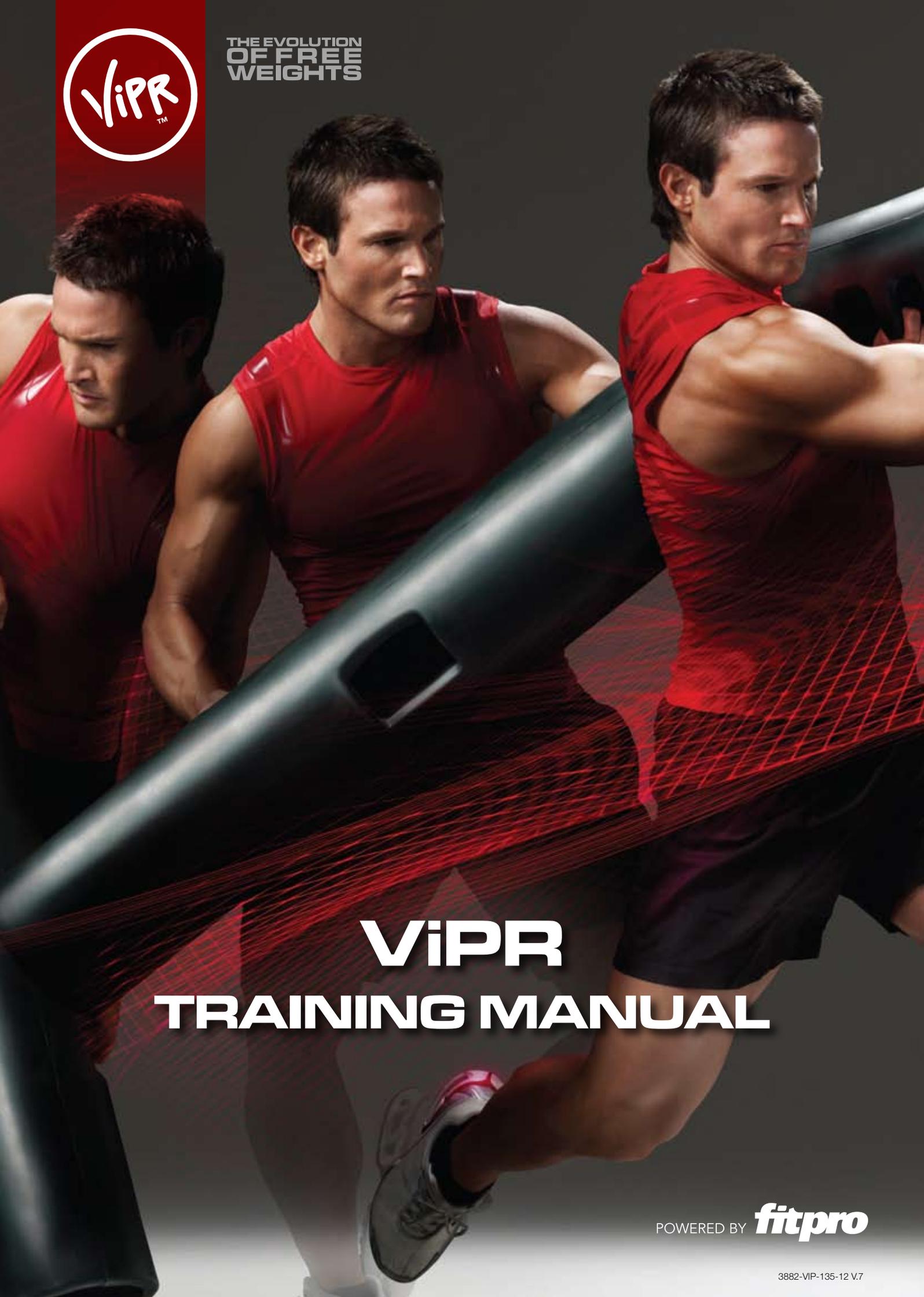




THE EVOLUTION  
OF FREE  
WEIGHTS



# ViPR TRAINING MANUAL

POWERED BY **fitpro**

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# Introduction

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I have been very fortunate in my career. For the past 10 years, I have travelled, shared and learned from many in the fitness industry and in academia. I have seen the start of movements within our trade and experienced paradigm shifts, which have coalesced our industry. The more I understand human design, the more I try in earnest to apply exercises that speak to the fundamentals of human design and operation.

I grew up on a farm and learned that, to be truly effective at getting my chores done, I had to integrate my body as a system. Whole-body integration (WBI) is the result of the lessons learned from watching how strong, stable and balanced farm kids are.

As I began training individuals and groups some time ago, I always felt that there was something missing in my programming. The strategies I was using did not adequately fulfill the goals of training for optimal function in the body. The training tools did not allow for multi-directional training, proper timing or the rhythm of the body, nor did they provide enough load for transfer into life's activities or for life's demands.

ViPR was created from a need to evolve training tools, foster purposeful motion and blend strength training with functional training and movement. Movement is fundamental. And what makes up effective movement is a blend of lifting, shifting and twisting.

