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Published: 07/11/2014

Document Version:
Peer reviewed version

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Recommended citation(APA):

Orr, R. M. (2014). *Military Instructor Skills for Conditioning Large Groups*. 2014 ASCA International Conference on Applied Strength & Conditioning , Melbourne, Australia.

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Military Instructor Skills for Conditioning Large Groups

DR Rob Orr





BLUF: Unlike typical S&C or PT, tactical physical conditioning sessions can include very large groups of a diverse demographic. As such specific skills are needed to ensure safety, maximal participation and optimal conditioning.



TACTICAL STRENGTH & CONDITIONING AUSTRALIA

Contents

- Key concepts
- Practical Application



EVIDENCE BASED . TACTICALLY TESTED . OPERATIONALLY PROVEN



Key Concepts

Catering for Diversity

- Within each unit there are diverse demographic backgrounds
- Heights, body weight/mass, fitness, injuries, skills, age and gender all require consideration
- A real challenge for the TSAC coach who may have to manage up to and some times over 100 personnel





TACTICAL STRENGTH & CONDITIONING AUSTRALIA

Key Concepts

Ability Based Training

- Allows for individual's to be catered for



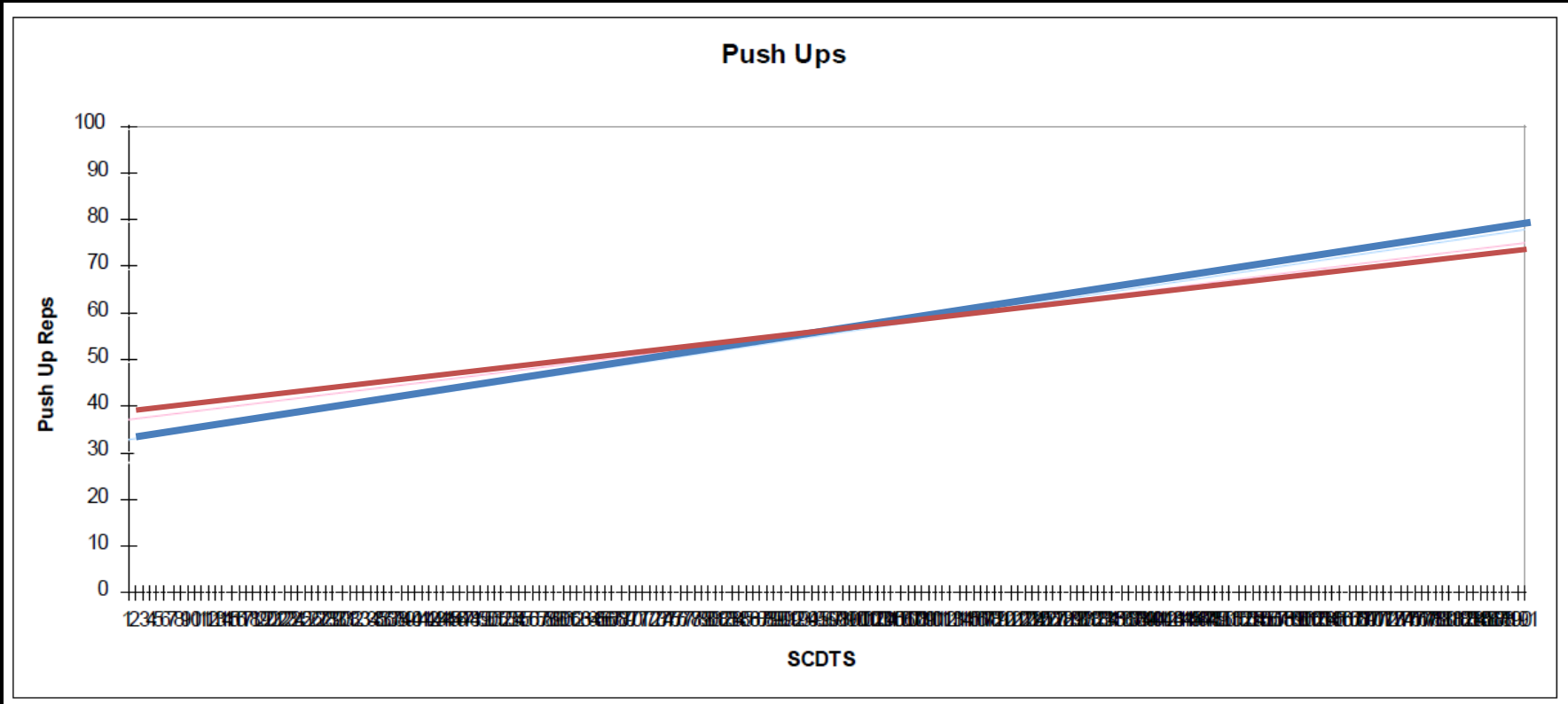
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Key Concepts

