

Designing and Implementing Effective Workouts

Revisiting the Microcycle & Training Session

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"50% of what we know is wrong; the problem is that we do not know which 50% it is" Tim Nokes, MD, PHD



Where do I go?
What do I do?
Now what?

TOO MUCH - Volume Loading Trap

TOO SOON - Progression & Accumulation

GETTING READY - Warm-up & Preparation

GETTING STRONG - Spectrum Strength

PLANNING - Current Reality

Answer These ?'s

✓Why are you doing what you are doing?

✓What are you doing?

✓When are you doing it?



✓Is what you are doing event like or event specific?

✓Are you making your athletes better or are you just making them tired or predisposing them to injury?

The Goal


At the end of the journey all physical limitations must be eradicated and the athlete is ready technically, tactically, physically and psychologically to compete to win in the competitive arena.

3M + 3P = Training System



“Win the workout”

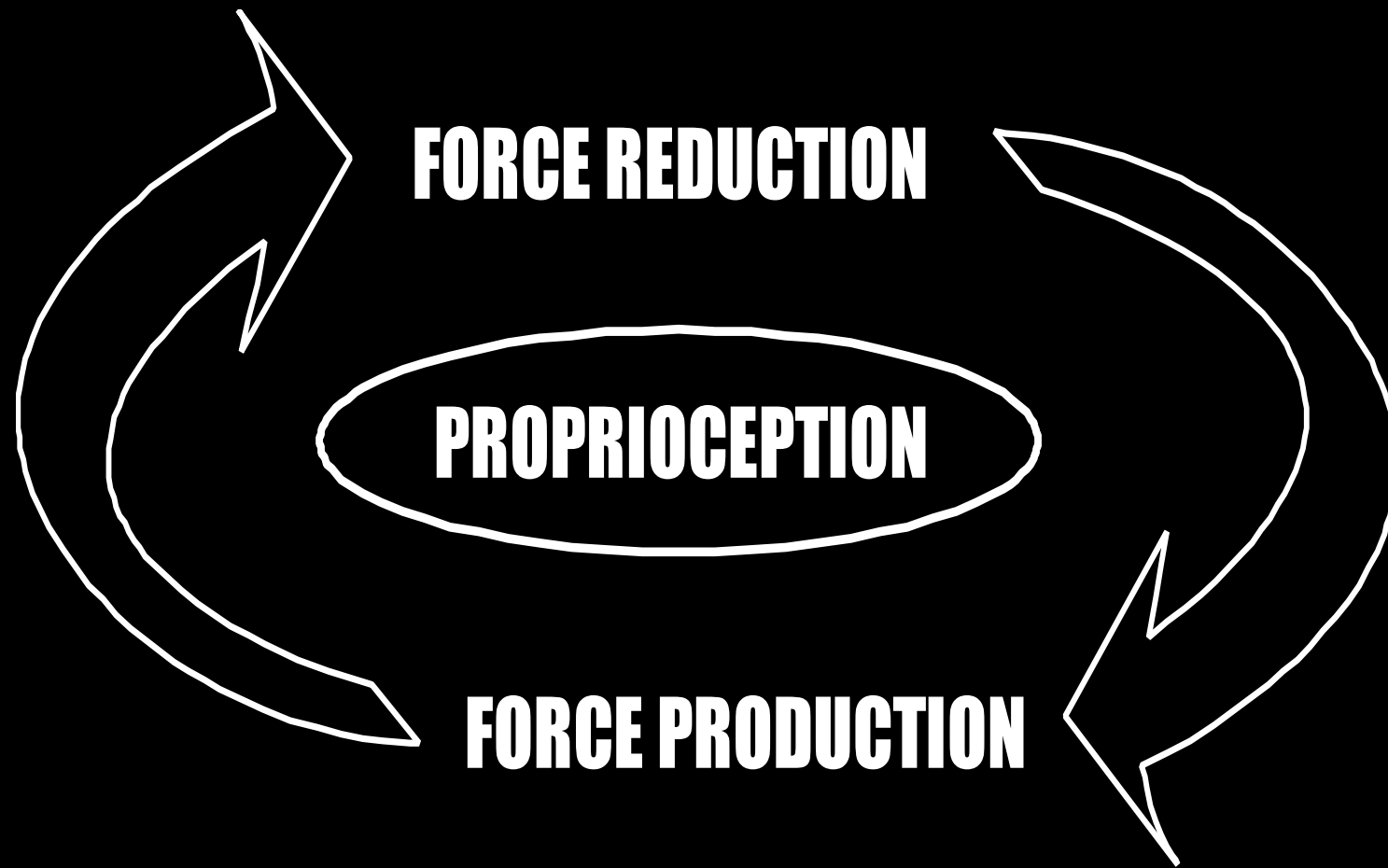
Complexity


Two dancers in black leotards are captured in dynamic, acrobatic poses against a dark background. The dancer on the left is in a high, arched position with one leg extended upwards and arms reaching towards the ceiling. The dancer on the right is in a similar pose, with one leg bent and arms reaching out. The lighting highlights the contours of their bodies, emphasizing the complexity of their movements.

Systems cannot be understood simply by understanding the parts - the interactions among the parts and the consequences of these interactions are equally significant.

The Body's Is Self Organizing!

Don't turn energy systems &
muscles off & on





Anatomical Structure determines
function, this determines exercise selection
and prescription