**“Live Life in 3V.”**



I thank you for taking the time and effort to understand the concept of ViPR. It is my sincere hope that you enjoy the experience and that you are empowered to use the ViPR to create lasting change. “Experience a rush of energy, pulsing through the body; every moment becomes an awakening. Motion creates emotion. Is our motion fixed, controlled and strained? Or is it free, expressive, joyous and strong? Rhythm is at the heart of everything we do and defines our make-up. Our movements, when rhythmical, become purposeful, fun and liberating. Rhythmical movements are fundamental to our design.”

**Welcome to the ViPR experience.**

**Michol Dalcourt**  
University of Alberta – Exercise Science  
Adjunct professor – University of San Francisco  
Past instructor – School of Health Sciences, NAIT College  
Director – Institute of Motion



## ViPR fundamentals

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**What is ViPR?** ViPR is an acronym for Vitality, Performance, and Reconditioning.

It's about **VITALITY:**

A renewed sense of energy and movement possibility: purposeful and strong.

It's about **PERFORMANCE:**

Performing at the highest level possible, with plenty to spare.

It's about **RECONDITIONING:**

Regaining the power to move effectively and efficiently once more.





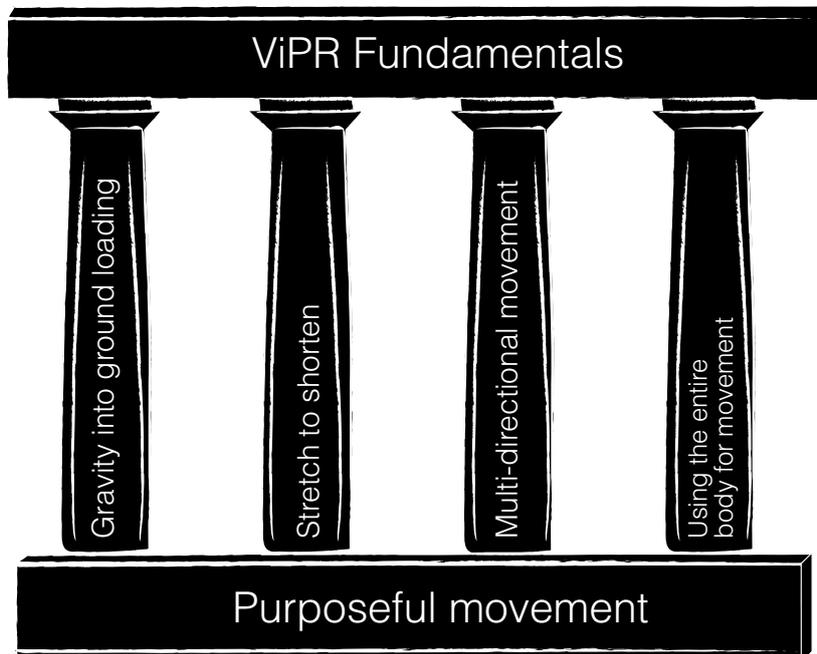
At the heart of ViPR training is the concept of whole-body integration (WBI). There exists an old adage:

**“We are stronger as a whole than the sum of our parts.”**

WBI means that, for every action and movement performed, you are using your entire body to effectively create motion. This is consistent with the fundamental design of the human body. Current research is revealing these truths like never before (see reference list at the end of the manual). Recent anatomy and biomechanical studies have delineated these facts quite clearly. Treating and training movements using the whole body is more effective ... and loading these movements will create accelerated adaptations. ViPR allows movement to be loaded, thus ensuring a positive transfer into life!

## Ground rules

What makes up whole-body integrated (WBI) exercises?

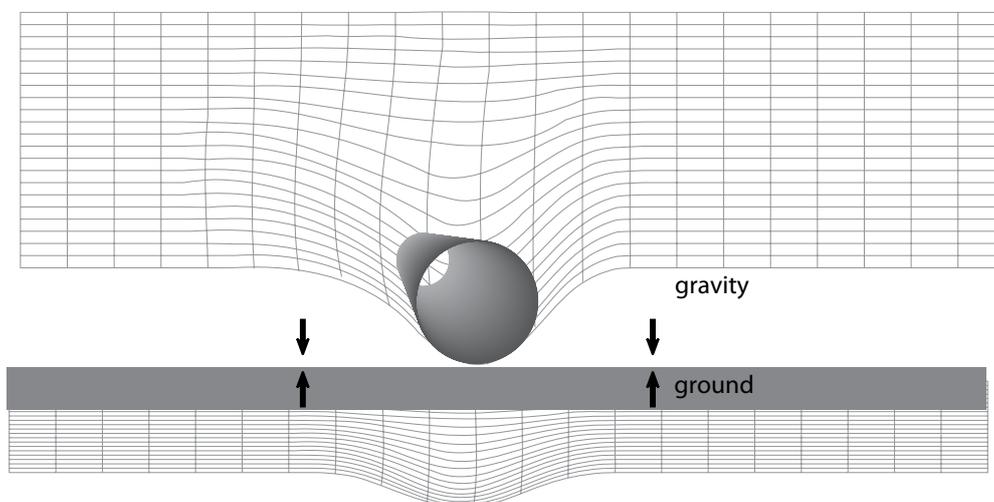


Now, let's examine each of the pillars in more detail.