Ability Based Training

- The Plateau effect

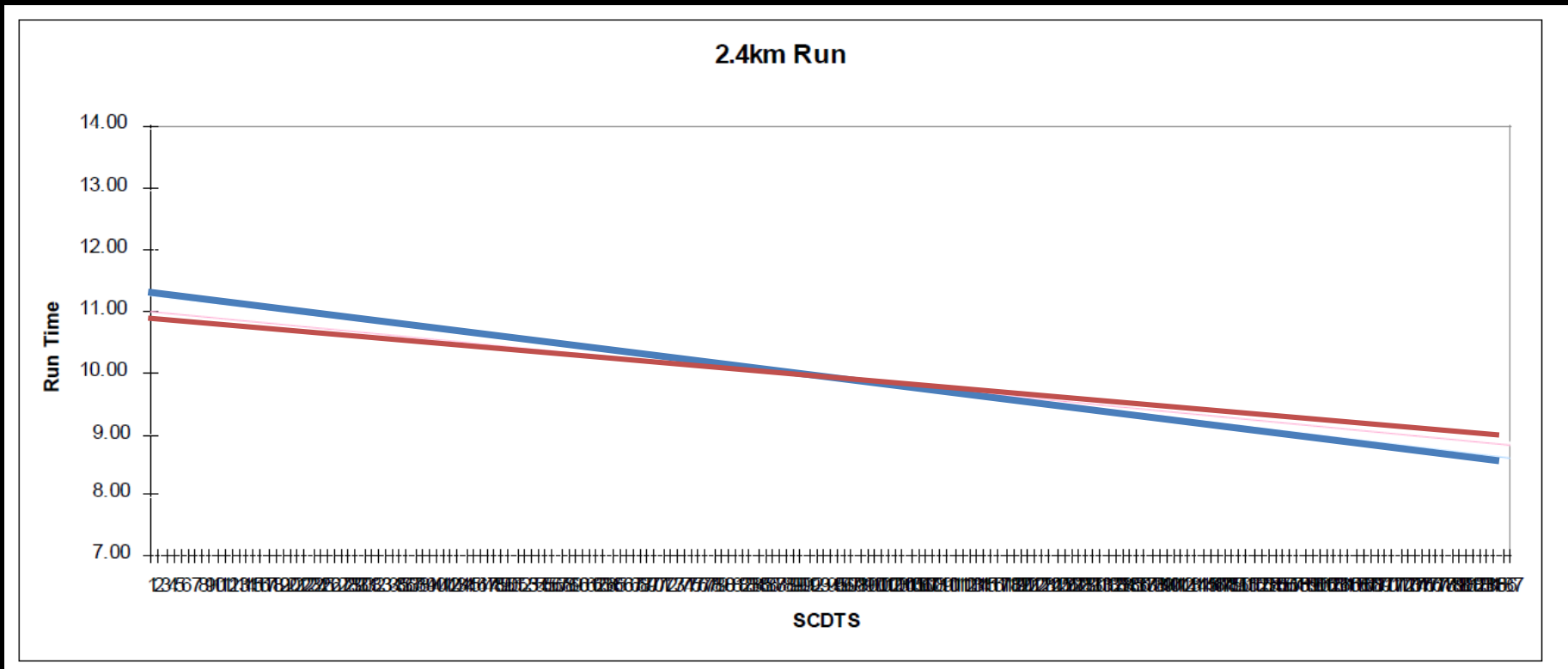




Key Concepts

Ability Based Training

- The Plateau effect





Key Concepts

Ability Based Training

- Traditional Program vs ABT
- ABT based on 30-15 IFT



Key Concepts

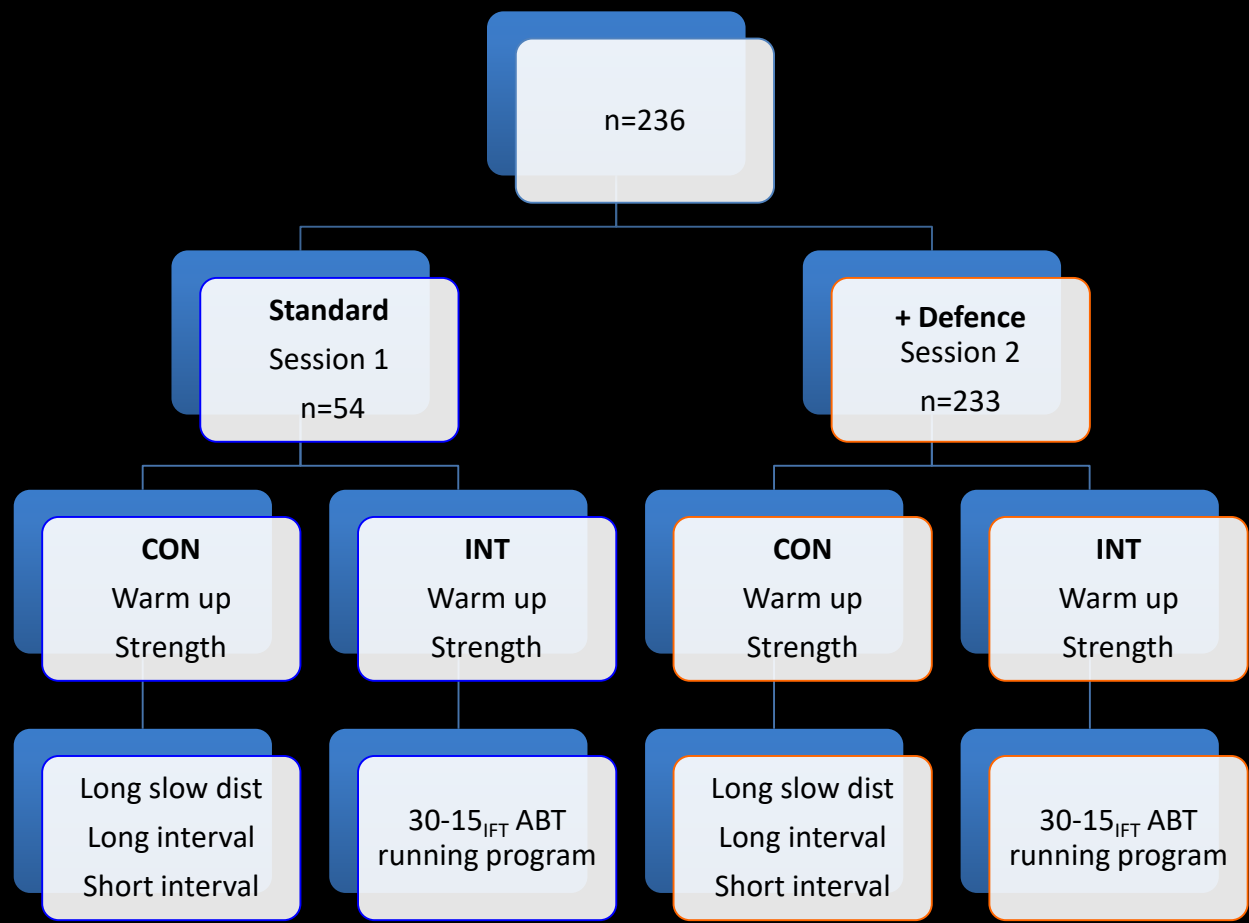
Ability Based Training

- Study investigating whether an ABT program derived from the 30-15 Intermittent Fitness Test (IFT), would improve the aerobic fitness of police recruits to the same extent as current training processes.



