



Preparation for the 800m



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“Why would someone plant the seeds of a tree, the shade of which they will never see?”

Greek proverb

Today's Theme

Progression

Progression

Progression

Progression

Progression

Progression

Progression

Progression

Progression

Progression

Athlete Development



“You can’t make the grass grow faster by pulling on the blades.”

African proverb

Precocious Development



Alfred Kipketer

1st IAAF World Youth 2013 1:48.01 (16)

1st IAAF World Junior 2014 1:43.95 (17)



Timothy Kitum

3rd London 2012 1:42.53 (17)



Nijel Amos

2nd London 2012 1:41.73 (18)

Precocious Development



1:59 in High School



Nick Symmonds – Progression from Age 20 -29

1:51.18	(AGE 20)	1	Preview	Eugene OR	22 Mar	2003
1:50.48		2h2	NCAA-III	Canton NY	23 May	2003
1:49.51	SB	1	NCAA-III	Canton NY	24 May	2003
1:48.92		1r5	MSR	Walnut CA	15 Apr	2005
1:48.82	SB	1	Foreman	Seattle WA	14 May	2005
1:47.34		1r2		Nashville TN	13 May	2006
1:45.83	SB	2	NC	Indianapolis IN	25 Jun	2006
1:44.54	SB	1	Pre	Eugene OR	10 Jun	2007
1:44.10	SB	1	NC	Eugene OR	30 Jun	2008
1:43.83	SB	3	Herc	Monaco	28 Jul	2009
1:43.76	SB	3	Rieti 2010	Rieti	29 Aug	2010
1:42.95	(AGE 29) PB	5	OG	London	9 Aug	2012

Track & Field as a Late Development Sport

Average Ages - Men 800m

Ages at Championships and by Annual Best Performances 2000-2004

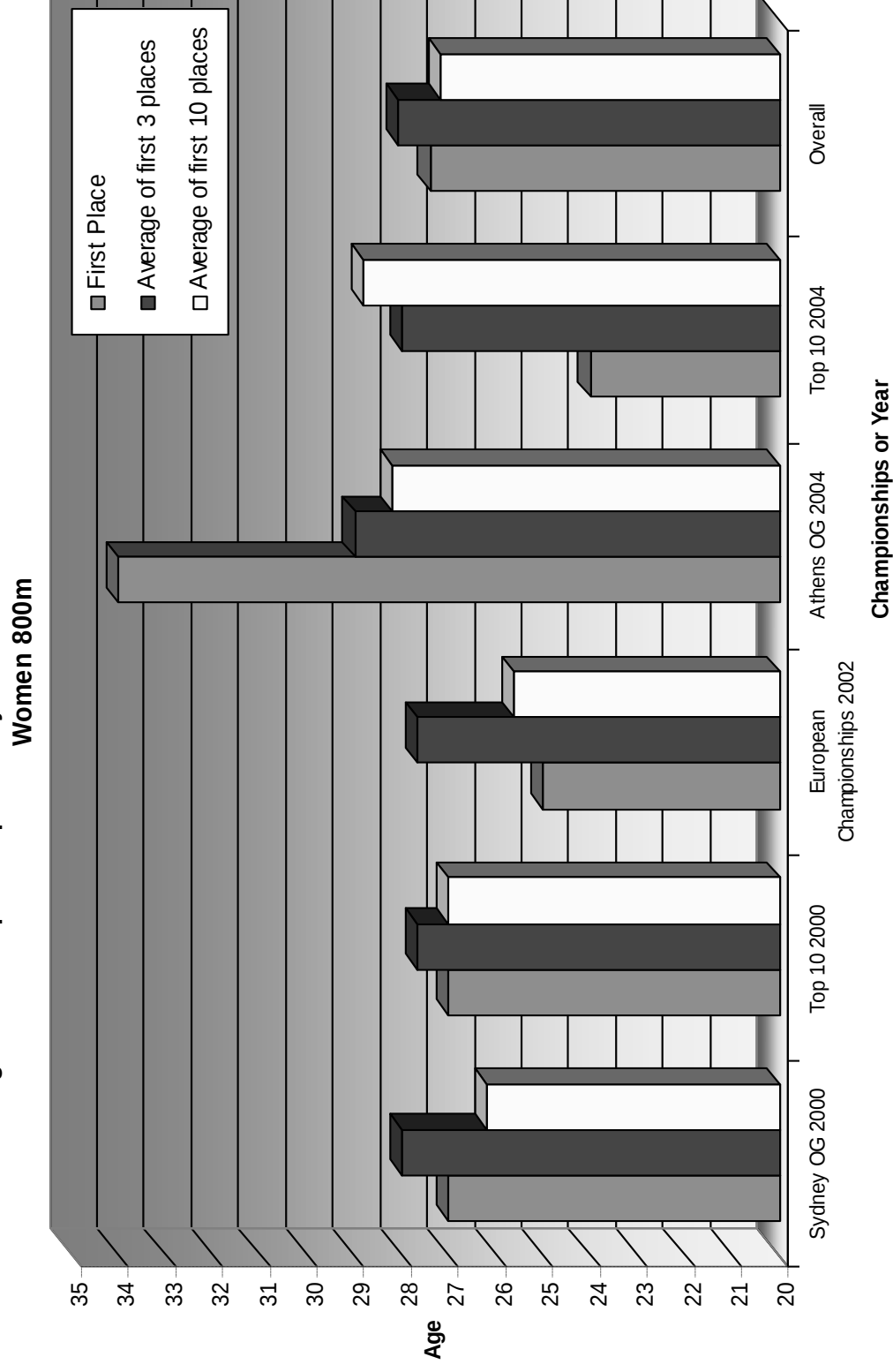
Men 800m



Track & Field as a Late Development Sport

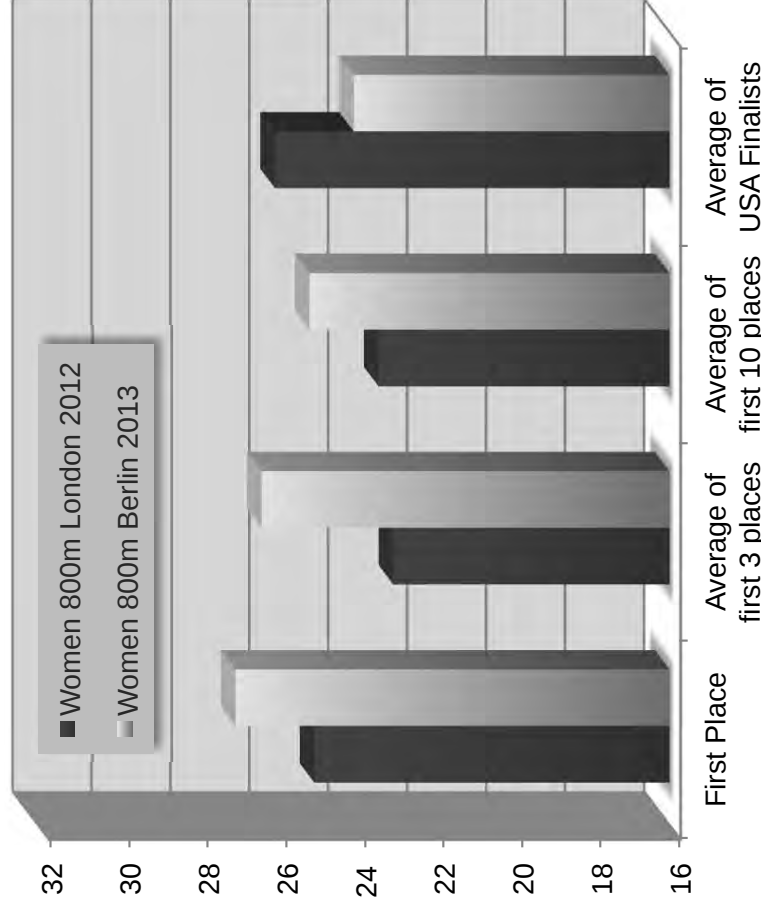
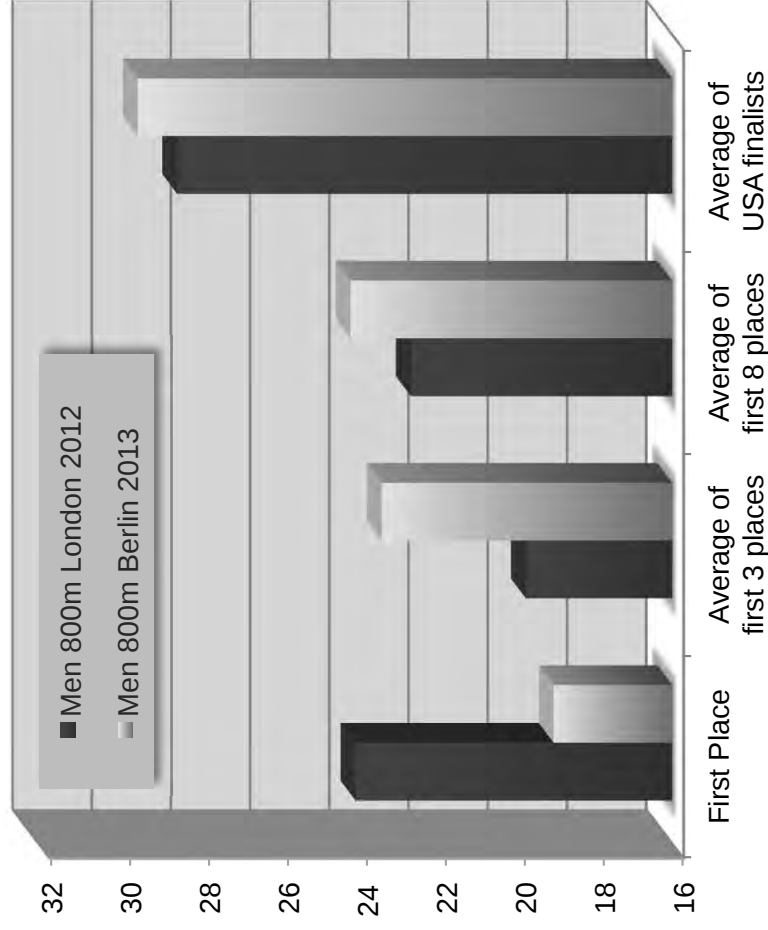
Average Ages – Women 800m