### **1 Gravity into ground loading**

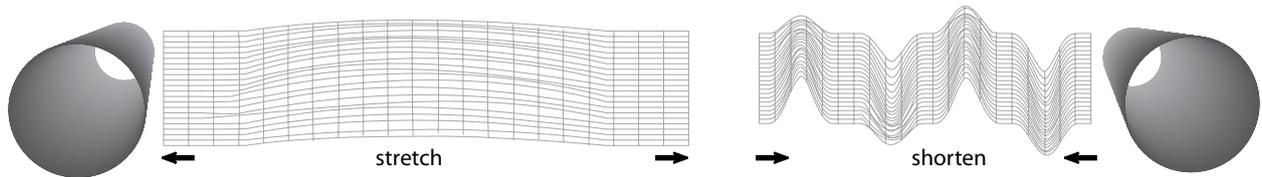
On earth, gravity pulls us down and enables us to make contact with the ground. The body uses the force of gravity and the resistance from the ground to ensure proper motion. This is where the magic happens.

ViPR was designed to act in the same way, using this principle to ensure correct human function.



## **2 Stretch to shorten (i.e., loading to unloading)**

Think of jumping, throwing, running, etc. They all involve stretching before shortening. Jumping involves lowering oneself to the ground before jumping up. Throwing involves stretching in the opposite direction before releasing the ball. Think of your muscles as elastic bands. To get them to work effectively, you must stretch them before they shorten. In all ViPR exercises, there is a rhythmical stretch to shorten (load to unload) which increases the efficiency of movement.



## **3 Multi-dimensional movement**

The human body is designed for multiple dimensions of movement. It is as easy as watching kids at play, athletes in sports or a dancer in the midst of a performance. ViPR allows the freedom to move in multiple dimensions, ensuring a complete and authentic workout.

## **4 Using the entire body for movement**

Human anatomy is unified. The muscular system is an interdependent system that works best when trained together. WBL exercises are at the very core of ViPR.



# Programming



SERIES



EXERCISE



HOLD



FOOTPRINT



HAND  
PRINT



THRESHOLD

<p>To organise the many different exercises that are available for the ViPR user, we have structured them into different 'series'. All of the series encompass the full range of movements that can be utilised with this revolutionary tool.</p>	<p>The exercises using ViPR. This step involves the gross movement patterns with ViPR, in other words what global movement am I doing?</p>	<p>How we would hold/grip the ViPR</p>	<p>Foot stance and/or foot movement while performing the exercises</p>	<p>Arm position and/or arm movement while performing the exercises</p>	<p>Acute variable manipulation:</p> <ul style="list-style-type: none"> <li>• Reps</li> <li>• Sets</li> <li>• Weight</li> <li>• Speed</li> <li>• Range of motion</li> <li>• Complexity of motion</li> </ul>
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## Series

Here is a list of the ViPR exercise categories that we call 'series'. Each of the following series will have a 'variability' component to it, where all footprints and handprints will be performed and manipulated in all three planes.