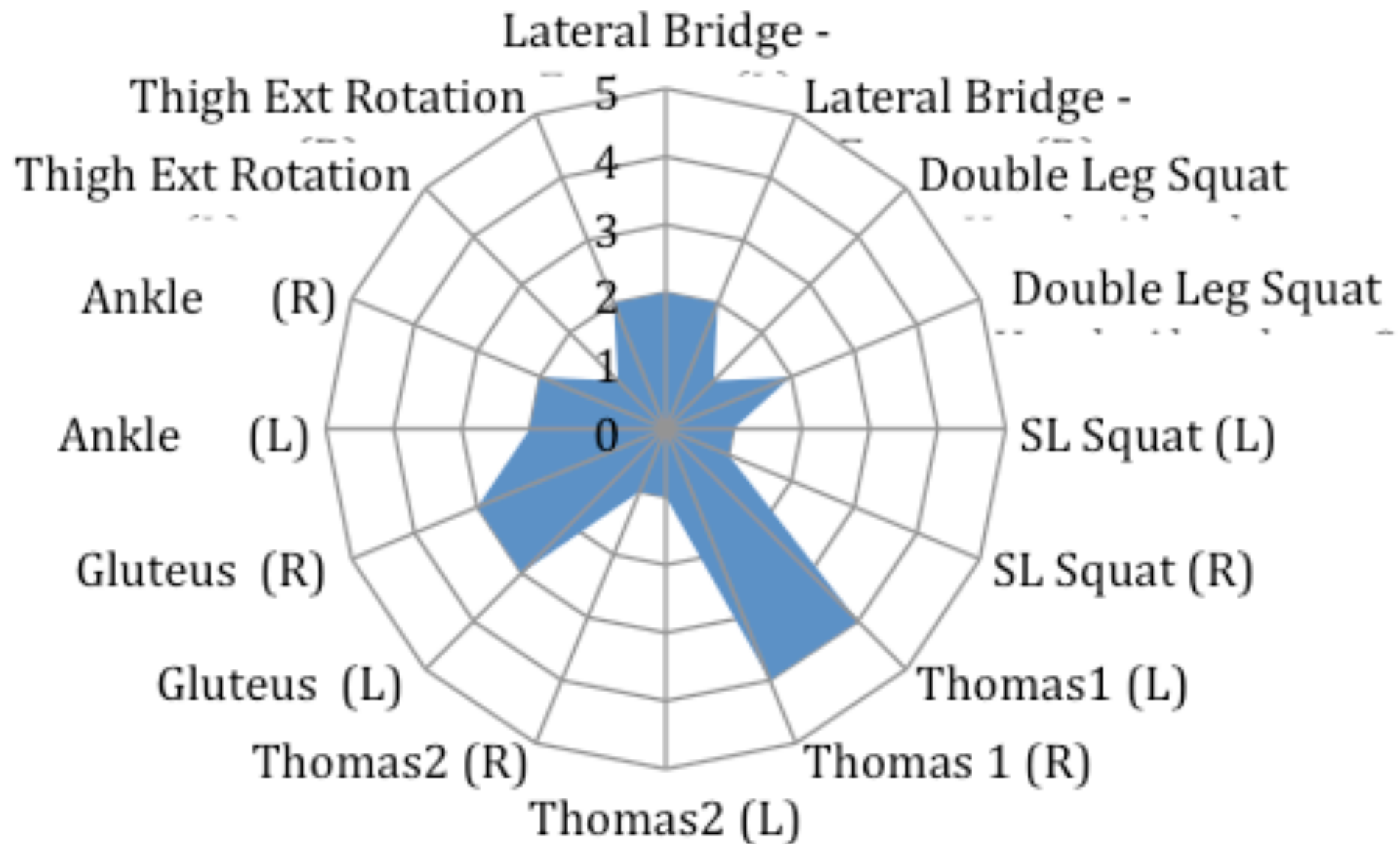
Big for a Reason!