Ages at Championships and by Annual Best Performances 2000-2004

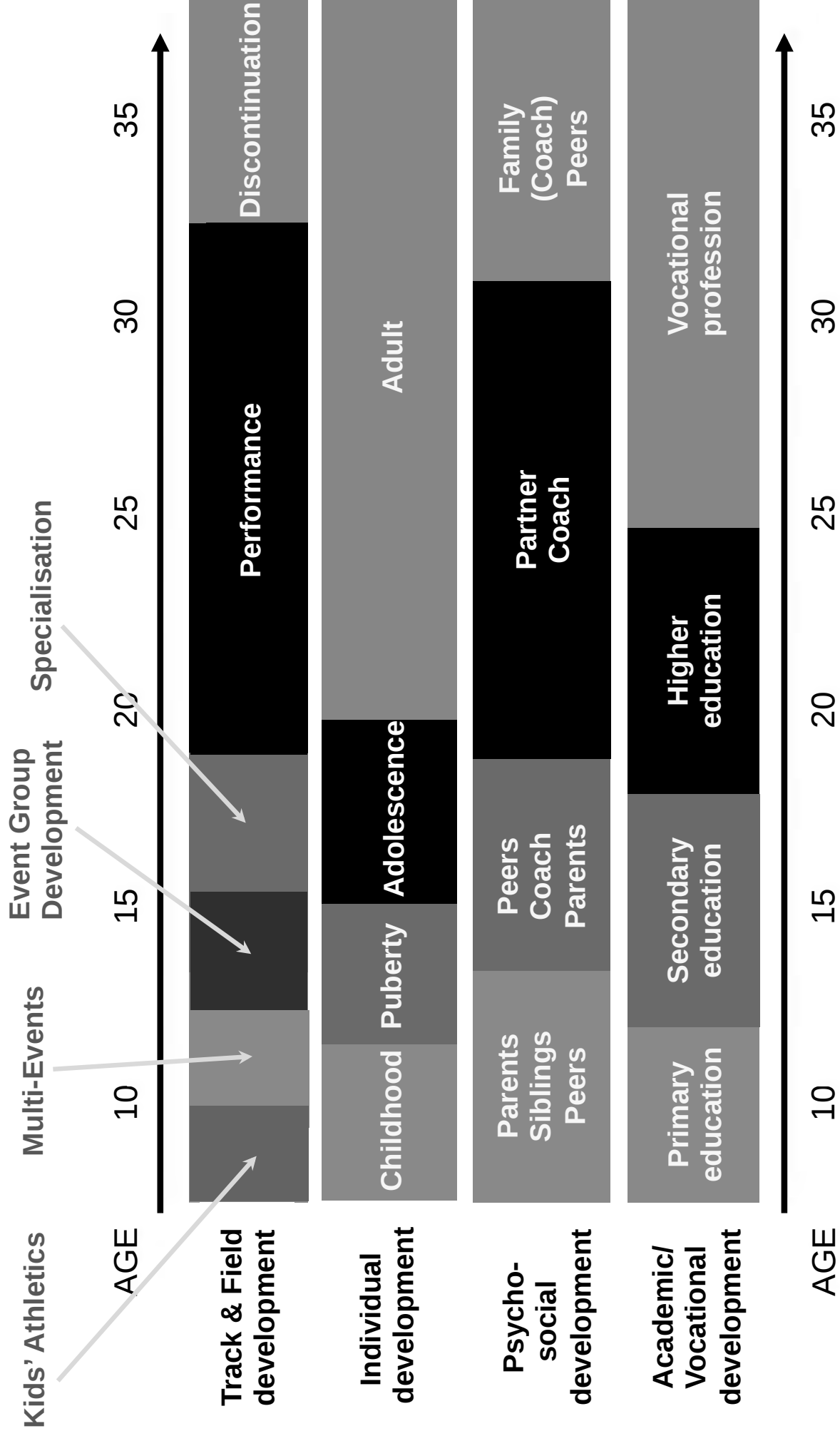


Track & Field as a Late Development Sport

Average Ages - Men and Women 800m – London 2012 & Berlin 2013



Developmental Model of Transitions



How the Body Grows



Three Youth athletes – all 14 years of age

Photo: I. Balyi, LTAD Implications for coaches and parents, NCTC Coaching Conference, UK 2005

Each Athlete's Four 'Ages'

1. Chronological Age:

Number of days, months and years that have elapsed since birth

2. Biological Age:

The individual's stage of development in relation to physical maturity - children within the same chronological age banding can differ by several years in their level of biological maturation

3. Developmental Age:

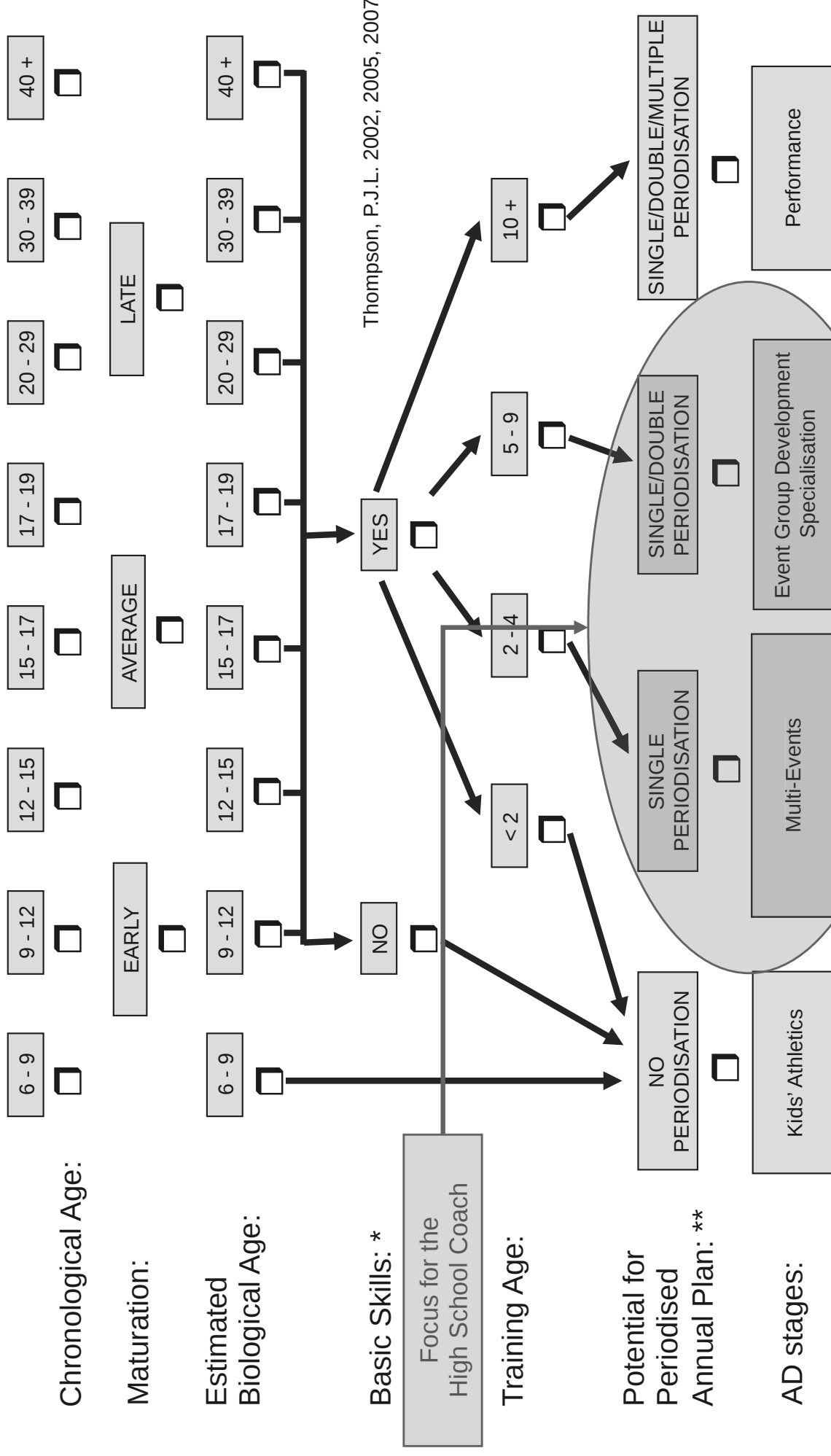
The complex interaction between physical, emotional, psychological and social development