1. Lifting series
2. Shift series
3. Tilt series
4. Flipping series
5. Carry series



## Exercise

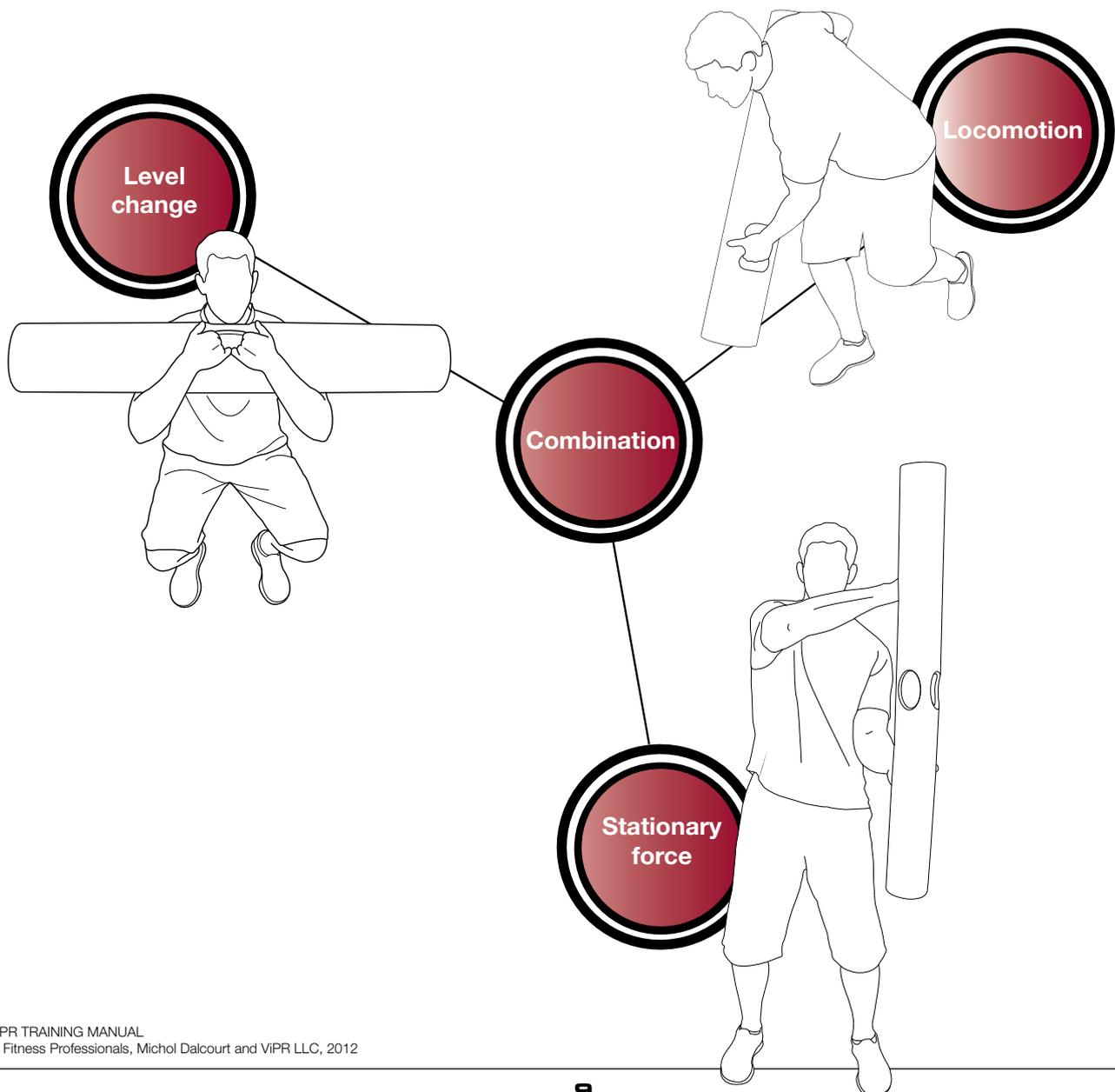
Exercise is defined as a global movement pattern. In other words, what big motion the body is going through. It is important to consider what movements are occurring, so that proper progressions are given.

### Ask yourself these questions:

- Is my participant a beginner or advanced?
- What goal is most important to him/her?
- In what way can he/she move well (i.e., lifting and/or shifting and/or twisting)?

### Here is the list of global movement patterns:

- Level change – (squatting/lunging/bending)
- Locomotion – (walking/jogging/running/shuffling/skipping/hopping/bounding/jumping)
- Stationary force – (pushing/pulling/rotating)
- Combination of movements





*Hold*

### Two-handed grip

Neutral		
Wide (snatch grip)		
Offset	Right	
Offset	Left	

### One-handed grip

Reverse	
---------	---

## One-handed grip

Neutral



## Shovel hold

Neutral

Right



Left



Reverse

Right



Left



Carry		
Front		
Shoulder carry	Right (in grips)	
	Left (in grips)	
Cylinder grip		
On end		
On tube		

# Flip grip

Neutral		
Cross body	One-handed (left)	
	One-handed (right)	
	Two-handed (left)	
	Two-handed (right)	



## **Footprint**

The footprint describes where your feet are positioned and where they are moving to (if the exercise involves foot motions). Adding footprint patterns increases the complexity of the movement, as well as the neural demand. It is important to consider where the feet are and what (if anything) they are doing. For example, I might have my feet stationary in a normal, staggered, wide or narrow stance as I execute the movement. Likewise, I could have my feet moving (sagittal, frontal or transverse) during the exercise in various patterns (i.e., step, lunge, shuffle, skip, hop, etc.)



## **Handprint**

The handprint describes where your hands are positioned and where they are moving to (if indeed the exercise requires hand/arm motions). With different hand motions, there are different muscles that are engaged in the body. It is important to know what forces are imposed and how the body manages them. For example, I might have my hands/arms reaching (in various angulations), rotating and/or moving in various ways as I perform a given exercise.