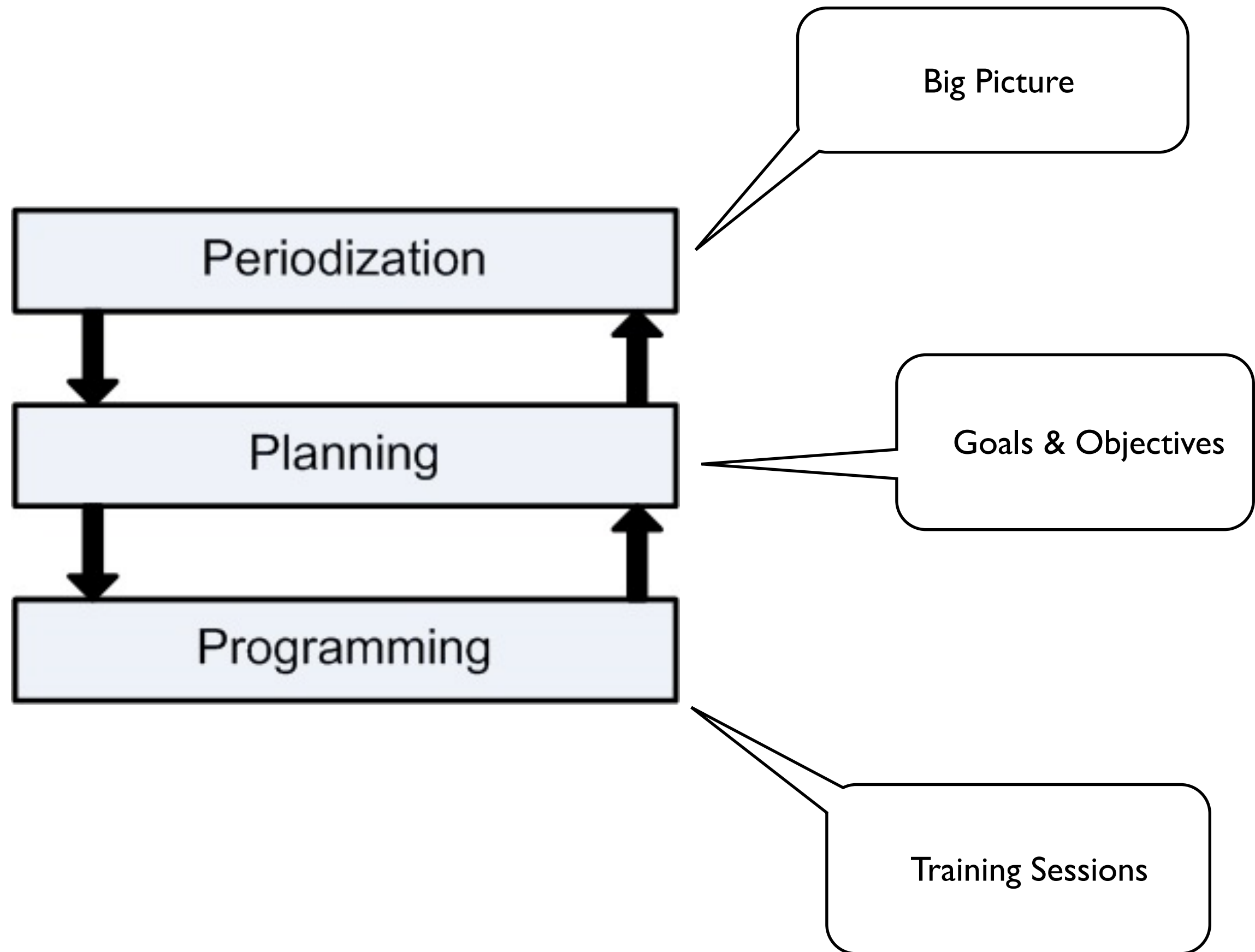
Starting Point

Thorough & Complete PCA



World Class 100m Sprinter

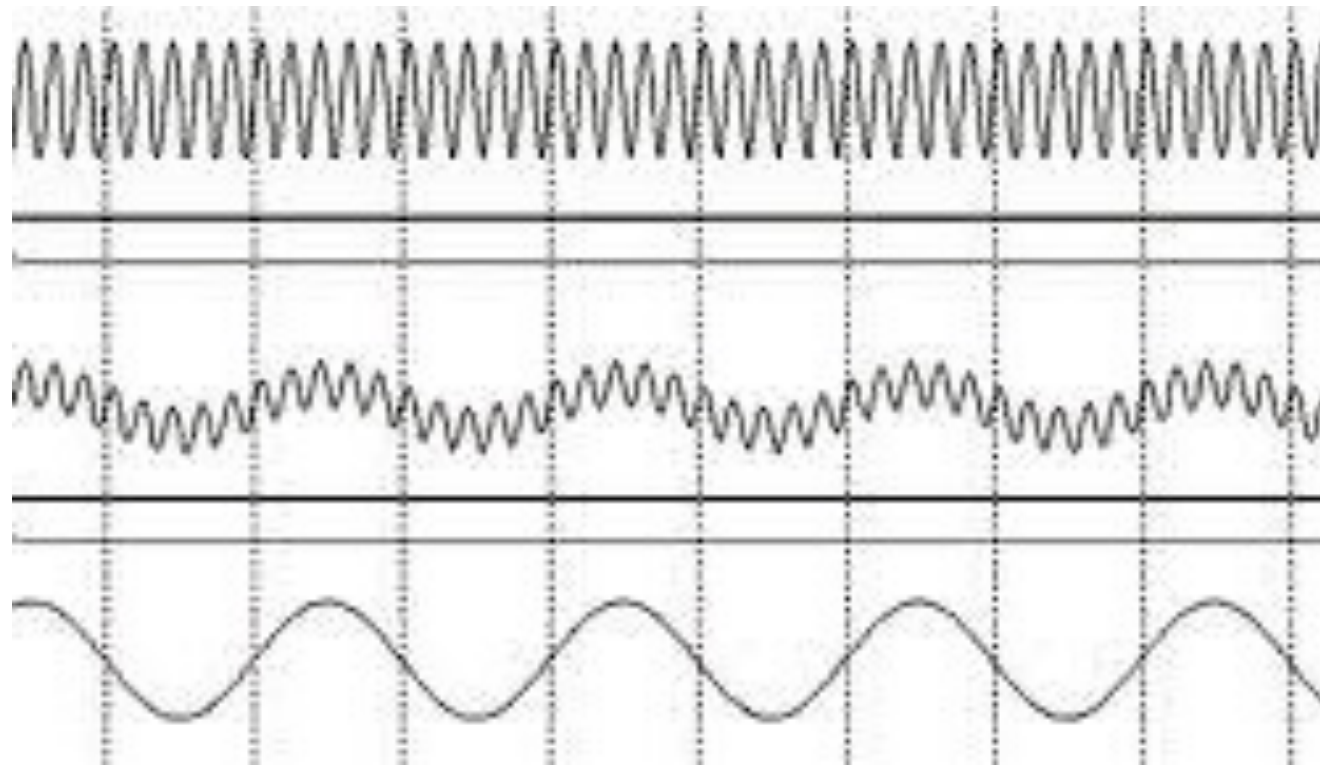




Progression

Fitting pieces
together

Variation



Accumulation



Training Effects

Acute - Those that occur during the exercise

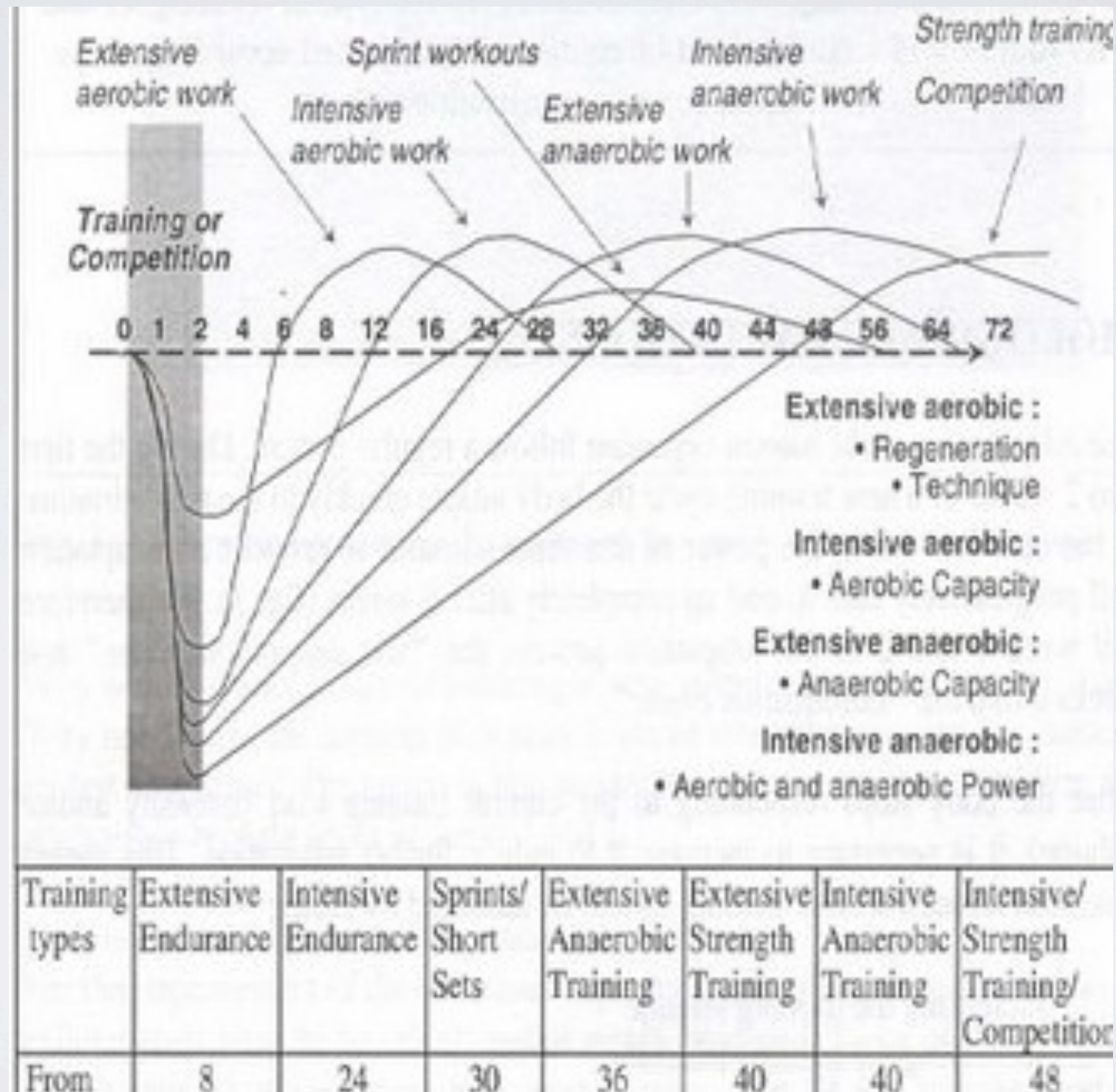
Immediate - Changes from a single workout or training session