4. Training Age:

The number of years that an individual has been in specific training for any related sport.

Determining the AD stage and structure of the annual plan

☒ Tick the appropriate boxes – start at the top level and work down, ticking only one box at each level



* The basic skills of ABC's + ABC's of Athletics + KGB's + CKS = Physical Literacy

** Although there may be the potential for a double or multiple periodised annual plan, there will be additional factors which impact on this choice.

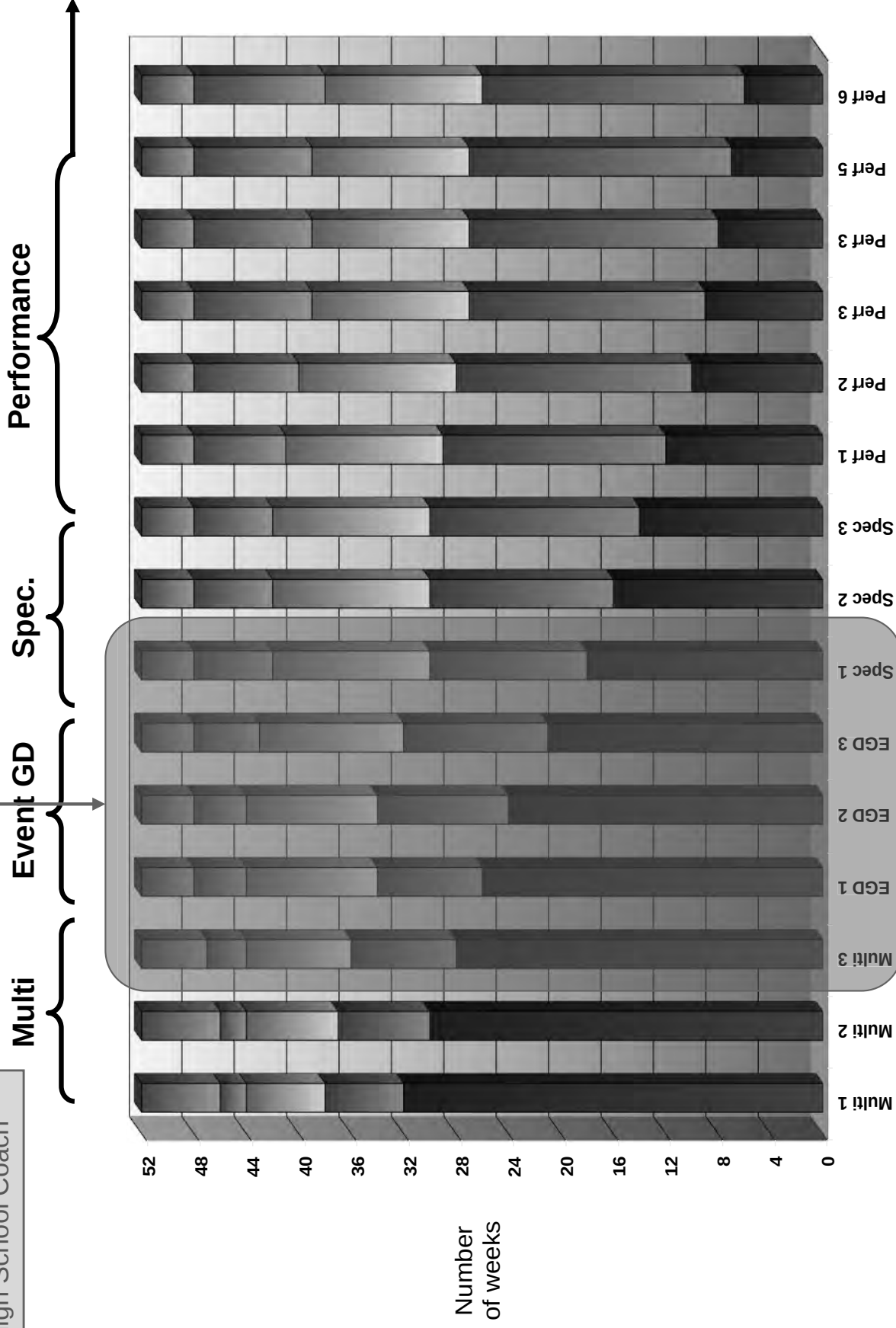


*“If I had eight hours to chop down a tree, I’d
spend six sharpening the axe.”*

Abraham Lincoln (coach)