## **Threshold training: key points to consider with progression/regression**

### **Threshold 1**

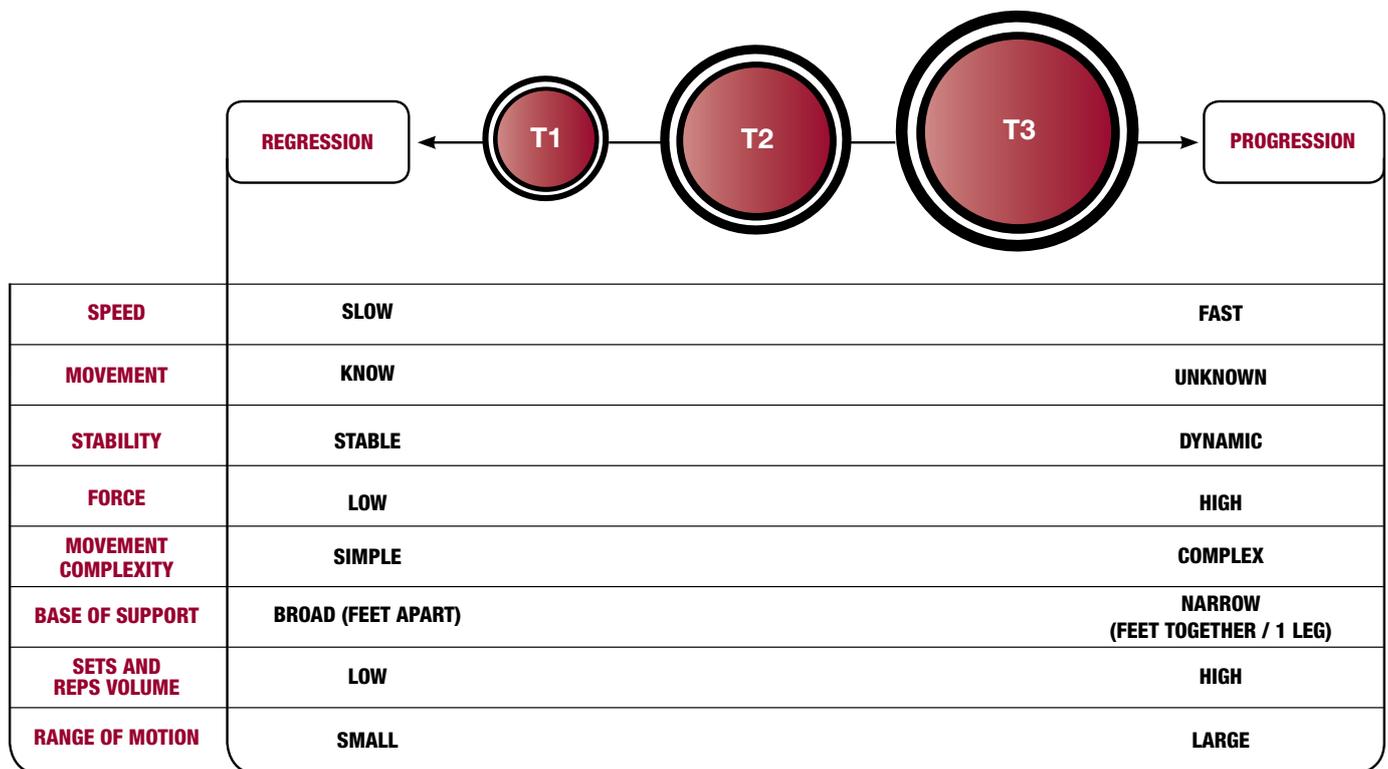
- Neuromuscular efficiency
- Eccentric motor control
- Anatomical adaptation (prepares tissues for the rigours of movement)
- Controlled range of movement (ROM)

### **Threshold 2**

- Increased movement complexity
- Increased integrated timing of function
- Increased force output
- Increased reactive component

### **Threshold 3**

- Dynamic end range movement ability
- High movement complexity
- Dynamic function
- Faster movement
- High force movement
- Unknown movement (reactive)



As we move into the exercises, anchor into the following movement strategies:

## Rhythm

- Just like breath, movements must be rhythmical to be effective.
- Tuning the muscles to rhythm protects joints/soft tissues.
- Rhythmical movement creates and reinforces neural synapses (increases the capacity for the nervous system to work).
- If the muscles are too active, it slows movement. If the muscles are too relaxed, energy leaks. The key is to balance the two.

## Flow

- Movements that flow take the pressure off joints and allow for proper joint mechanics.
- Muscles need to contract and relax in a wave-like manner to work correctly.