Cumulative - Changes from a series of workouts

Delayed - Changes over time

Residual - Retention of changes after cessation of training
beyond a given time period

Continual Adaptation



Adaptation Time

Flexibility - Day to Day

Strength - Week to Week

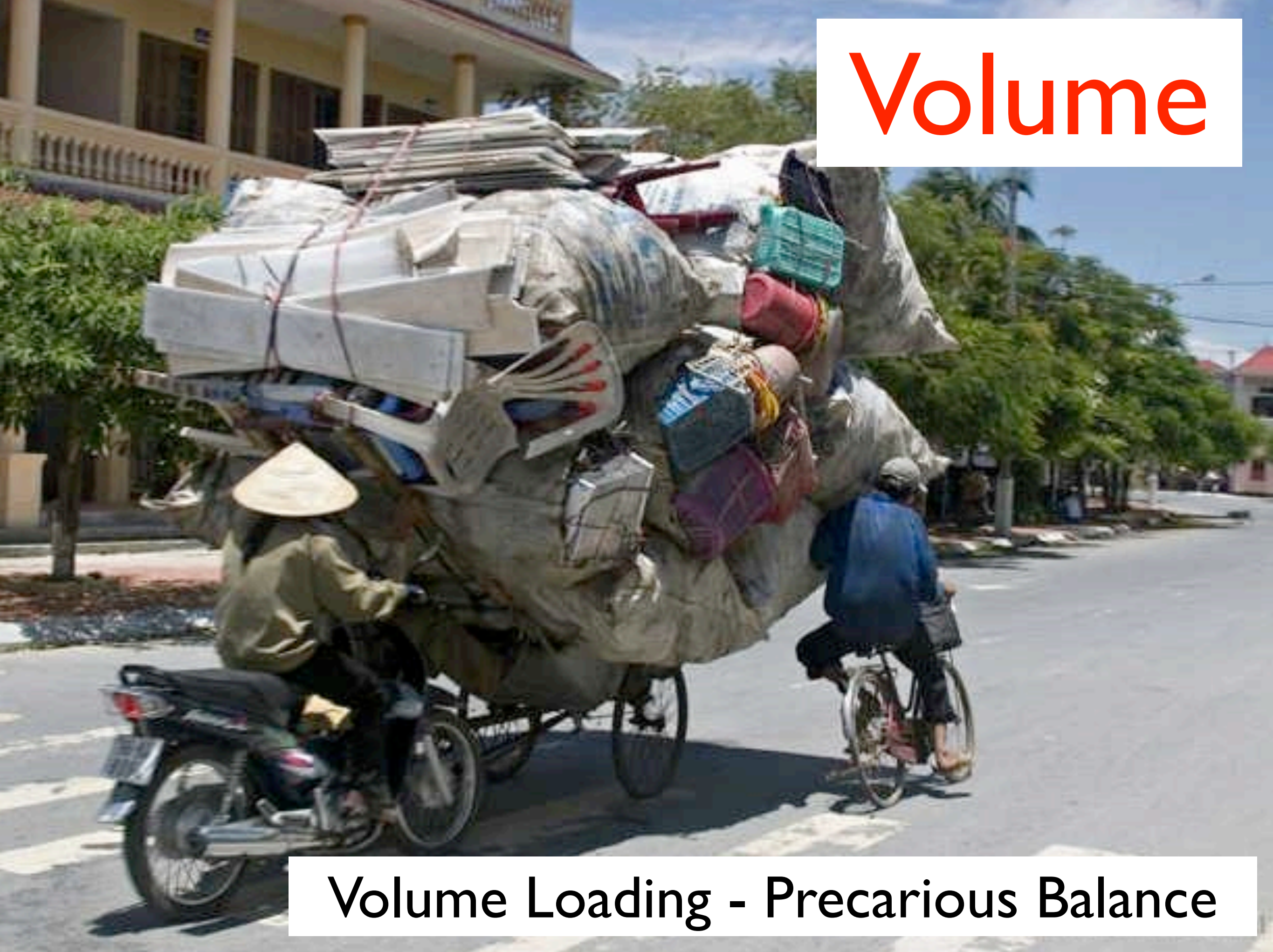
Speed - Month to Month

Work Capacity - Year to Year

Context is King



Volume



Volume Loading - Precarious Balance



Stimulus Threshold

Recoverability

Highly Individual
& Event Specific



Seven Day Microcycle Plan (Single Session)

Goals:		
Preparation	One	
	Two	
Adaptation	Three	
	Four	
	Five	
Application	Six	
	Seven	
Notes:		

Seven Day Microcycle Plan (Multi-Session)

Goals:			
Emphasis	Day	Session	Session
Preparation	One		
	Two		
Adaptation	Three		
	Four		
	Five		
Application	Six		
	Seven		
Notes:			

Seven Day Microcycle Plan (Front Loaded)

Goals:			
Emphasis	Day	Session	Session
Preparation 50%	One		
	Two		
Adaptation 35%	Three		
	Four		
	Five		
Application 15%	Six		
	Seven		
Notes:			

Fourteen Day Microcycle Plan

Block:		Microcycle:	
Goals:			
Emphasis	Day	Session	Session
Preparation	One		
	Two		
	Three		
	Four		
	Five		
Adaptation	Six	REST	
	Seven		
	Eight		
	Nine		
	Ten	REST	
Application	Eleven	Active Rest	
	Twelve	Competition or Testing	
	Thirteen	Competition or Testing	
	Fourteen	Active Rest	
Notes:			