Durations of the Phases through LTAD

Focus for the
High School Coach



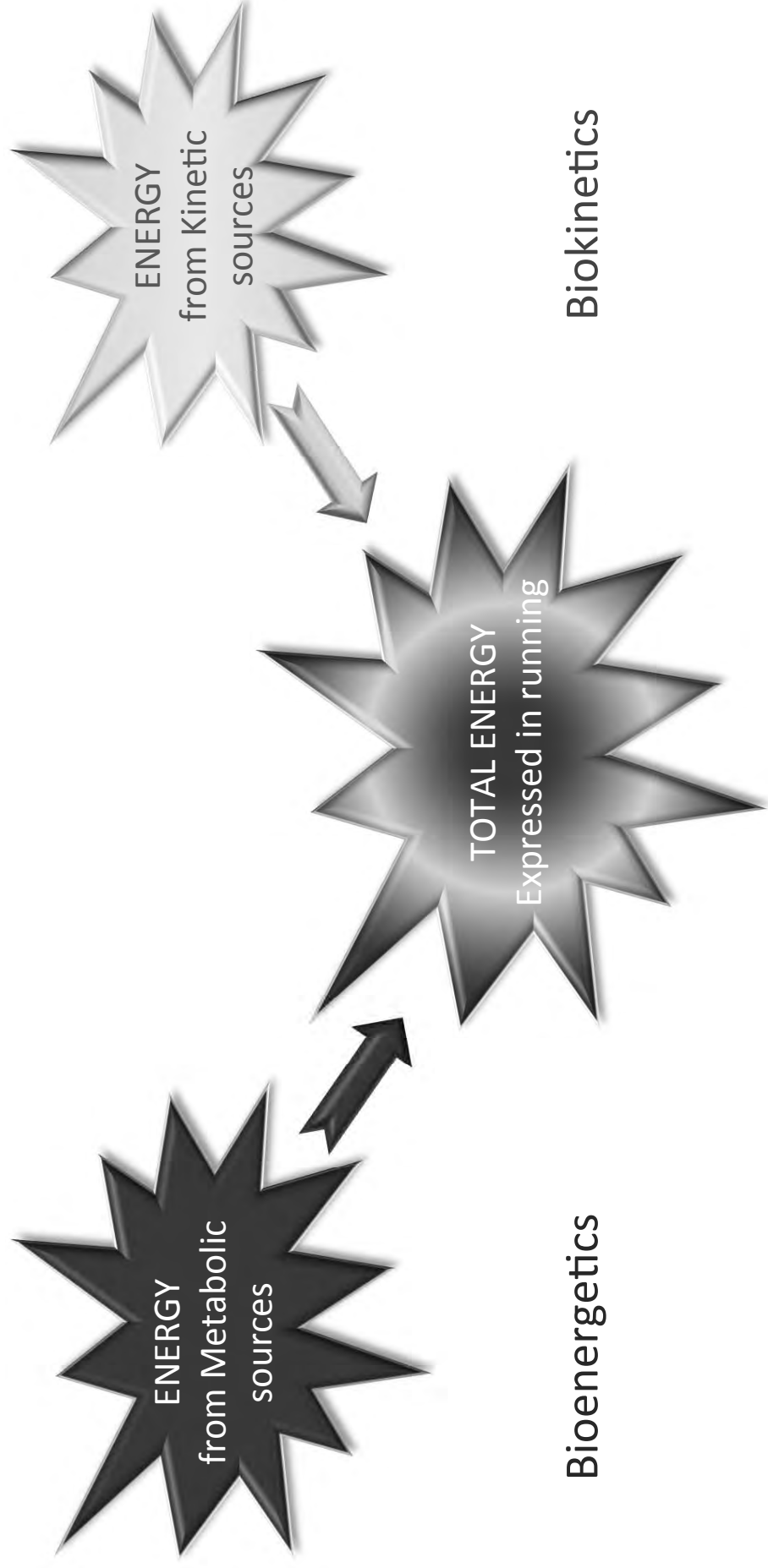
Elements of Preparation

- Technical Preparation
- Tactical Preparation
- Psychological/Mental Preparation
- Physical Preparation



Energetics and Running Performance

Endurance running performance is concerned with energy production, management, utilization and expression



What types of 'Speed' are used in the 800m?

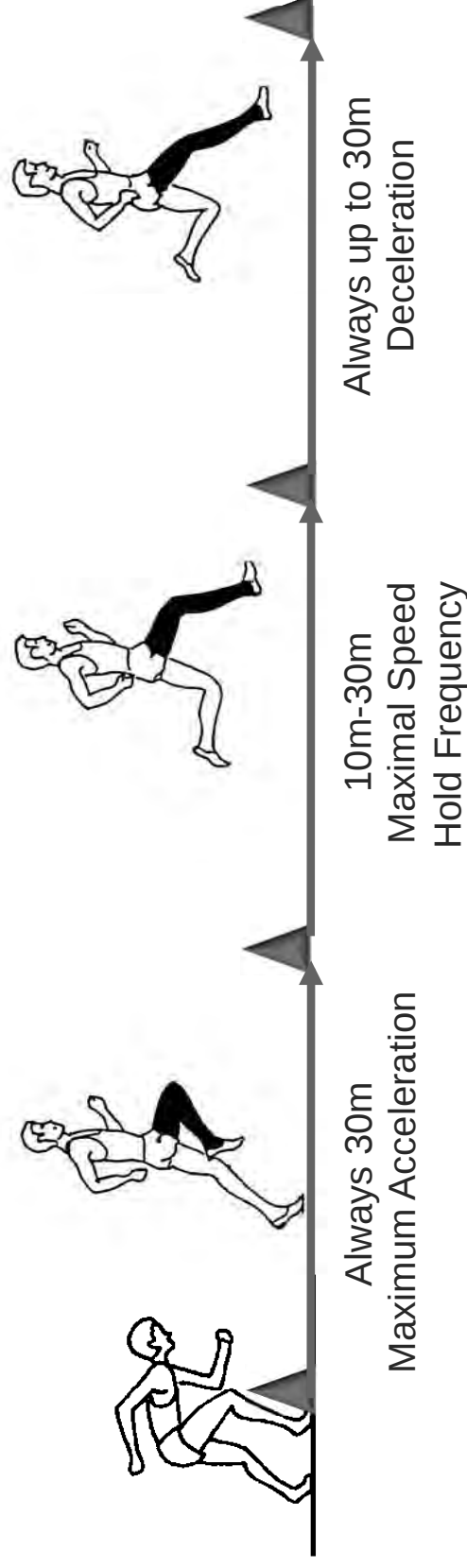
- Maximal speed
 - 'Pure' speed - as fast as you can - 10" or less
 - may involve whole body or relate to limb movement
- Optimal speed
 - includes 'pace' and 'rhythm'
- Acceleration speed
 - rate of change in speed
- Reaction time
 - time between the stimulus and the first movement of the athlete
- Speed endurance
 - ability to continue to express speed as fatigue levels increase.

Running for Speed – Acceleration and Maximum Speed Running

- Sprint and running drills
- ‘Flying Sprints’.



Running for Speed – Acceleration and Maximum Speed Running



- 'Flying 30s' – for developing maximal speed running
Example: 3 x 3 x flying 30s (max) [2'-3' and 5'-7']
- For athletes with a low training age the middle maximal speed section will usually be less than 30m
Example: 2 x 2 x flying 10s (max) [2' and 5'] or with more experience 2 x 3 x flying 20s (max) [2'-3' and 5'-7'].

Flying Sprints 10m-30m



	Max Acceleration - always 30m	10m	15m	20m	25m	30m	Controlled deceleration - always up to 30m
Lane	Flying 10						70m
Lane	Flying 15						75m
Lane	Flying 20						80m
Lane	Flying 25						85m
Lane	Flying 30						90m


 Maintain Maximum Frequency

What is 'Speed Endurance'?

- Speed Endurance is simply the ability to keep expressing speed - regardless of the distance you are running
- The speed endurance for a marathon runner is different from the speed endurance of a middle distance 800m and 1500m runner
- Some call this speed endurance - 'event specific endurance' - but there has to be a foundation of 'general speed endurance'
- Athletes in the Multi-events and Event Group Development stages are not specialist event athletes and should develop a foundation of 'general speed endurance'.

Training for Running Events

Training for all running events can be either:

- Continuous
- Non-Continuous.



Developing General Speed Endurance

Continuous methods

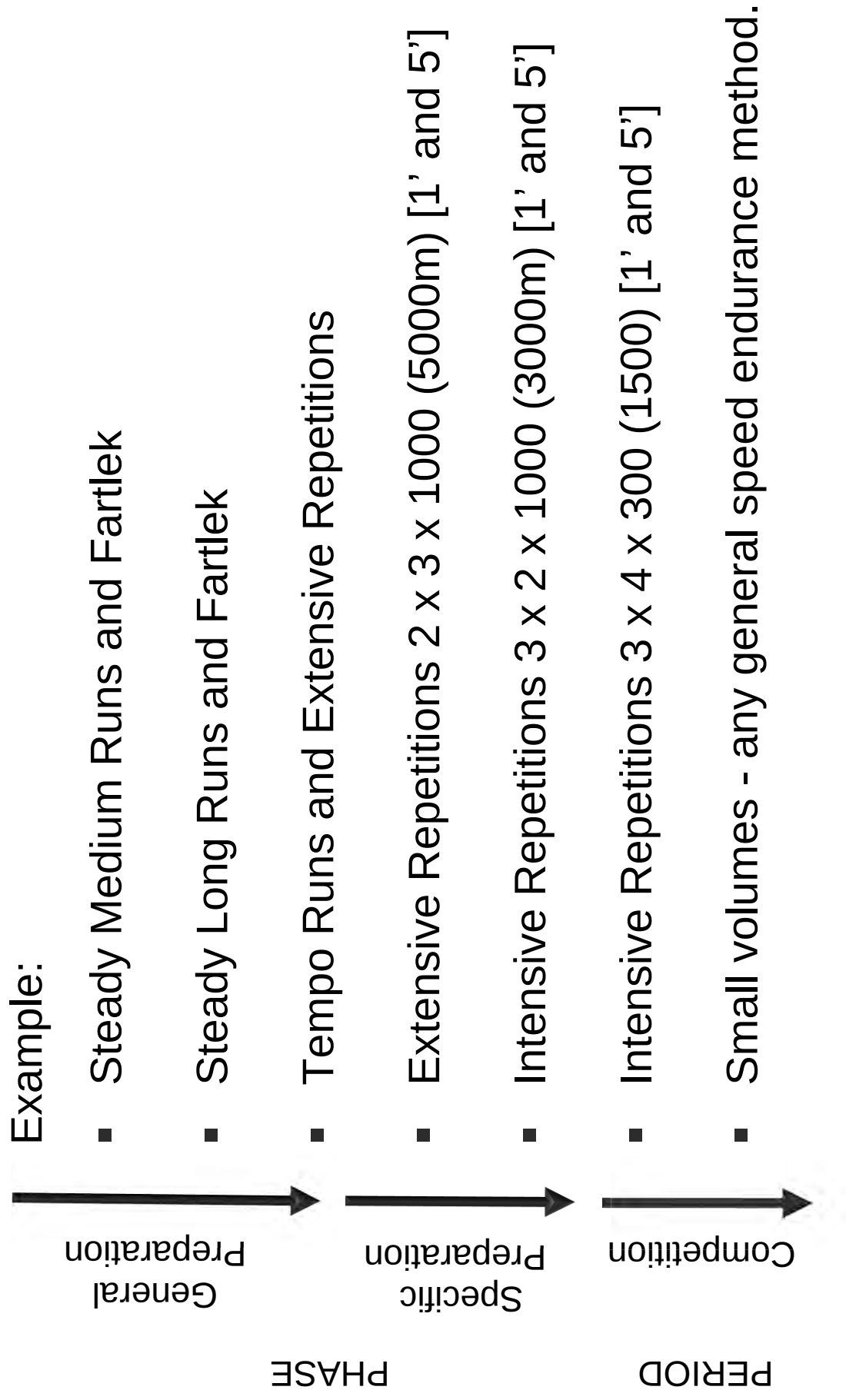
- Fartlek
- Tempo runs
- Crescendo runs
- Cross-training activities