## Integration

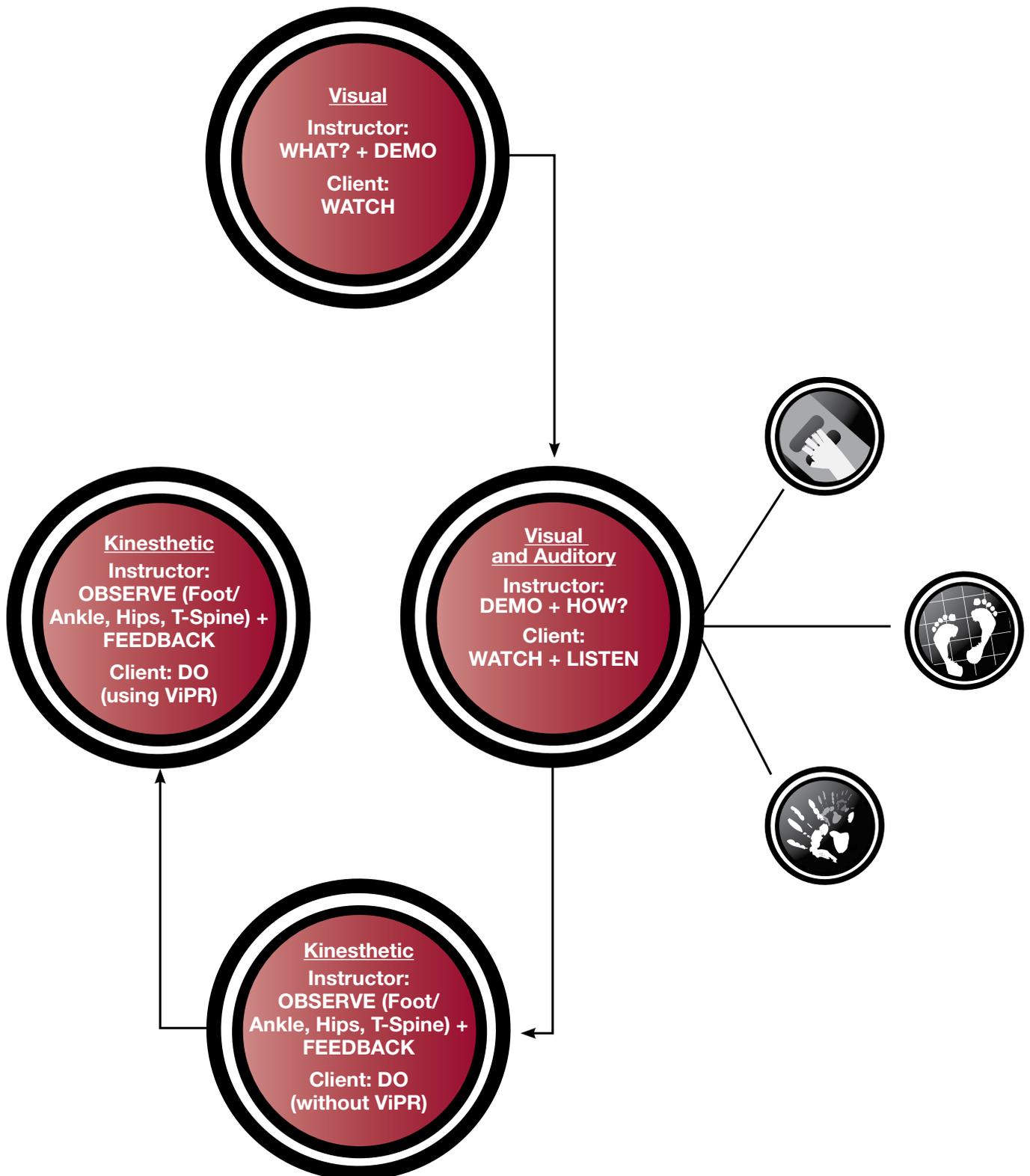
- There is only one muscle in the body; it is connected by fascia: train it that way!
- Joints rely on tension from the entire body for stability; this is only enhanced through integration training.

# Coaching ViPR

## Coaching preparation

Step	What do I need to consider?	How	Progress/regress
			
			
			
			
			
			

## Coaching model



# Vitality: sample exercises

<b>1. Squat thread the legs</b>				
<b>2. Lateral shuffle with ViPR tilt</b>				
<b>3. Box pattern</b>				
<b>4. ViPR indoor flipping</b>				

## Performance: sample exercises

<b>1. Shovelling drill</b>				
<b>2. Anterior step with upper cut</b>				
<b>3. Ice skaters</b>				
<b>4. Cylinder lift</b>				

## Reconditioning: sample exercises

<b>1. Staggered stance with medial tilt</b>				
<b>2. Step-over squats</b>				
<b>3. Step with lateral shift</b>				
<b>4. Step thread the needle</b>				

# Appendices

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## Resources

- [www.PTontheNet.com](http://www.PTontheNet.com)
- [www.fitpro.com](http://www.fitpro.com)