Factors to Consider in Developing a Plan

Qualities of Individual

Speed

Strength/Power

Stamina

Suppleness

Skill

Biological Age v Chronological Age

Injury History

Adaptability/Recoverability

Cognitive Ability

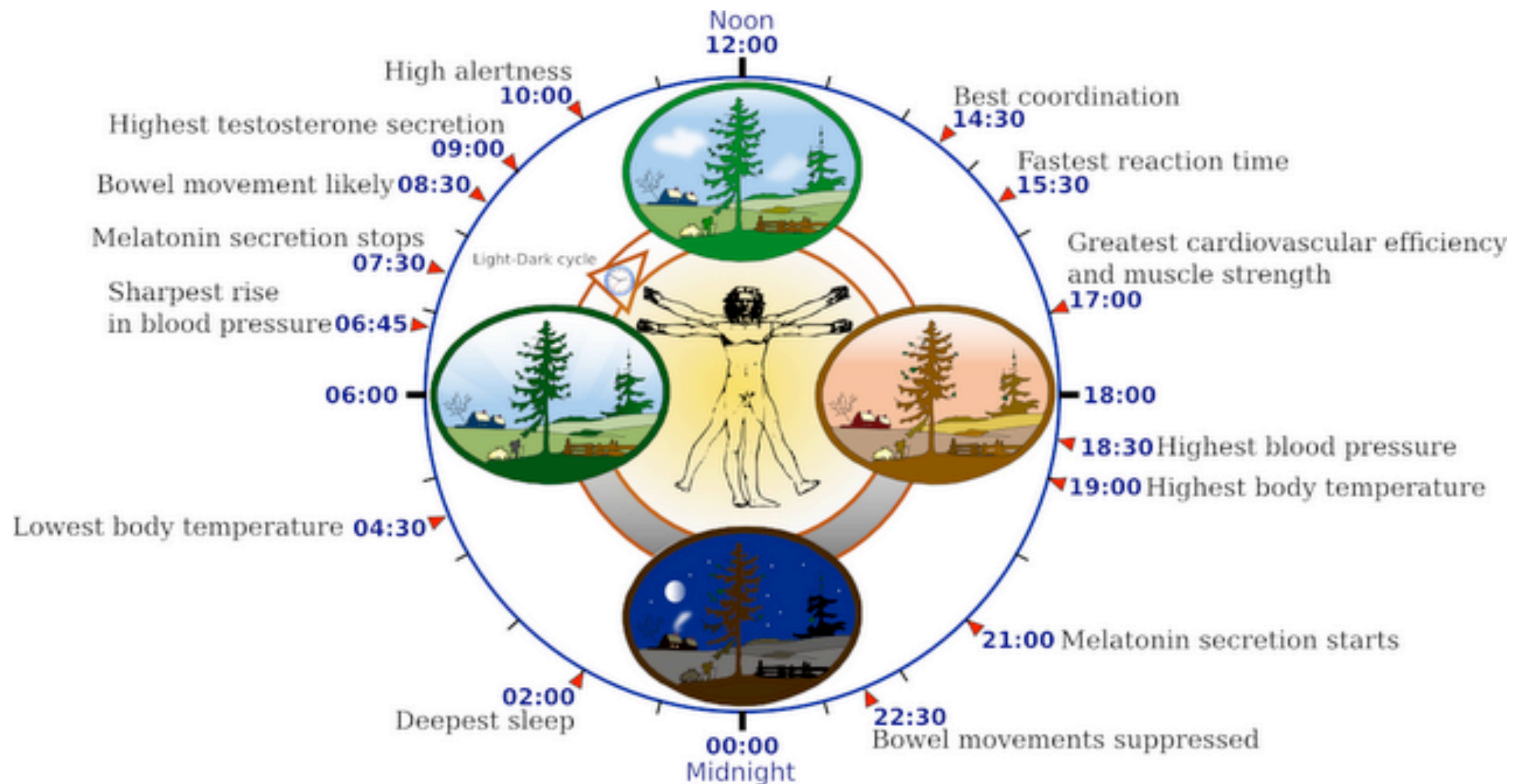
Level of Technical Development



Gender



“24 Hour Athlete”



A close-up photograph of a calendar page. A white, semi-transparent banner is placed diagonally across the center, containing the text "Time frame available to execute plan" in a bold, black, sans-serif font. The calendar itself is a grid with dates. Some dates are in red (3, 10, 17, 24, 1, 8), some in black (1, 2, 9, 16, 23, 30, 6, 7), and some in grey (14, 15, 21, 22, 29). To the right of the date 30, the names "Andreas" and "Anders" are printed. At the bottom right, there is a red dot icon followed by the text "Svensk helgdag/Swedish".

**Time frame available to
execute plan**

Monitoring

What you
see or
think you
see is only
the tip of
the iceberg



Peaking



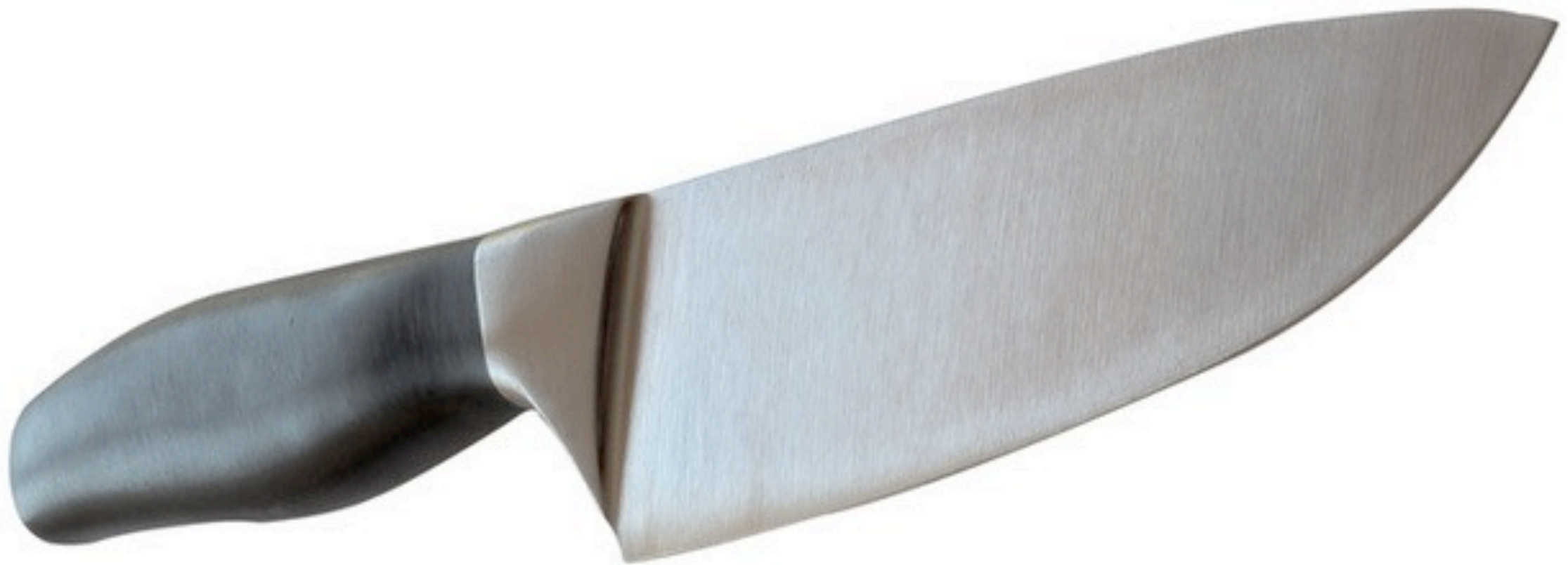
Tapering



Slow Leak



Dulling the Knife



Track & Field competition occurs in an information-rich, dynamic environment that requires complex coordination patterns to produce optimum technique





Give the athlete increasingly
complex movement problems to
solve

Stable/Predictable >>> Unstable/Chaotic

3R's

Routine

Repetition

Refinement

Training Tools



Want to do

Nice to Do

Need to Do

Strength Training

Coordination training with appropriate resistance to handle bodyweight, project an implement, resist gravity and optimize ground reaction forces



Strength Training

Full Range of
Motion

Mindful

Multiple Planes

Multiple Joints

Proprioceptively
Demanding

Doherty Strength Power Index (DPI)

S_{10}	S_9	S_8	S_7	S_6	S_5	S_4	S_3	S_2	S_1
V_1	V_2	V_3	V_4	V_5	V_6	V_7	V_8	V_9	V_{10}

Ask yourself - Where do you perform?