Non-continuous methods

- Repetition training
 - Extensive Repetitions
 - Intensive Repetitions
- ‘Interval training’ - a specific type of repetition training
 - the original ‘Gerschler Interval Training’
 - ‘New Interval Training’.

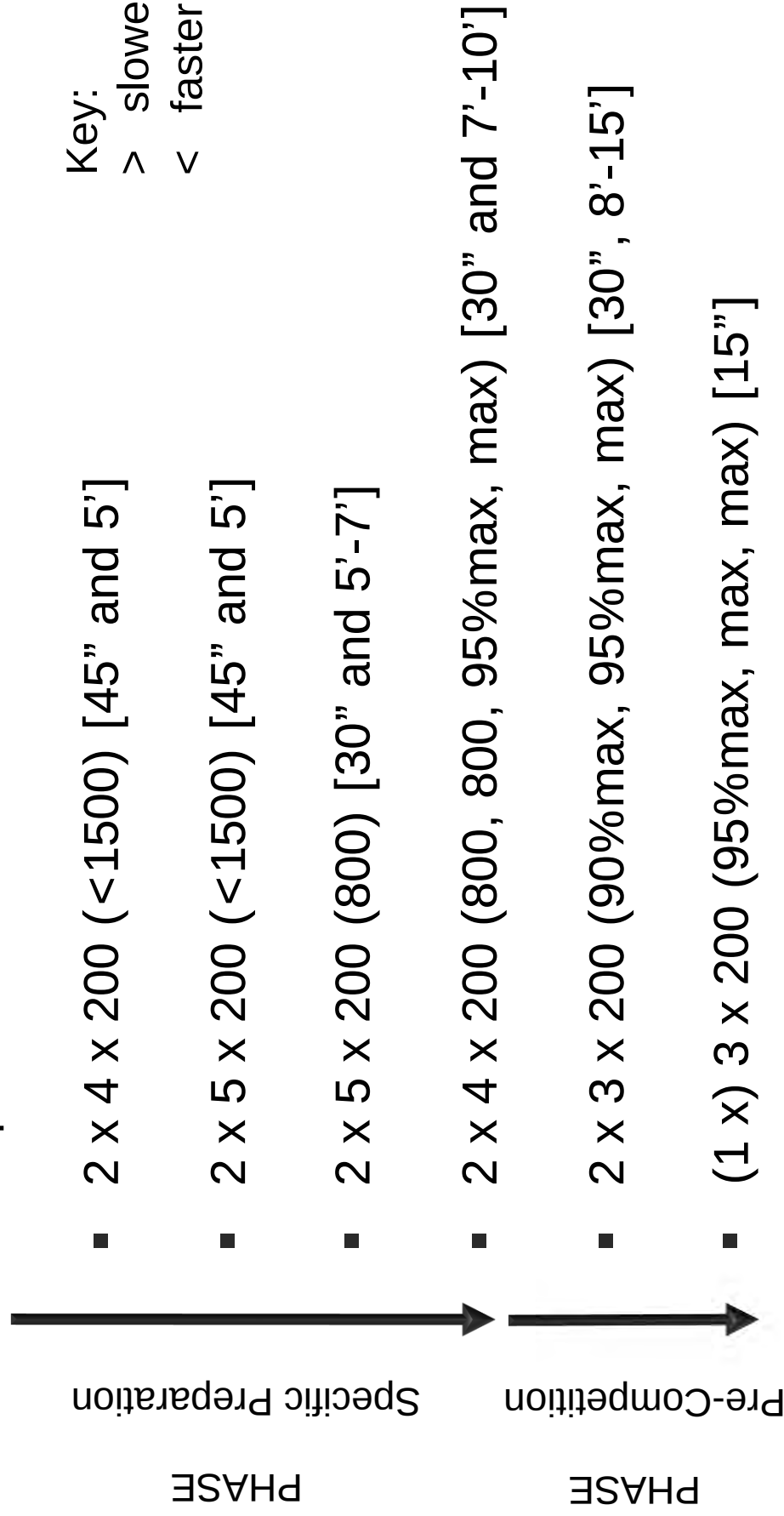


Progression of General Speed Endurance