## References

1. Andrews JG (1985), A general method for determining the functional role of a muscle, *J Biomech Eng*, 107: 348-353.
2. Andrews JG (1982), On the relationship between resultant joint torques and muscular activity, *Med Sci Sports Exerc.*, 14:361-367.
3. Andrews JG (1987), The functional role of the hamstrings and quadriceps during cycling: Lombard's paradox revisited, *J Biomech*, 20:565-575.
4. Baechle TR and Earle RW (2000), *Essentials of Strength Training and Conditioning*, second edition, Human Kinetics.
5. Basmajian J (1978), *Muscles Alive*, Williams and Wilkins Co, Baltimore.
6. Bompa TO (1999), *Periodization – Theory and Methodology of Training*, fourth edition, Human Kinetics.
7. Borelli, GA (1680-1681), *De motu animalium*, Rome.
8. Busquet L (1992), *Les chaines musculaires*, Vols 1-4, Freres, Mairlot, Maitres et Clefs de la Posture.
9. Carlsoo S (1972), *How Man Moves*, Kinesiological Methods and Studies, William Heinemann Ltd.
10. Chen CS and Ingber DE (1999), Tensegrity and Mechanoregulation: from skeleton to cytoskeleton. *Osteoarthritis Cartilage*, 7(1):81-94.
11. Dart R (1950), Voluntary musculature in the human body: the double spiral arrangement, *British Journal of Physical Medicine*.
12. Donatelli R (1995), *Biomechanics of the Foot and Ankle*, second edition, FA Davis Co.
13. Dykyj D (1988), *Anatomy of Motion*, *Clin Pod Med and Surg*, 5(3):477-90.
14. Elftman H (1966), *Biomechanics of Muscle*, *J Bone Joint Surg Am*, 48:363-377.
15. Farfan HF (1975), Muscular Mechanisms of the Lumbar Spine and the Position of Power and Efficiency, *The Orthopaedic Clinic of North America*, 6:133-144.
16. Foran B (2001), *High-performance Sports Conditioning*, Human Kinetics.
17. Fuller BR (1979), *Synergetics 2*, Macmillan.
18. Galli C, Guizzardi S, Passeri G, Macaluso GM and Scandroglio R (2005), Life on the wire: on tensegrity and force balance in cells, *Acta Biomed Ateneo Parmense*, 76(1):5-12.
19. Gordon JE (1978), *Structures: or why things don't fall down*, New York, De Capa Press.
20. Gracovetsky S (1988), *The Spinal Engine* Springer, Verlag/Wien.
21. Gray, Gary, *Personal Conversations*.
22. Gray, Gary (2003), *Functional Video digest*.
23. Ingber DE (2003), Tensegrity I. Cell Structure and hierarchical systems biology, *J Cell Sci.*, 116(7):1157-73.
24. Ingber DE (1997), Integrins, tensegrity, and mechanotransduction, *Gravit Space Biol Bull.*, 10(2):49-95.
25. Ingber DE (1998), The architecture of Life, *Scientific American*, 278(1):48.
26. Inman V, Ralston H and Todd F (1981), *Human Walking*. Baltimore: William and Wilkins.
27. Kazarian LE (1975), Creep Characteristics of the Human Spinal Column, *Orthop, Clinics of North America*, Jan 6.
28. Kirkbv R (1975), The Probable Reality Behind Structural Integration, *Bull. Struc. Integ*, 5:5.
29. Latash ML and Zatsiorsky VM (2001), *Classics in Movement Science*, Human Kinetics.
30. Lee D (2000), *The Pelvic Girdle*, Churchill Livingstone.
31. Leonard CT (1998), *The Neuroscience of Human Movement*, Mosby, Missouri.

32. Levangie P and Norkin C (2001), Joint Structure and Function, FA Davis Company.
33. Levin SM (1997), A different approach to the mechanics of the human pelvis: tensegrity. In Movement, Stability and Low Back Pain (eds Vleeming A, Mooney V, Dorman T, Snijders C and Stoeckart R), London, Churchill Livingstone, 157-167.
34. Levin SM (1982), Continuous Tension, discontinuous compression, a model for biomechanical support of the body, Bulletin of Structural Integration, Rolf Institute, Boulder, 31-33.
35. Levin SM (1997), Putting the shoulder to the wheel: a new biomechanical model for the shoulder girdle, Biomed Sci Instrum., 33:412-417.
36. Levin SM (1995), The importance of soft tissues for structural support of the body, Prolotherapy in the Lumbar Spine and Pelvis (ed Dorman T) 9(2): 309-524. Philadelphia: Hanley and Belfus: 309-524.
37. Mann R and Inman VT (1964), Phasic Activity of Intrinsic Muscles of the Foot, J Bone Joint Surg AM, 46:469-481.
38. Mansour JM and Pereira JM (1987), Quantitative functional anatomy of the lower limb with application to human gait, J Biomech, 20(1):51-8.
39. McGill S (2004), Ultimate Back Fitness and Performance, second edition, Wabuno Publishers, Backfitpro Inc.
40. Mustata T and Rusu V (1998), Mechanotransduction and Tensegrity (I), Rev Med Chir Soc Med Nat, 102(3-4):25-35.
41. Myers T (2004), Anatomy Trains, Churchill Livingstone.
42. Nachemson A (1960), Lumbar Intradiscal Pressure, Acta. Orthop. Scand., Suppl. 43.
43. Panjabi MM, Krag WH, White RA and Southwick WO (1977), Effects of Preloads on Load Displacement Curves of the Lumbar Spine, Orthop. Clin. North America, 8:181.
44. Panjabi MM and White AA (2001), Biomechanics in the Musculoskeletal System, New York, Churchill Livingstone.
45. Robbie DL (1977), Tensional Forces in the Human Body, Orthop. Review, 1:45.
46. Schultz L and Feitis R (1996), The Endless Web, Berkeley: North Atlantic Books.
47. Siff M (2003), Supertraining, Supertraining Institute, Denver.
48. Sutherland DH, Cooper L and Daniel D (1980), The role of the ankle plantar flexors in normal walking, J Bone Joint Surg Am, 62:354-363.
49. Thompson DW, On Growth and Form, second edition, Cambridge University Press, Cambridge, UK.
50. Tzaczuk H (1968), Tensile Properties of the Human Lumbar Longitudinal Ligaments, Acta. Orthop. Scand. Suppl. 115.
51. Varela F and Frenk S (1987), The organ of form, Journal of Social Biological Structure, 10:73-83.
52. Vleeming A, Mooney V, Dorman T, Snijders C and Stoeckart R (1999), Movement, Stability and Low Back Pain, Churchill Livingstone.
53. Wendling S, Canadas P, Oddou C and Meunier A (2002), Interrelations between elastic energy and strain in a tensegrity model: contribution to the analysis of the mechanical response in living cells, Comput Methods Biomech Biomec Engin, 5:1-6.
54. White AA and Panjabi MM (1978), Clinical Biomechanics of the Spine, Lippincott, Philadelphia.
55. Zajac F and Gordon M (1989), Determining Muscle's Force and Action in Multi-Articular Movement, Exerc Sport Sci Revs, 17:187-230.
56. Zatsiorsky VM (2002), Kinetic of Human Motion, Human Kinetics.

