this?

What I think the research supports and what it doesn't. The developmental-load literature does not provide a single formula that predicts exactly what every adolescent can tolerate. It supports serial monitoring, progressive loading and attention to individual modifiers such as maturation, injury history, training history, strength, aerobic fitness and coordination (Jayanathi et al., 2022; Towlson et al., 2021).

For parents, compare less and ask more

For parents, I completely understand why this is difficult. Another athlete of the same age may be doing more mileage, more sessions or a longer Sunday run, and it is natural to wonder whether your child should do the same. But very often we compare birthdays or Strava totals rather than training history, maturation, other sport, school demands, recovery and the purpose behind the programme.

Coaches are not immune to the comparison either. We see another athlete the same age doing more and wonder whether we are leaving something on the table. I think the harder discipline is asking whether our athlete needs that extra training yet. The comparison I find most useful is the athlete against themselves six or twelve months ago: are they more consistent, robust and recovering better?

The same principle applies to the balance between event groups. If every athlete in an age group is being given essentially the same run-jump-throw balance because of their chronological age, I think it is reasonable for a parent to ask how training age, previous exposure, maturation, motivation and emerging event direction have been considered. The question is not whether breadth matters, it does. The question is what balance of breadth and specificity is appropriate for this athlete now.

8. The developmental question

The question I keep coming back to: what does this athlete need next?

We need age groups to organise sport. What I don't think we should do is let an age group become a training prescription. Two 15-year-olds can differ in chronological age within the competition band, biological maturation, training history, physical qualities, event background, total weekly load and psychological readiness. They can even run the same time for completely different reasons.

That applies not only to how much training an athlete does, but also to what the programme emphasises. An age-group label should not automatically determine an identical split between running, jumping and throwing when athletes have different training histories, interests, physical qualities and readiness for a stronger event-group direction.

Training age is useful because it makes us look backwards before we rush forwards: what has this athlete experienced and adapted to? But I don't think training age is the answer on its own. It must sit alongside maturation, current capacity, everything happening outside sport and the athlete's own motivation.

The later starter is not necessarily behind

If a 15-year-old joins athletics alongside runners who have been training since they were ten, I don't think their job is to squeeze five years of training into one season. Trying to 'catch up' in load removes the very progression that helped the more experienced athlete get there safely. Starting later changes the starting point. It does not tell us where the athlete can eventually get to.

Starting later can make an athlete feel behind because the comparison is visible every week. I would rather respect the training gap and build progressively than try to erase it in one season.

The successful young athlete still does not need to train like an adult

The opposite can be just as difficult. A young athlete starts winning, moves up the rankings or qualifies for championships and suddenly the question becomes, 'What could they do if we add more?' Maybe more would improve short-term performance. But I think the better developmental question is whether we need that extra load now, what it might cost, and what options we want to leave available for later.

Success creates its own pressure. When the current dose is still moving the athlete forward, I increasingly see leaving something for later as a strength rather than a missed opportunity.

The goal is not to create the best-trained 15-year-old. It is to help the 15-year-old become a healthy, robust, skilful and motivated athlete with the capacity to keep developing.

Three questions to finish with

1. What has this athlete progressively prepared themselves to tolerate?
2. What is changing in their growth, life and sporting context right now?
3. What is the smallest sensible next step that moves development forward without using more training than we need?

So, I keep coming back to the same conclusion. 'What should a 15-year-old runner be doing?' is probably too broad a question to be very useful. The better question is simpler, but it asks many more of us as coaches:

What does this 15-year-old need next?

Research informing this article

I've used the research in this article to challenge and support the coaching discussion, not to turn it into an academic paper. The sources below underpin the main developmental principles. Where evidence comes from other sports, I have tried to translate it cautiously rather than pretend it gives us an exact endurance prescription.

England Athletics (2026). Age Group Changes: Overview.

<https://www.EnglandAthletics.org/about-us/age-group-changes/>

Bergeron, M.F. et al. (2024). IOC consensus statement on elite youth athletes competing at the Olympic Games: essentials to a healthy, safe and sustainable paradigm. British Journal of Sports Medicine, 58(17), 946-965.

<https://doi.org/10.1136/bjsports-2024-108186>

Bergeron, M.F. et al. (2015). International Olympic Committee consensus statement on youth athletic development. British Journal of Sports Medicine, 49(13), 843-851.

<https://doi.org/10.1136/bjsports-2015-094962>

Krabak, B.J. et al. (2021). Youth running consensus statement: minimising risk of injury and illness in youth runners. British Journal of Sports Medicine, 55(6), 305-318.

<https://doi.org/10.1136/bjsports-2020-102518>

Jayanthi, N. et al. (2022). Developmental Training Model for the Sport Specialized Youth Athlete: A Dynamic Strategy for Individualizing Load-Response During Maturation. Sports Health, 14(1), 142-153.

<https://doi.org/10.1177/19417381211056088>

Towlson, C. et al. (2021). Maturity-associated considerations for training load, injury risk, and physical performance in youth soccer: One size does not fit all. Journal of Sport and Health Science, 10(4), 403-412.

<https://doi.org/10.1016/j.jshs.2020.09.003>

Parry, G.N. et al. (2024). Associations between growth, maturation and injury in youth athletes engaged in elite pathways: a scoping review. British Journal of Sports Medicine, 58(17), 1001-1010.

<https://doi.org/10.1136/bjsports-2024-108233>

Kearney, P.E., Hayes, P.R. & Nevill, A. (2018). Faster, higher, stronger, older: Relative age effects are most influential during the youngest age grade of track and field athletics in the United Kingdom. Journal of Sports Sciences, 36(20), 2282-2288.

<https://doi.org/10.1080/02640414.2018.1449093>

Jones, T.W., Shillabeer, B.C., Ryu, J.H. & Cardinale, M. (2021). Development in adolescent middle-distance athletes: a study of training loadings, physical qualities, and competition performance. Journal of Strength and Conditioning Research, 35, S103-S110.

<https://doi.org/10.1519/JSC.0000000000003437>

Coach development informing this article

Alongside the published research, some of the thinking in this article has been shaped by my England Athletics / UK Athletics Event Group Endurance coach development, particularly the Endurance Athlete Development Model, exercise-classification and training-progression material. Those resources influenced how I think about competency-based progression, the interaction between endurance, speed, technique and physical preparation, and the gradual movement from broader athlete development towards greater event-specificity. Course materials referenced directly in this section include the Endurance Athlete Development Model V1.2b and the GPE Training Methods: Multi-Throws Theory & Practice material.

I have treated those materials here as coach-development frameworks rather than current research evidence or a statement of current England Athletics policy.

A note on interpretation

There is no research paper that can tell us the exact perfect training dose for every young runner, and I think it is important to say that clearly. Some of the evidence here comes from consensus statements, reviews or other youth sports, and the middle-distance studies are relatively small. What matters to me is where those sources keep pointing in the same direction: development is individual, growth and maturation matter, previous exposure matters, and progression should respond to the athlete rather than simply to their age.