Use DPI as a guide for exercise selection

A woman in a light green t-shirt and black shorts is performing a one-arm snatch in a large gym. She is holding a black dumbbell with her right arm, and her left arm is extended downwards. The gym has a high ceiling with exposed steel beams and large windows. In the background, there are rows of dumbbells on racks and other people working out. A white text box with the word "Pulling" is overlaid on the upper right portion of the image.

Pulling

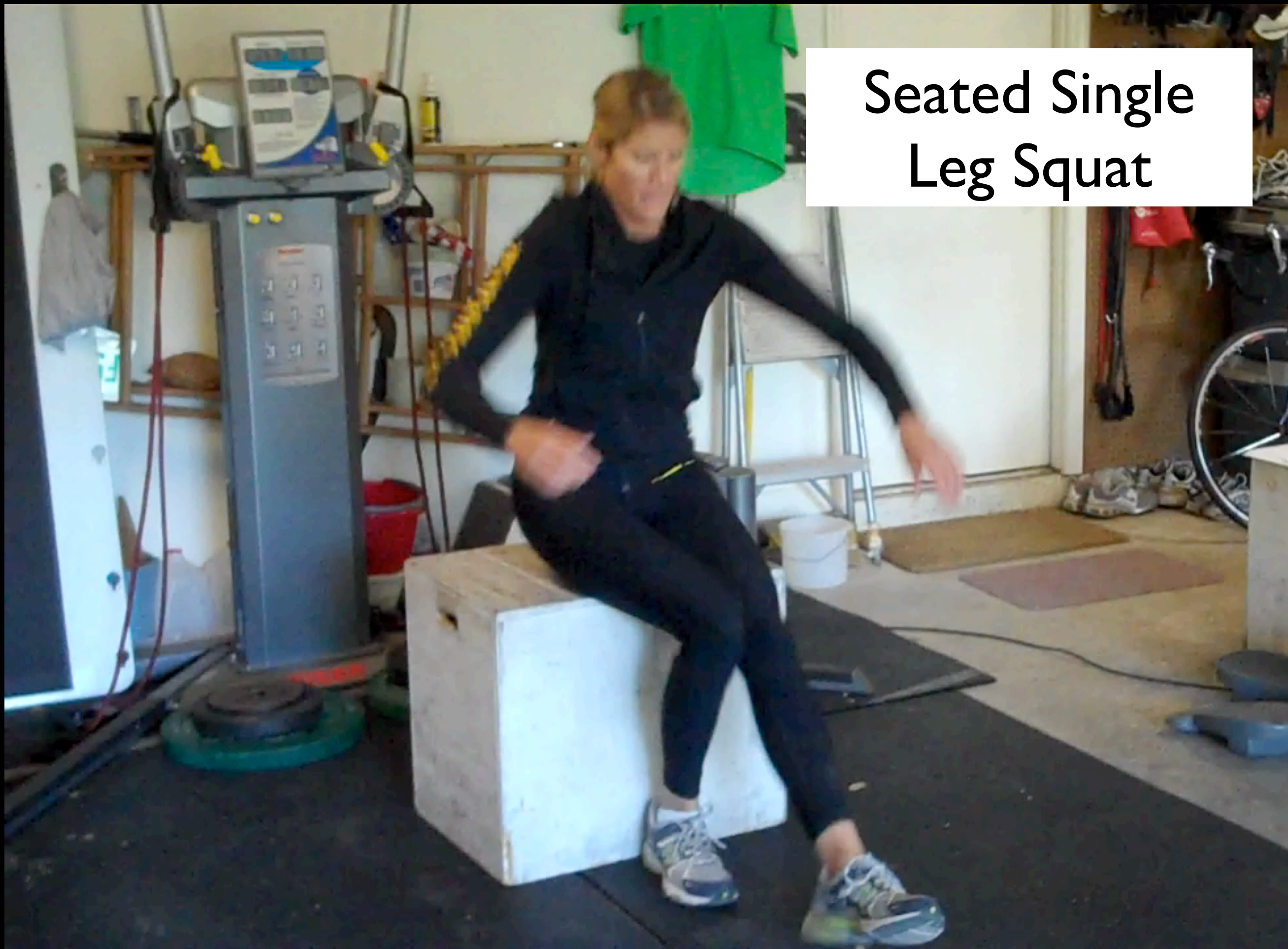
DB One Arm Snatch

Squatting

SLS

Training = Testing
Testing = Training

Seated Single Leg Squat



Squat with Mini Band





Spectrum Squats

#1 - Isometric

#2 - Loaded

#3 - Body Weight

#4 - Ballistic



Lunge & Reach (Anterior)