Key Concepts

Ability Based Training





Key Concepts

Ability Based Training

- CG - Long slow distance running: Long interval training (400m): Some short interval training (20m)
- IG – 30-15 Derived metcon program
 - Interval distance=running speed in m/s (score) x % of effort x duration of interval.
 - increased by 2.5% from 90% in Week 1 to 97.5% in Week 4 then 92.5% in Week 6 to 100% in Week 9
 - Each cycle = 10s on: 10s off for 6 mins
 - Cycles: Weeks 1-4 = 2 cycles with 2 min rest between: Weeks 6-9 = 3cycles with 3 mins rest between



Key Concepts

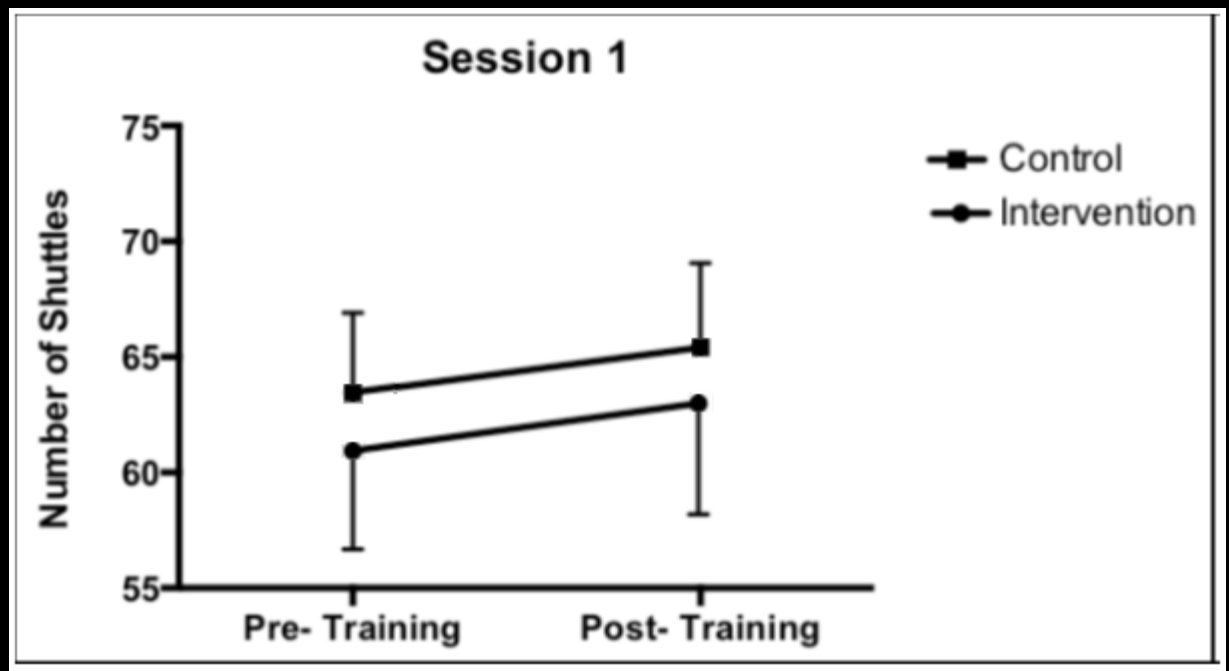
Ability Based Training

Session		Subjects		30-15 _{IFT} (Score) M(SD)	MSFT (# Stages) M(SD)
		Male n	Female n		
Session 1	Control	20	5	16.36 (1.71)	8.2 (1.68)
	Intervention	14	6	16.56 (2.10)	8.3 (1.78)
Session 2	Control	59	37	16.62 (1.63)	8.2 (1.49)
	Intervention	59	36	16.45 (1.71)	7.9 (1.60)



Key Concepts

Ability Based Training



No significant improvement Control pre vs post, $p=0.476$

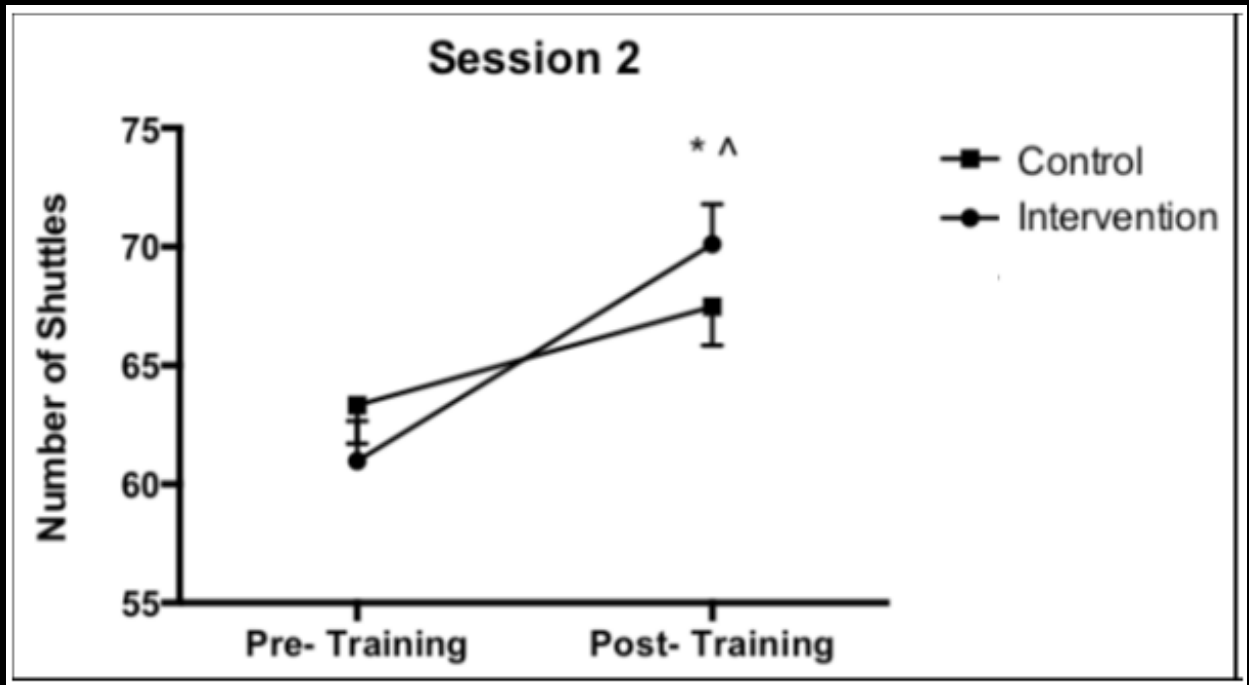
No significant improvement Intervention pre vs post, $p=0.493$

No significant difference between Control and Intervention post training, $p=0.09$



Key Concepts

Ability Based Training



* $p < 0.0001$ Control pre vs post ^ $p < 0.0001$ Intervention pre vs post



Key Concepts

Ability Based Training

- Recruits who did the ABT maintained/improved aerobic fitness comparable to their standard physical training counterparts
- Injury rates were lower in ABT groups
- ABT groups performed significantly less mileage, were running for less time and arguably trained for the required demands of their occupation (intermittent)
- Saved time ... NB for time poor tactical athletes



Key Concepts

Maximal Activity

- How do you keep everyone involved with limited equipment?
- How do you reduce wasted time?
- Can again add a plateau effect if fitter participants finish first then have to wait for other less fit participants.