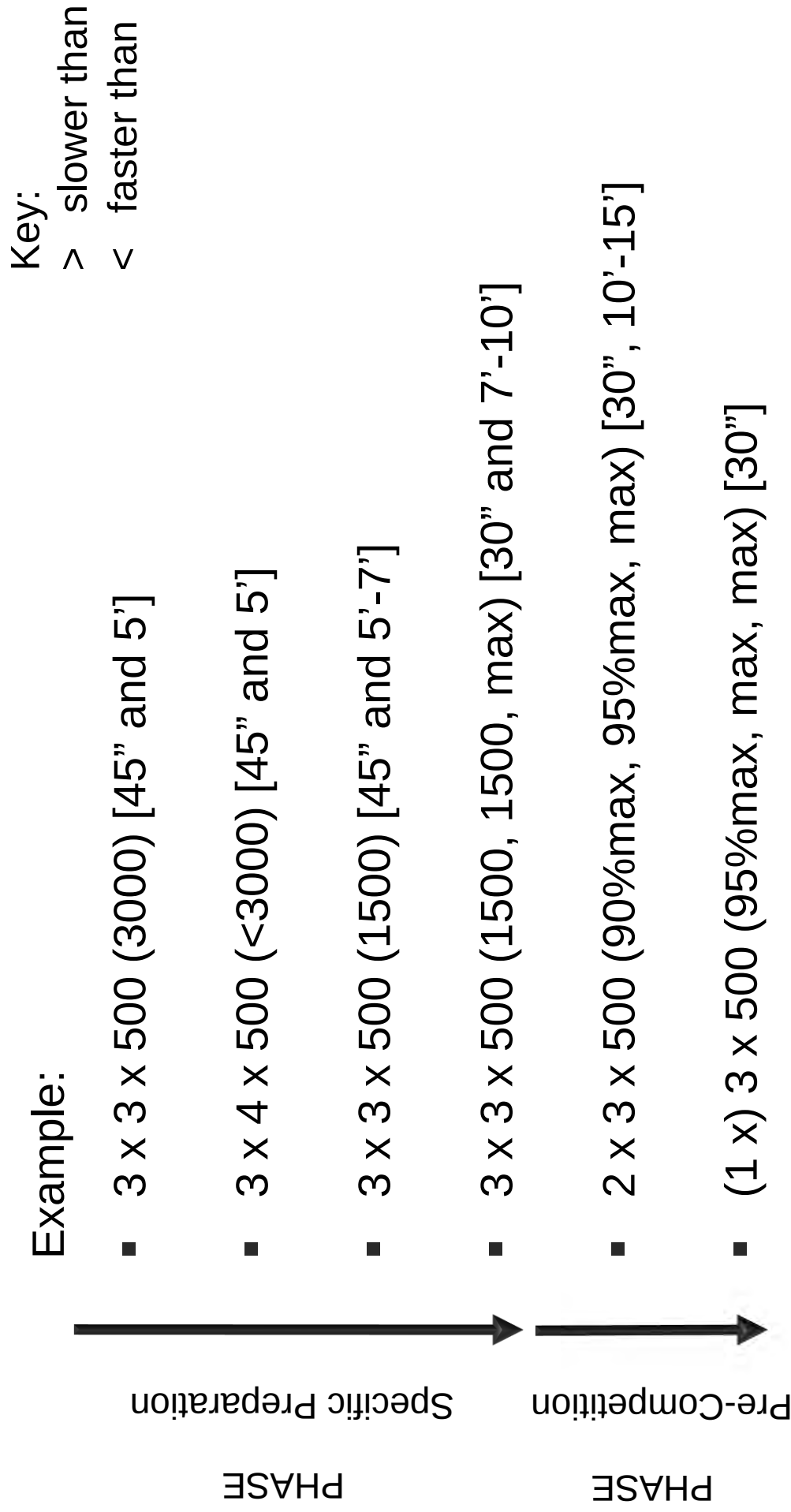


Progression of Speed Endurance – Repetition Training

Example:



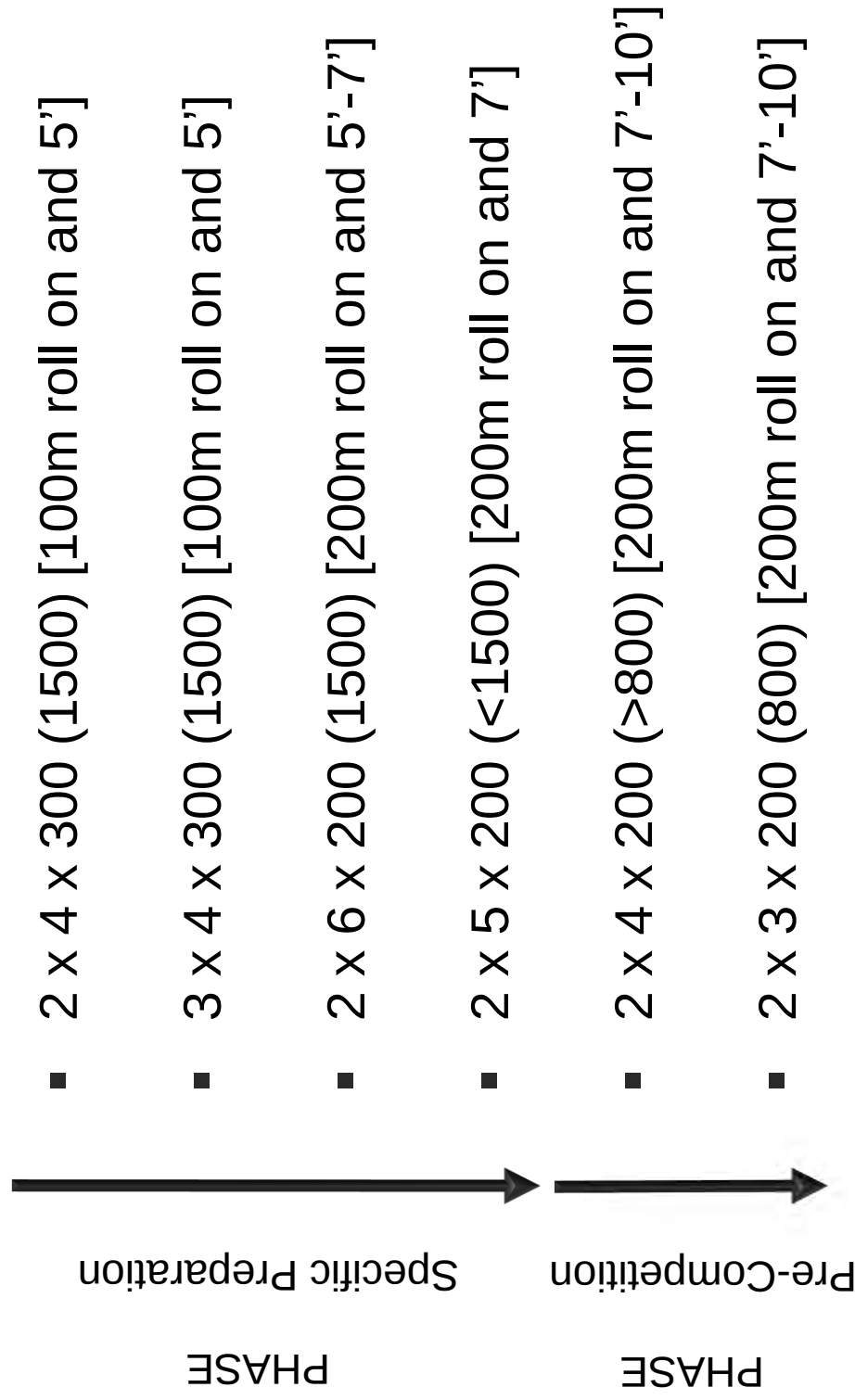
Progression of Speed Endurance - Repetition Training



Progression of Speed Endurance – New Interval Training

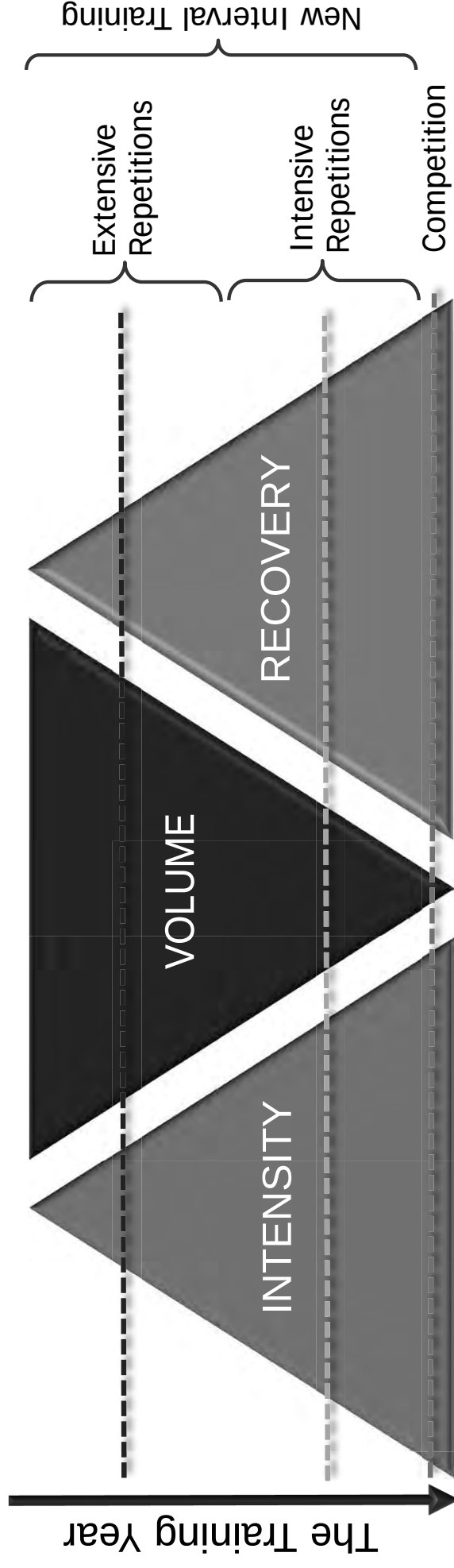
Key:
> slower than
< faster than

Example:

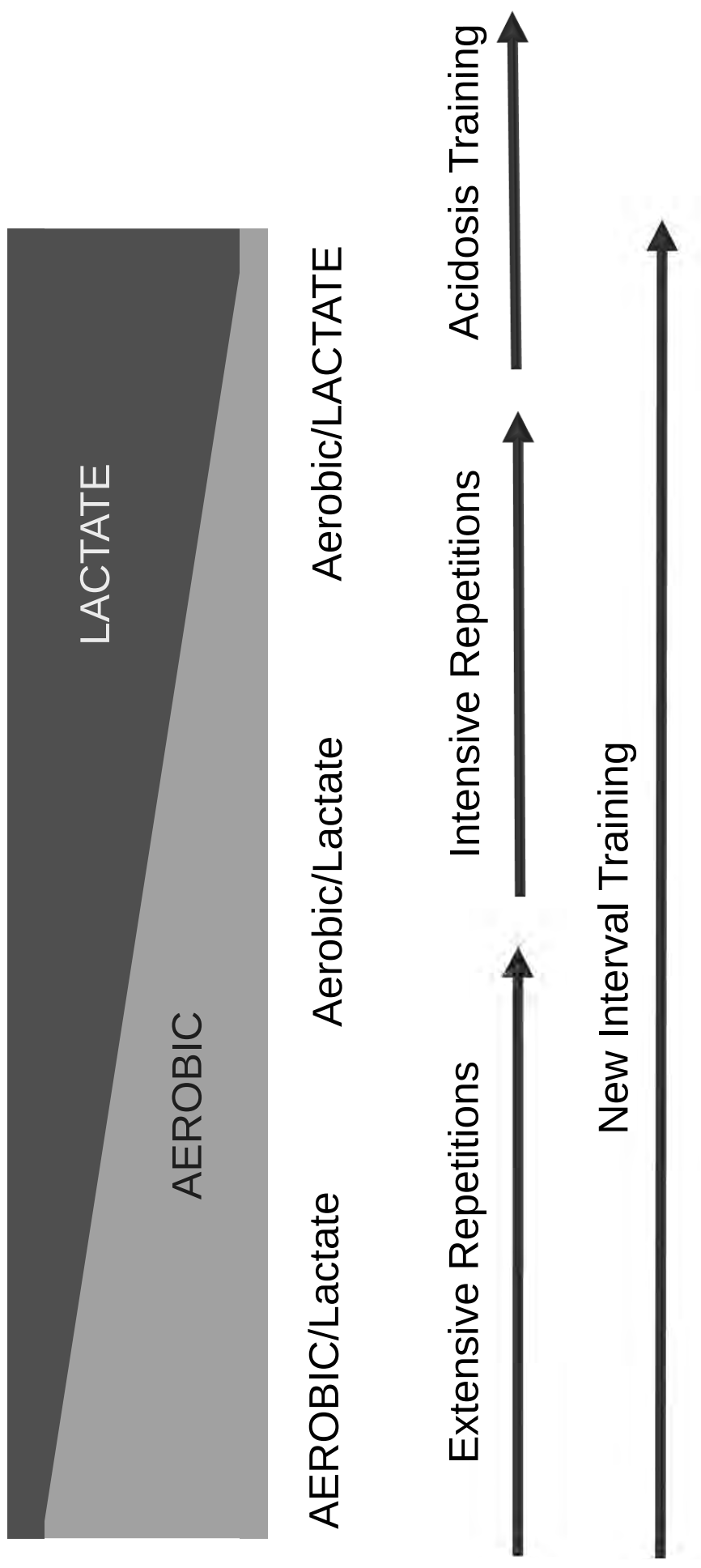


Progression of Repetitions

The Relationship between Intensity - Volume - Recovery



Repetition Training and Metabolic Development

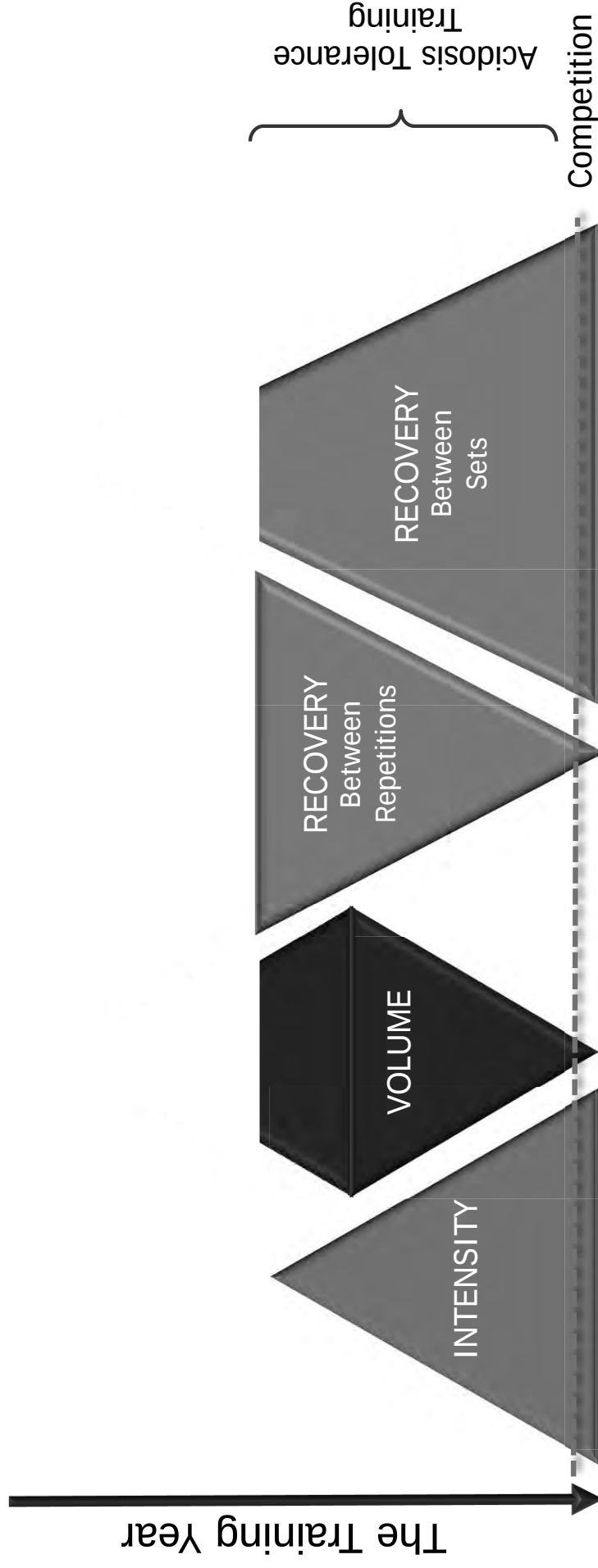


Acidosis Training

- Specific Preparation Phase - If athletes are in the Event Group Development, Specialisation and Performance stages of athlete development then acidosis training will be gradually introduced
- Higher intensities of training will significantly raise muscle and blood lactate levels
- Higher intensities of training will also significantly raise muscle and blood acidosis levels
- Increased acidosis in the functional muscles requires
 - tolerance of Hydrogen ions (physically and psychologically)
- Increased buffering capacities
 - clearance of Hydrogen ions
- Training result: increased tolerance and clearance of acidosis.

Progression of Acidosis Tolerance Repetitions

The Relationship between Intensity - Volume - Recovery



Enhancing Recovery from Acidosis

- The Role of Extensive Repetitions after Acidosis Training and Competition

- Understanding lactate dynamics training means that we know that the body can clear and utilize lactate as a fuel in the body
- This clearance of lactate also speeds the buffering and clearance of the H^+ ions that cause the acidosis
- This is done optimally with repetitions at New Interval Training natural 'roll-on' pace usually about 10Km pace for most athletes
- Normally 5 x 200 (10Km) [1'] followed by the usual cool down running pace
- Using 'Horwill's 4-5 second Rule' - an athlete who can run 2:20 for 800m should show this relationship:

Event	Pace per 400
800	70"
1500	75"
3000	80"
5000	85"
10,000	90" (45" per 200m)

Assessing your Progress - The Kosmin Test

Actually two tests – one for 800m and one for 1500m:

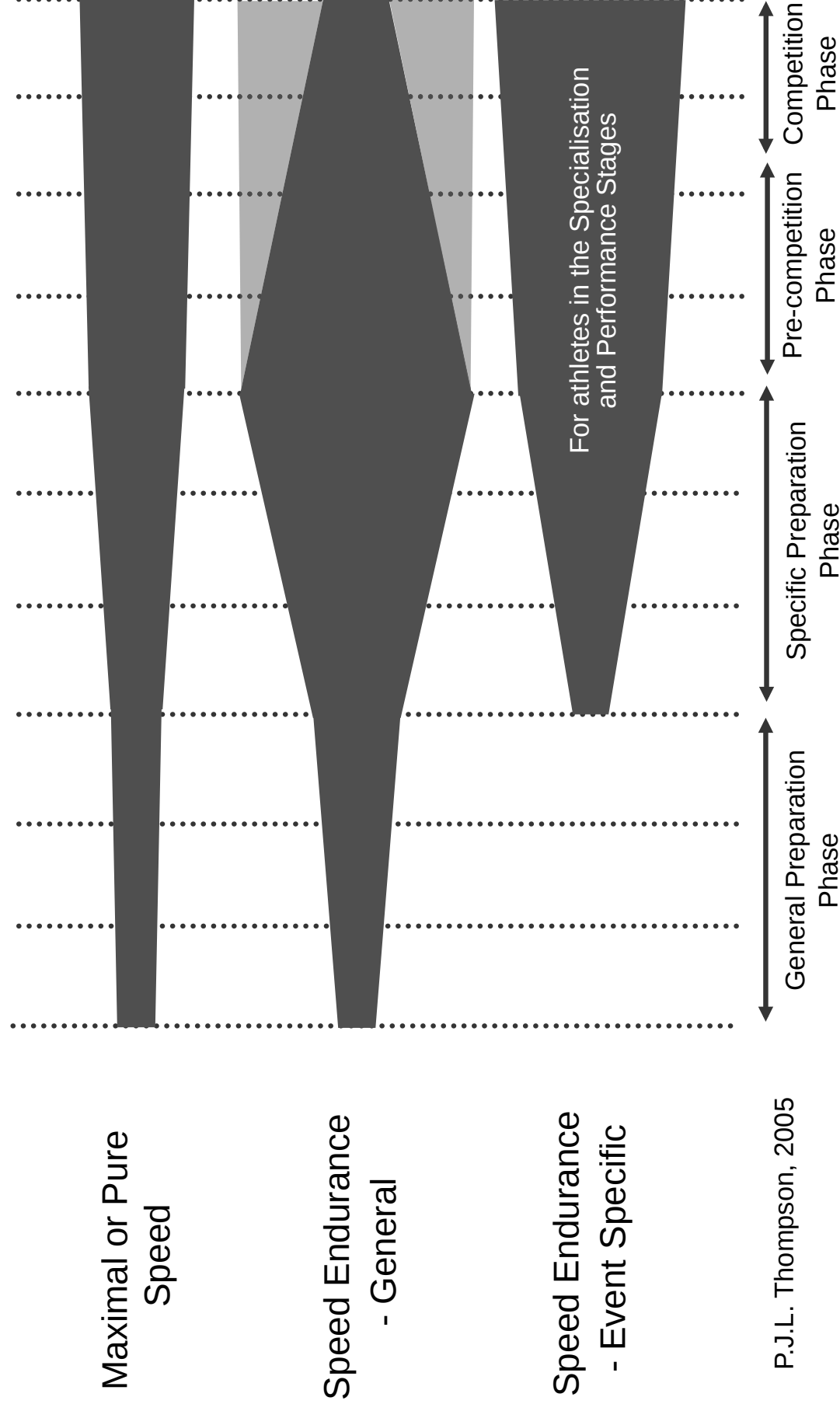
- The 800m test requires the coach to measure how far an athlete – running maximally - travels in 60” [3’] 60”
- The 1500m test requires the coach to measure how far an athlete travels in 60” [3’] 60” [2’] 60” [1’] 60” – very demanding physically and mentally - this test is not suited to the stage of development of the High School athlete
- See handout for full details.



Note: The Kosmin Test is BMC Copyright and may be used freely in any setting to benefit athletes and coaches – please cite: © British Milers’ Club

Speed Training

- Emphasis of Speed Development through a Macrocycle



P.J.L. Thompson, 2005



Always remember - young athletes can begin learning the ‘techniques of weight lifting’ from the ages of 8-11 years and then start ‘weight training’ once they are mature enough.



The importance of
'triple extension' –
except in maximal
acceleration and
maximal velocity
sprinting.



What contributes to Achievement



+



=



Physical
Technical
Tactical
Mental

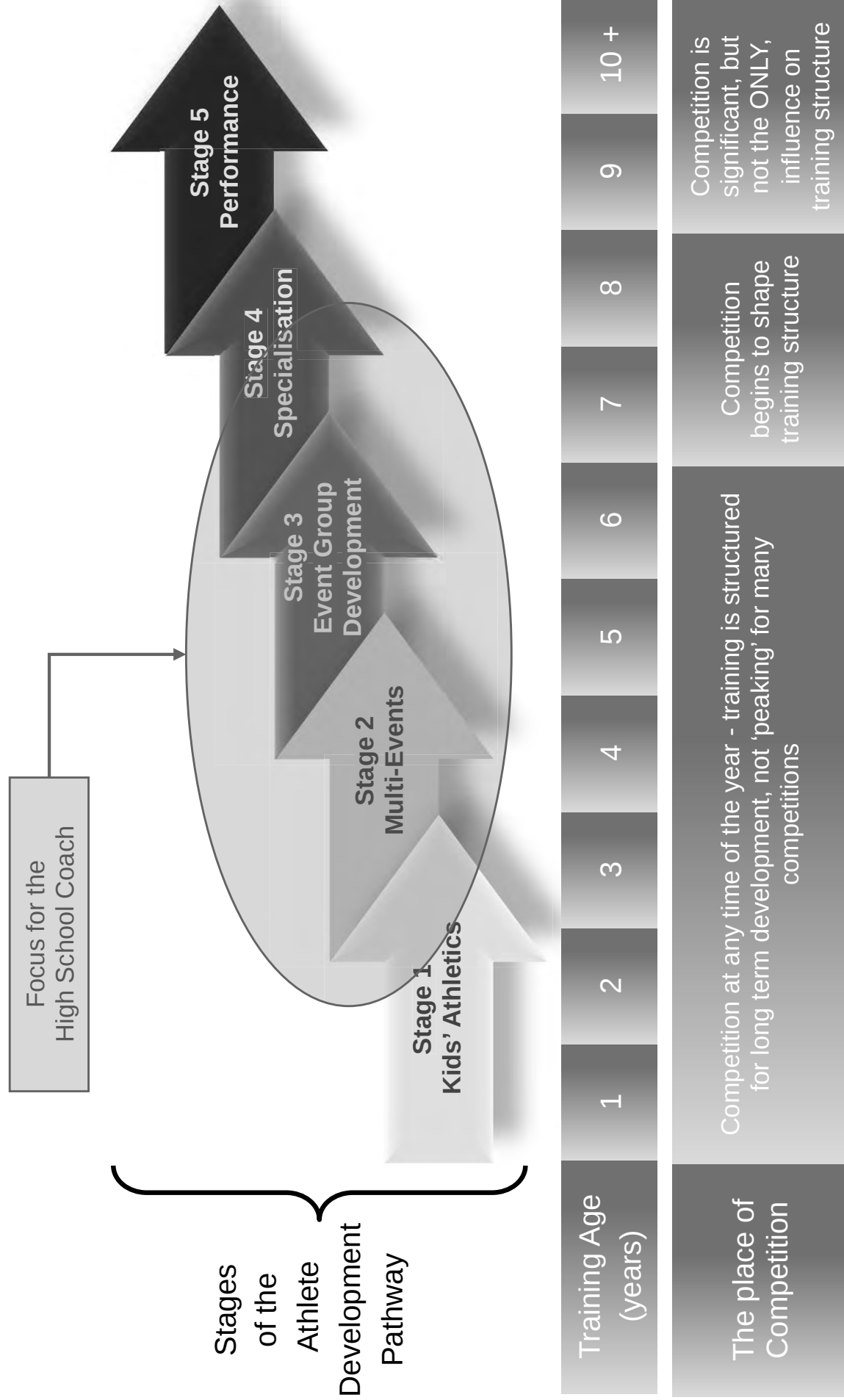
Competition



The Place of Competition in Planning

- the needs of Long Term Development determine the structure of the annual plan not Competition
- competition is important and can be done at any time during the year not just the Competition Period
- the overall training structure should not be changed to fit in with competitions
- rest or reduced training is appropriate prior to competition at any time
- train for long term development and competition needs.

Athlete Development and the Role of Competition



Planning a Variety of Competitive Experiences

Example: 14 year-old athlete (male or female) T.A. 4 years

- 100m 1 - 2
- 4 x 100m 3 - 4
- 200m 2 - 4
- 300m 2 - 5
- 4 x 400m 0
- 800m 10 - 11 (includes heats at 4 championships)
- 1500m 3 - 7
- LJ 2 - 4
- JAV 1 - 5
- other events as occur

“Why would someone plant the seeds of a tree, the shade of which they will never see?”

Greek proverb

Have a GREAT 2015 season



HOKAONE



Thank you for your attention
and contributions

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