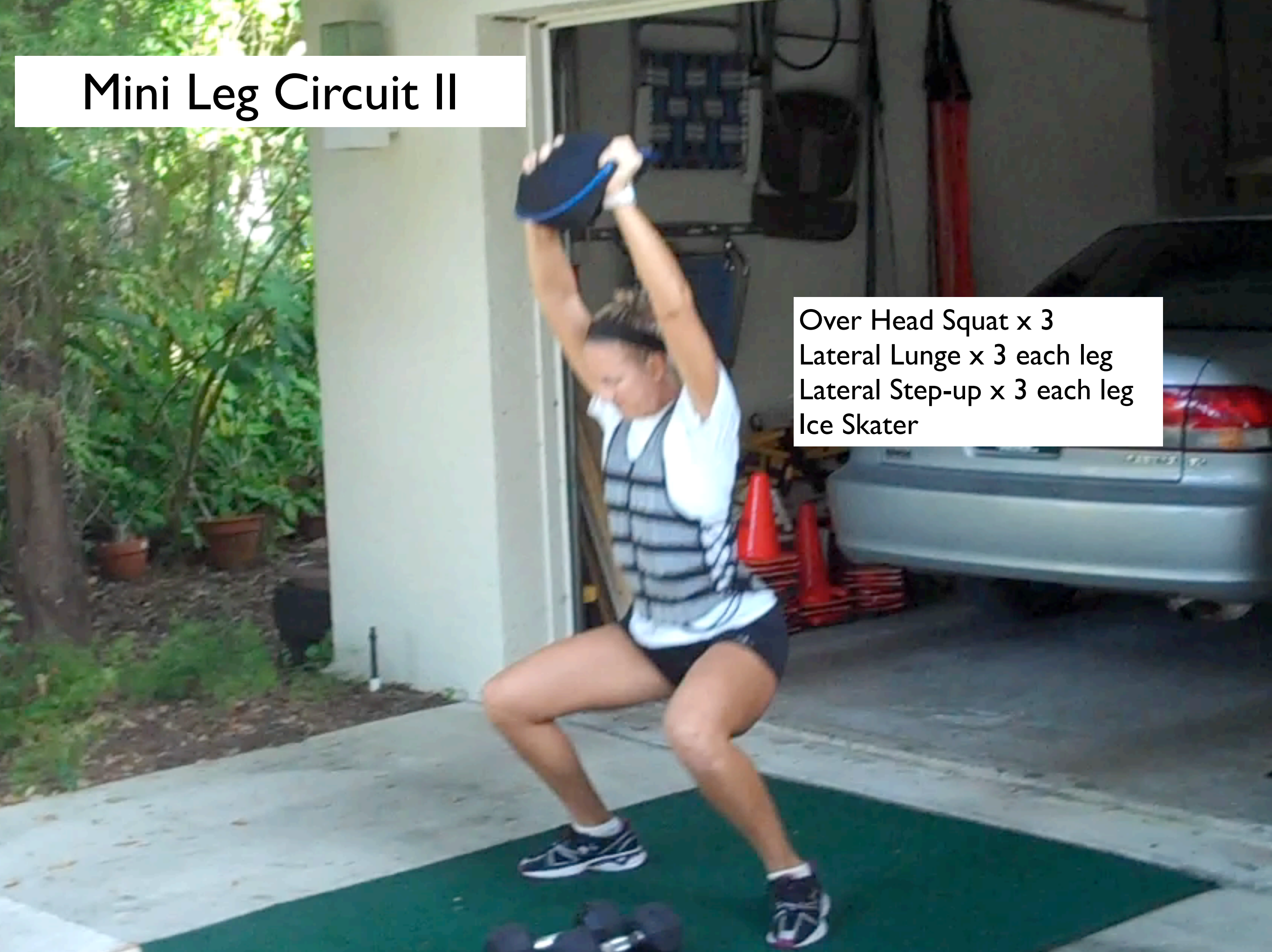


High Step-up



Mini Leg Circuit II

Over Head Squat x 3
Lateral Lunge x 3 each leg
Lateral Step-up x 3 each leg
Ice Skater



Bosch Exercises



Hurdles

When

How

Where



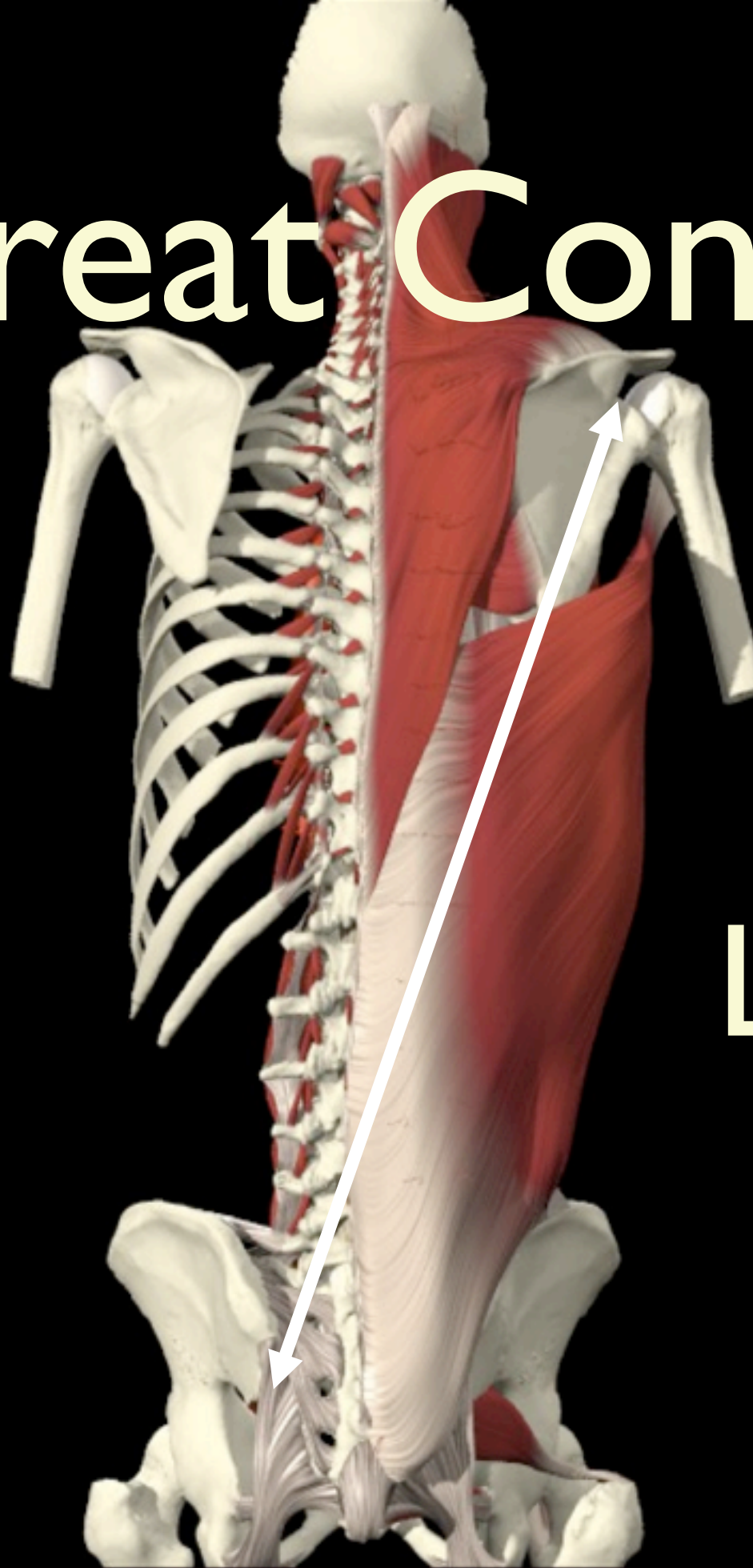
Overs

Unders

The Great Connector

Strengthen

Lengthen



Linkage





Core Training



On Your Feet



Patterns

Bracing



All Training is
Core Training



Get out of the sagittal plane!

Rotate

Rotate

Rotate

Flexibility

Mostability

The correct amount of motion, at the correct joint, in the correct plane, at the correct time



Remediate - “Re-abilitate” Daily

FUNdamental Work
Posture (Dynamic)

Balance

Coordination

Why FUNdamental Work?