Key Concepts

Maximal Activity

- Consider a LSD run
 - Both running at 75% PMHR
 - Fitter finish first and then wait, less fit take longer – are working within their training threshold for longer = Increase potential for injury for the less fit and detraining for the more fit





Key Concepts

Command and Control

- With many moving bodies, there is a need to always be able to control a large group...sometimes very quickly





Key Concepts

Command and Control

- Command position: Make sure you can see everyone ...ALL of the time





Key Concepts

Command and Control

- Words of Command: Use words to coordinate movement in a controlled fashion





Key Concepts

Return Activity

- Can be useful to increase specific components/skills or add intensity





TACTICAL STRENGTH & CONDITIONING AUSTRALIA

Practical Applications



EVIDENCE BASED . TACTICALLY TESTED . OPERATIONALLY PROVEN



TACTICAL STRENGTH & CONDITIONING AUSTRALIA

Files

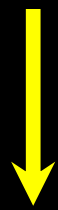


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TACTICAL STRENGTH & CONDITIONING AUSTRALIA

Ranks

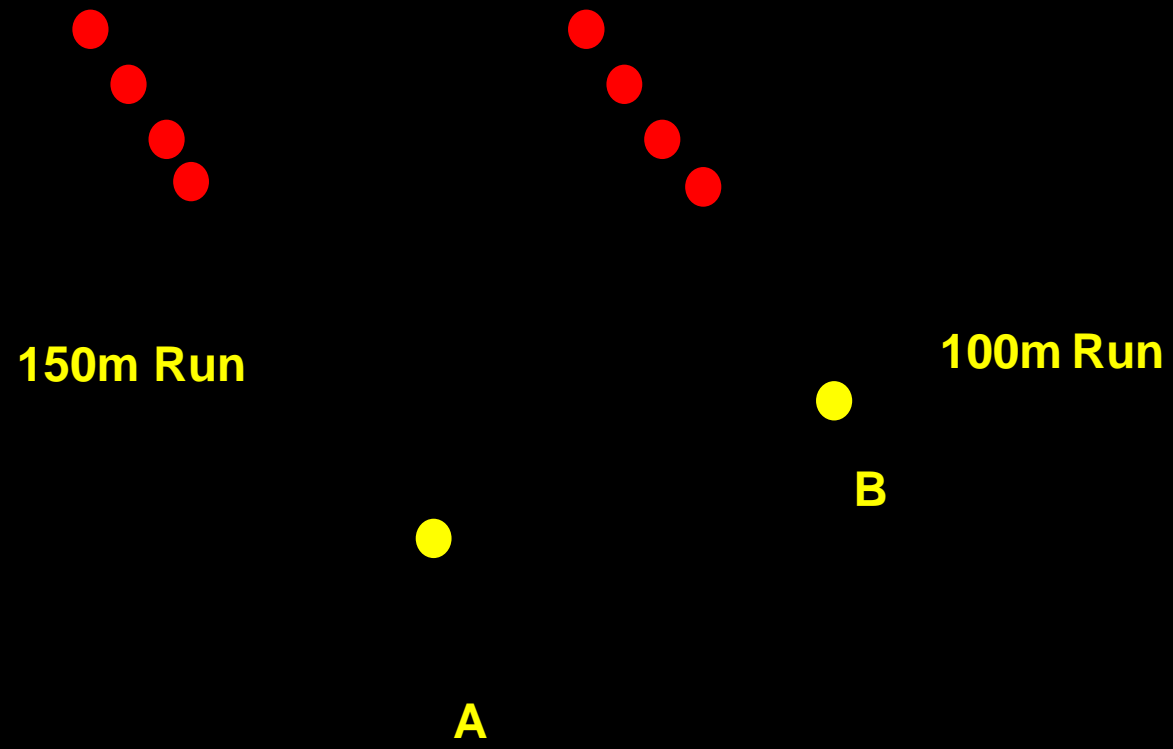


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TACTICAL STRENGTH & CONDITIONING AUSTRALIA

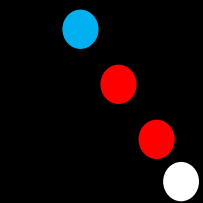
ABT -Interval



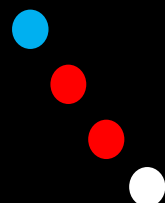


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ABT -HIIT



150m Run



100m Run



A

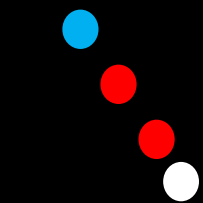


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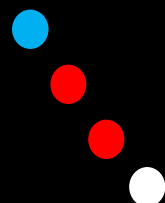


TACTICAL STRENGTH & CONDITIONING AUSTRALIA

ABT -HIIT



150m Run



100m Run



A

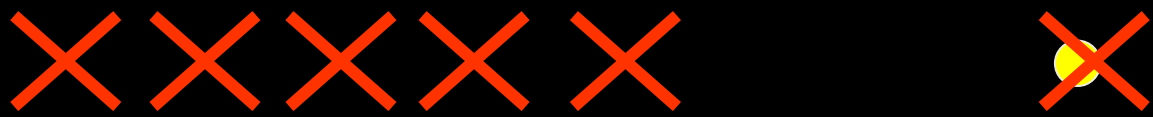


B



TACTICAL STRENGTH & CONDITIONING AUSTRALIA

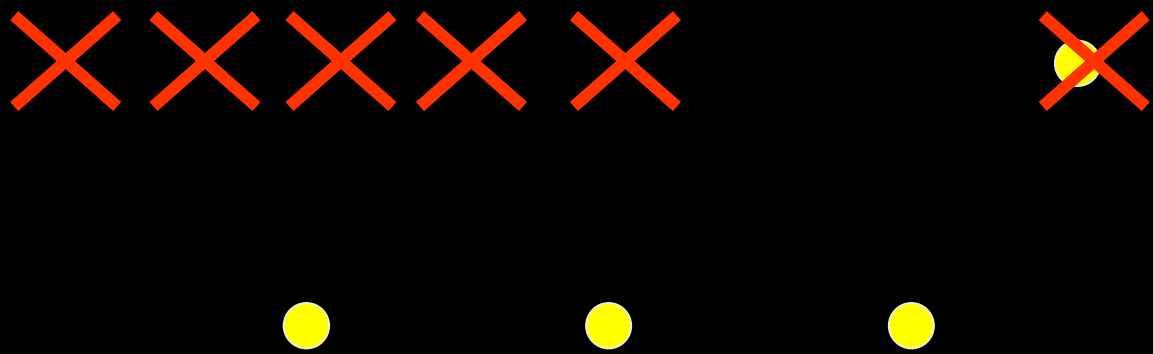
ABT – Interval – Active Recovery





TACTICAL STRENGTH & CONDITIONING AUSTRALIA

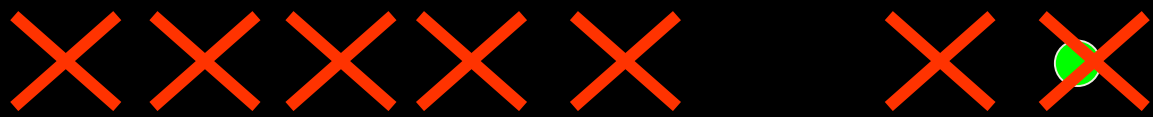
ABT –Interval – Return Activity





TACTICAL STRENGTH & CONDITIONING AUSTRALIA

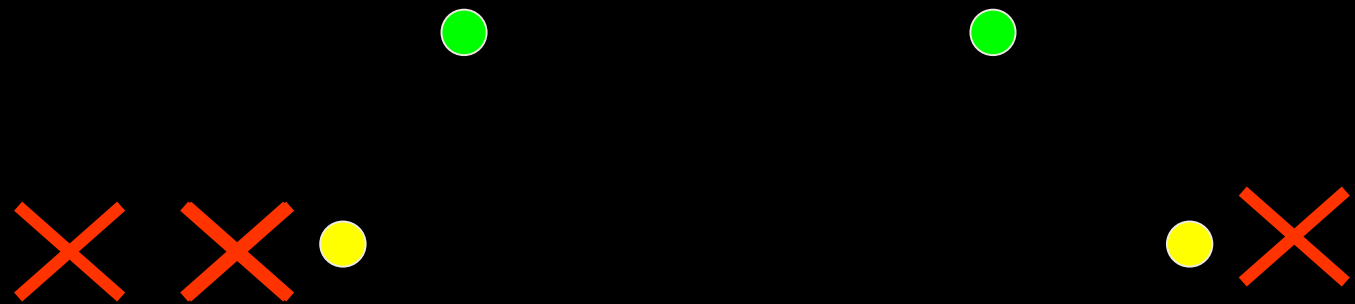
ABT –Interval – Return Activity





TACTICAL STRENGTH & CONDITIONING AUSTRALIA

ABT – Increased Distance





TACTICAL STRENGTH & CONDITIONING AUSTRALIA

ABT – Wind up Drill

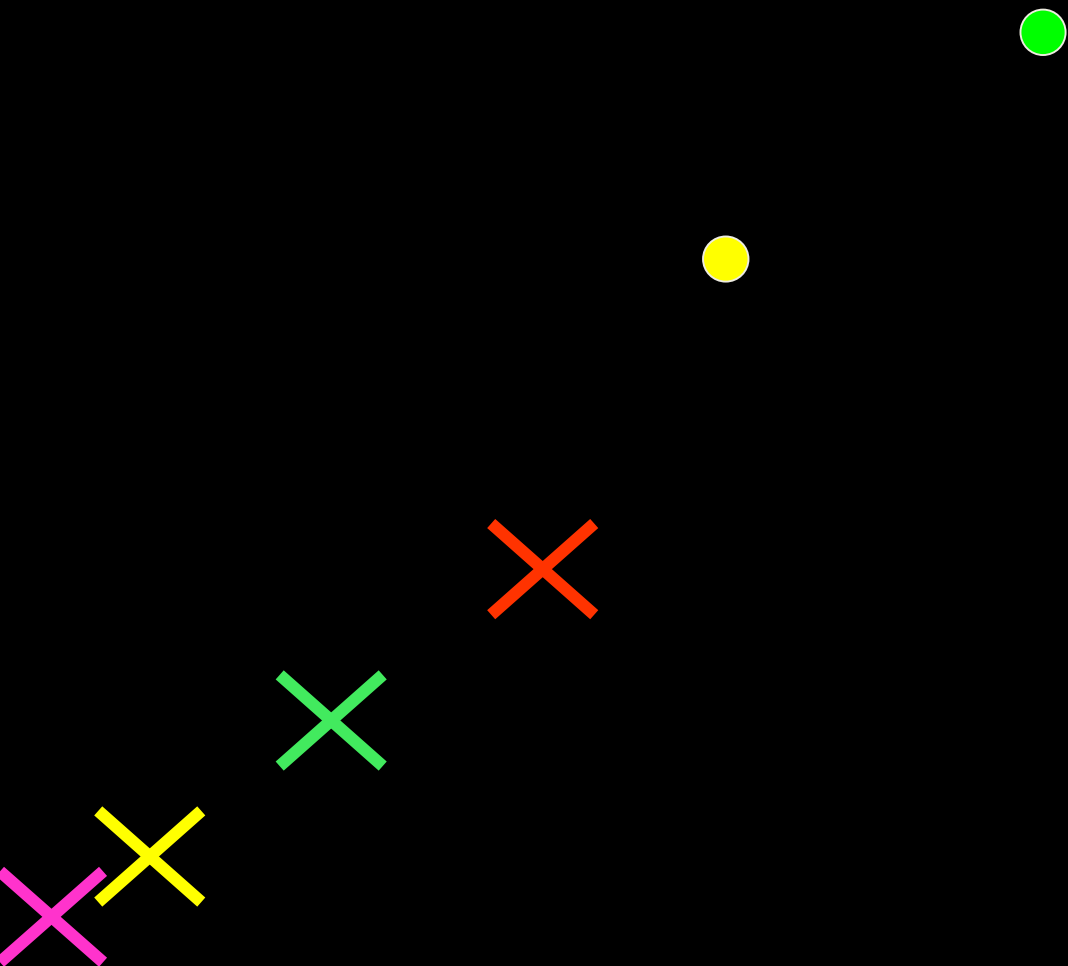


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TACTICAL STRENGTH & CONDITIONING AUSTRALIA

ABT – Wind Up Drill

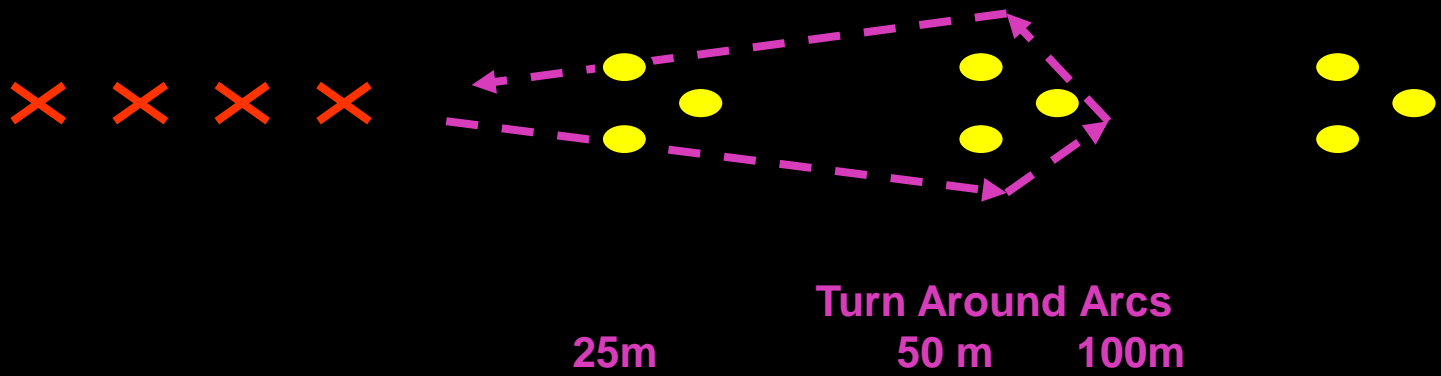


EVIDENCE BASED . TACTICALLY TESTED . OPERATIONALLY PROVEN



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ABT –Interval – Multi Distance