Sedentary Lifestyle

One Sided (Biased) Training

Poor General Fitness Background

Warm-up & Preparation

1) Mini Band Routine (Band above ankles)

Sidestep Walk - Forward/Back Carioca Monster Walk

2) Balance & Stability

Single Leg Squat (Hold each position five counts)

Straight Ahead Side Rotation

3) Basic Core – Walking Forward & Back (3 Kg Med Ball)

Wide Rotation x 20 Tight Rotation x 20 Side to Side x 20

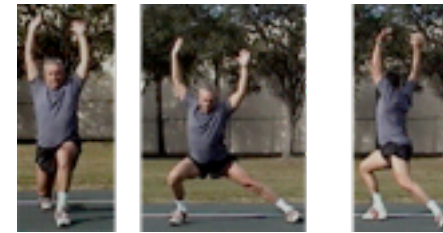
Chop to Knee x 20 Figure 8 x 20

4) Lunge & Reach Series(2 reps in each plane – Forward/Side/Rotational)

Reach Up Reach Out & Down Reach Across

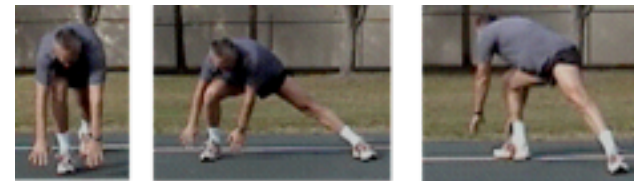
5) Crawls

Jack Knife Crawl x 5 Creepy Crawl x 5



5) Active Stretch (No more than two minutes)

Calf Hamstrings Psoas/Lats Pecs



6) Coordination (All @ 30 meters x 2)

Skip

Crossover Skip

Side Step

Carioca

Backward Run

High Skip

High Skip with Rotation



7) Accelerations

4 - 6 x 40 to 60 meters

Hip Series

Hip Series One – Standing

Standing #1



Lift one leg in front and move up and down. Repeat with the other leg.

Standing #2



Lift one leg to the side and move up and down. Repeat with the other leg.

Standing #3



Lift one leg behind and move up and down. Repeat with the other leg.

Standing #4



Move the leg up and down. Repeat with the other leg.

Hip Series Two – Kneeling

Kneeling #1



Extend the opposite leg to the front and move it up and down.

Kneeling #2



Extend the opposite leg to the side and move up and down, repeat with the other leg.

Kneeling #3



Extend the opposite leg behind the body and move it up and down, repeat with the other leg.

Hip Series Three – Supine

Supine #1



While lying on the floor, fold legs over the body and raise the hips up and down.

Supine #2



Raise one leg with the knee bent. While lying face up on the floor, bring the body up in the arch position. Move hips up and down while holding the leg in position. Repeat with the other leg up.

Supine #3



Supine 3A&B

One leg against the wall and the other leg raised with the knee bent.

Move the hips up and down while holding the leg in position. Repeat with the other leg.

Supine #4



While lying face up on the floor, move the hips up and down.

Support on the shoulders, arms and heels.

Hip Drop Series

Hip Drop Series



Forward

Step Down



Stepping Stones



Balance Single Leg Squat with Mini Band

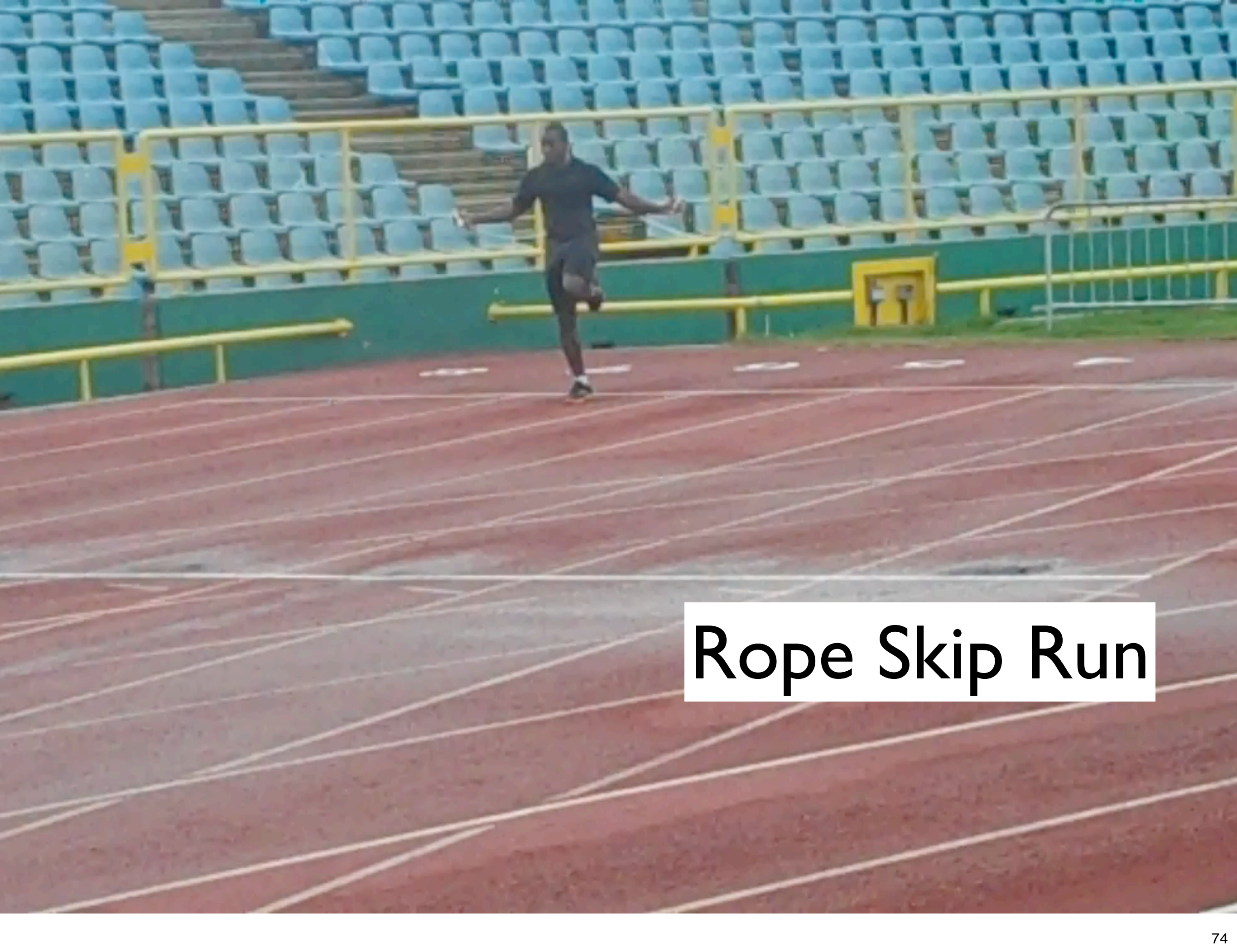


Plyo's



Speed





Rope Skip Run



Stick Run

Testing = Training

Training = Testing

Can't afford to wait for testing
day or competition

Every drill, each rep is an opportunity
to evaluate

Sometimes what you can't
see is more important than
what you can see!



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