TACTICAL STRENGTH & CONDITIONING AUSTRALIA

ABT – Line run

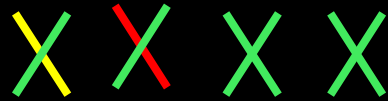


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TACTICAL STRENGTH & CONDITIONING AUSTRALIA

Line run



EVIDENCE BASED . TACTICALLY TESTED . OPERATIONALLY PROVEN



TACTICAL STRENGTH & CONDITIONING AUSTRALIA

Line run

X X X X



TACTICAL STRENGTH & CONDITIONING AUSTRALIA

ABT – Line run

X X X X

X X X X



TACTICAL STRENGTH & CONDITIONING AUSTRALIA

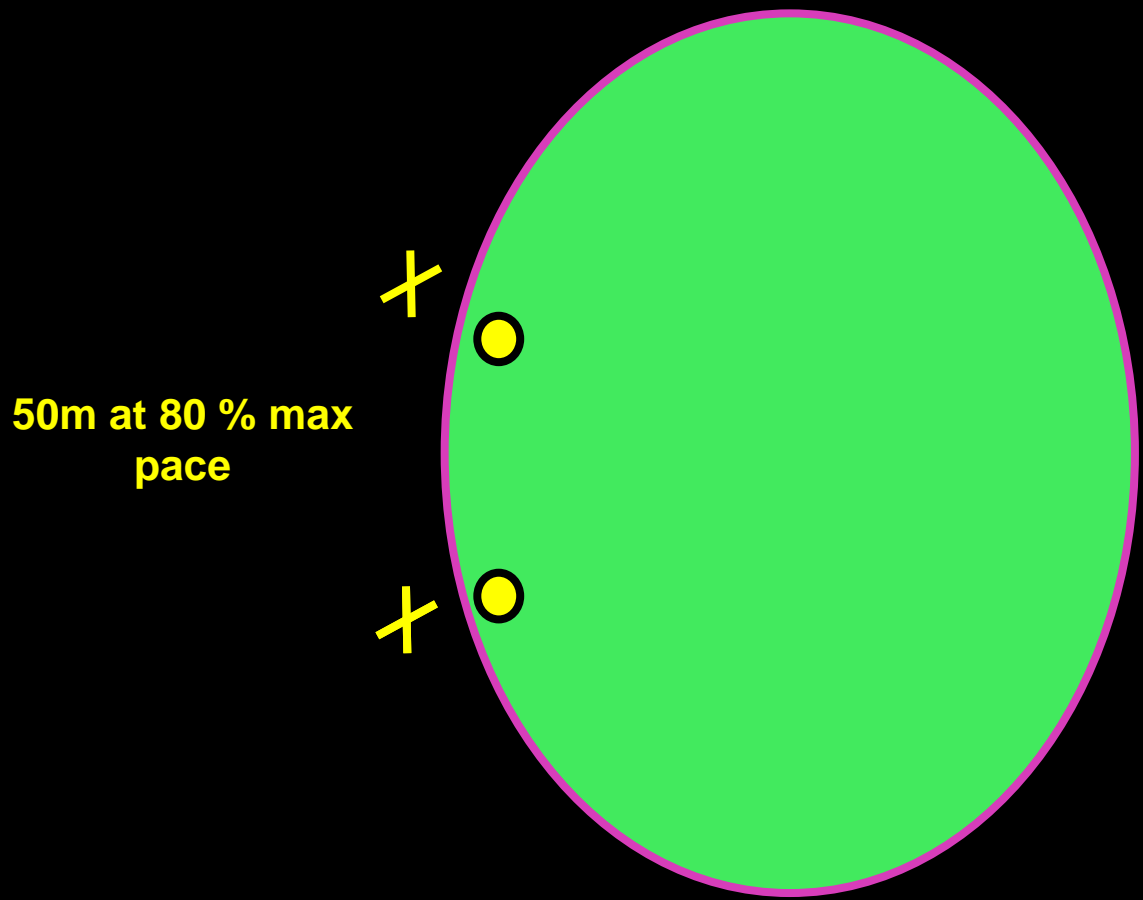
ABT – Line run with Drop Off

X X X X

X



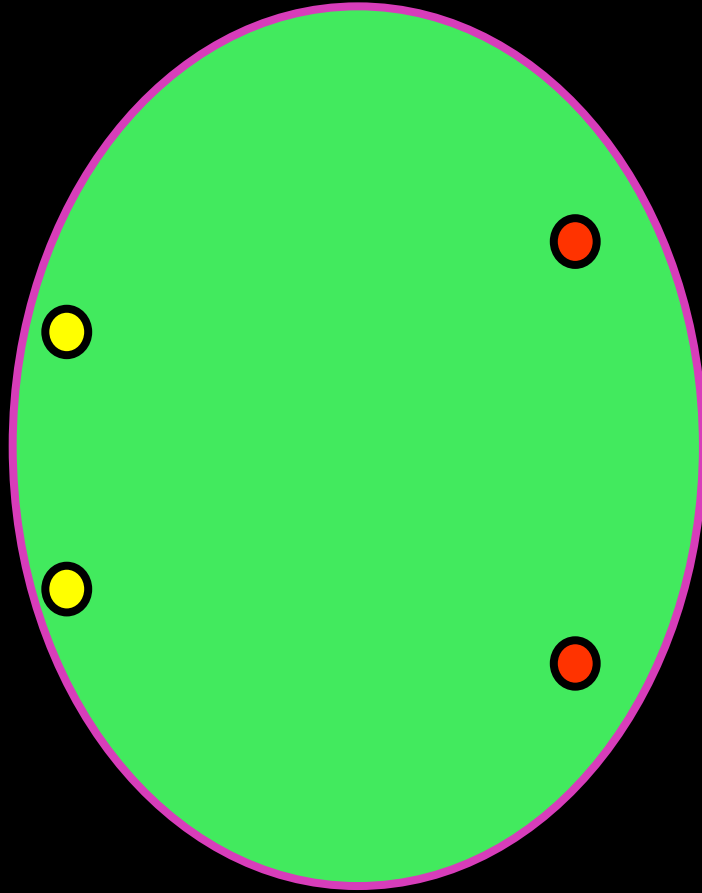
ABT – Fartlek





ABT – Fartlek

**50m at 85 % max
pace**



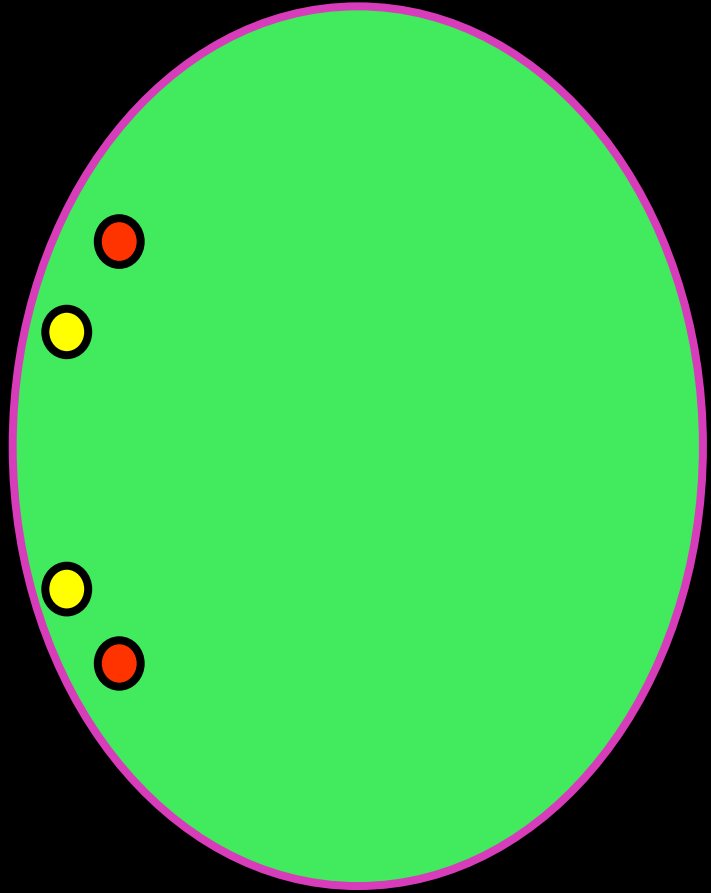
**80m at 70 % max
pace**



ABT – Fartlek

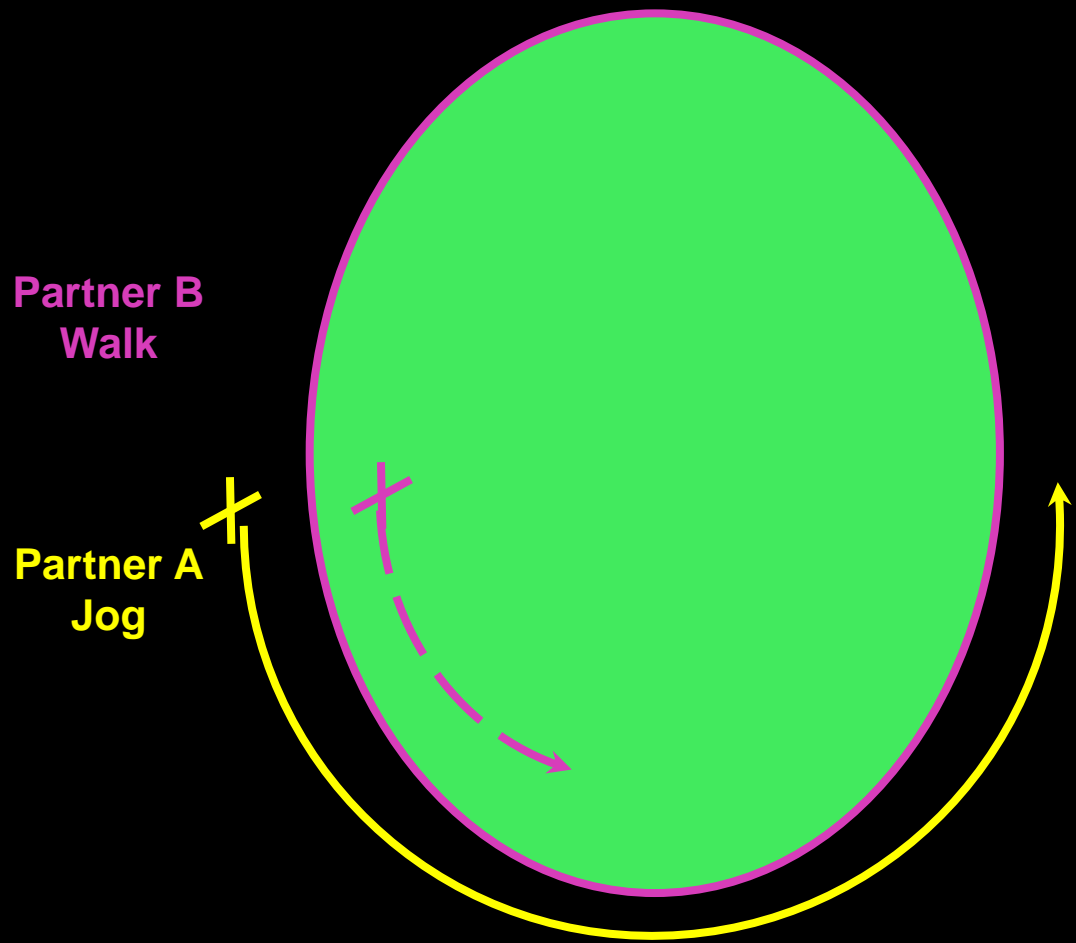
**2. 80m at 70 %
max pace**

**1. 50m at 85 %
max pace**





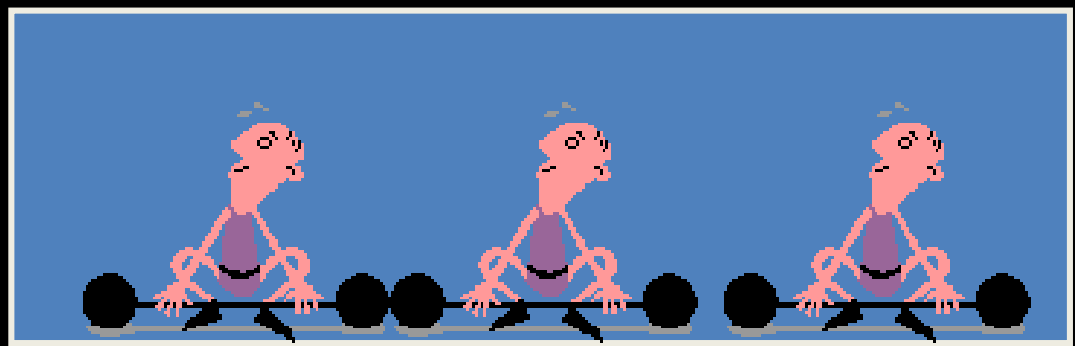
ABT – Partner Fartlek





TACTICAL STRENGTH & CONDITIONING AUSTRALIA

Circuits



EVIDENCE BASED . TACTICALLY TESTED . OPERATIONALLY PROVEN



TACTICAL STRENGTH & CONDITIONING AUSTRALIA

ABT – Linear Circuit

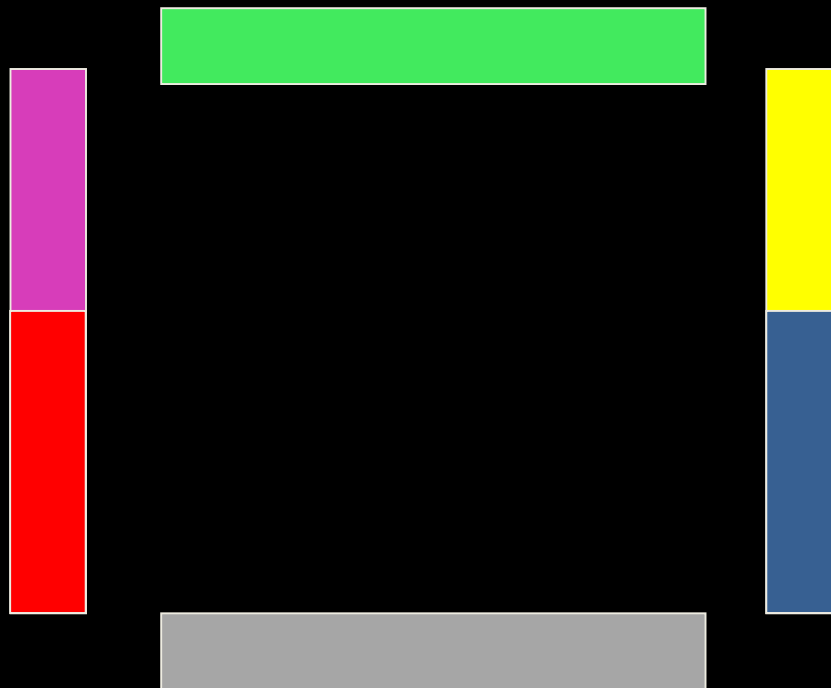


EVIDENCE BASED . TACTICALLY TESTED . OPERATIONALLY PROVEN



TACTICAL STRENGTH & CONDITIONING AUSTRALIA

ABT – Box Circuit



EVIDENCE BASED . TACTICALLY TESTED . OPERATIONALLY PROVEN



References

- Ford, K., Stierli, M. & Orr, R. (2014) Implementation of an ABT program in police force recruits. 3rd International Congress on Soldier Physical Performance, Boston, USA
- Orr, R., & Moorby, G. M. (2006). The physical conditioning optimisation project - a physical conditioning continuum review of the Army Recruit Training Course. Department of Defence. Canberra: AUST.
- Orr, R. (2007). The Royal Military College of Duntroon. Physical Conditioning Optimisation Review Canberra: ACT: Department of Defence.
- Orr, R. (2014). Optimising the conditioning of new recruits. Tactical Strength and Conditioning Conference, San Diego, USA