## Photos

Cover and main imagery: FitPro, [www.fitpro.com](http://www.fitpro.com)

Technique images: Sam Bloomfield, [www.sambloomfield.com](http://www.sambloomfield.com)

## ViPR – The product

ViPR™ is an industrially moulded commercial product, formed under extreme pressure in combination with high temperatures. As a result, small imperfections may result and should be considered normal. They will not affect performance or durability. The product is expertly finished to remove sharp edges, particularly on joints and hand grips.

## ViPR – Guidance on correct usage

ViPR is a resilient product made from high-quality rubber. Like all rubber products, ViPR may become damaged if used incorrectly. To ensure you and your members get the most from ViPR, we suggest following these simple guidelines.

### Do



- ✓ Have fun!
- ✓ Remember that ViPR is designed to be lifted, shifted, thrown, rolled, dragged, carried, tilted and flipped in accordance with proper technique, programme design and environment
- ✓ Ensure you follow the 'Coaching Model' provided in the online training manual while instructing someone on a ViPR exercise
- ✓ Follow the programme design model provided in the online manual
- ✓ Remember that ViPR bridges the gap between strength and movement training so full-body, rhythmical movements are at the heart of every exercise
- ✓ Begin with a lightweight ViPR tool and limited range of motion
- ✓ Only progress an exercise once that individual is ready to
- ✓ Clean ViPR using an all-purpose cleaner

### Don't



- ✗ Use ViPR handles to support bodyweight when doing push-ups – ensure hands are placed on the main body of ViPR to avoid breakage
- ✗ Bend or twist ViPR handles
- ✗ Use ViPR to mimic isolated bodybuilding exercises
- ✗ Bend ViPR in half
- ✗ Begin a ViPR exercise session with a heavy ViPR tool or large range of motion
- ✗ Use a small dimension ViPR (10kg or less) for impact drills including, but not limited to, burpees, battling (hitting) drills, high-impact flipping and/or tilting drills
- ✗ Store ViPR in excessive heat or sunlight
- ✗ Clean ViPR with products containing bleach or limescale remover
- ✗ Use in water which is balanced by the addition of chemicals such as chlorine

## Limited one-year warranty

A limited one-year product warranty protects against manufacturer defects and begins the day you receive your ViPR order. The terms and conditions of this warranty apply only to genuine ViPR products. Please follow the instructions below to process a claim as quickly as possible. The right to terminate the warranty is reserved in the event of uncertainty or doubt as to the compliance with the ViPR guidelines for correct usage.

Please email your claim to the ViPR retailer who supplied your ViPR product and provide the following:

- A brief description of how the ViPR tool was damaged
- A picture of the ViPR tool, showing the damage
- Your shipping address and contact information
- A copy of your receipt for the ViPR purchase

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# Training evaluation form



Please complete this evaluation form and hand it in to your facilitator.

We aim to deliver training that is well structured, informative and relevant to fitness professionals.

<b>Date:</b>	
<b>Club:</b>	
<b>Facilitator:</b>	

How would you rate the following? (circle your response)

Training facilitator	Excellent	Great	Good	Fair	Poor
My facilitator clearly and effectively communicated the material	5	4	3	2	1
My facilitator was professional and made the lessons interesting, using a variety of teaching/learning practices	5	4	3	2	1
My facilitator gave me support and was patient throughout the training	5	4	3	2	1
My facilitator was passionate and inspiring	5	4	3	2	1
Overall, please rate the facilitator's ability to deliver and lead the training	5	4	3	2	1
Any other comments:					

The training	Excellent	Great	Good	Fair	Poor
The training manual is appropriate and conducive to learning the subject matter	5	4	3	2	1
The training was interesting and relevant	5	4	3	2	1
The module was innovative and worth the time I invested in it	5	4	3	2	1
The module will help me to become a more successful instructor	5	4	3	2	1
Any other comments:					



Training venue	Excellent	Great	Good	Fair	Poor
The venue was pleasant and a good learning environment	5	4	3	2	1
The venue was easily accessible (location, parking, etc.)	5	4	3	2	1
Any other comments:					

Booking process	Excellent	Great	Good	Fair	Poor
The booking process was quick and easy	5	4	3	2	1
I was adequately prepared for and advised on expectations (timetable, location, delivery, rescheduling of commitments, etc.)	5	4	3	2	1
How could we have made the training better for you?					
Is there anything else your facilitator could have done to help your learning?					
What are your honest feelings/thoughts as you leave the training?					

**Thank you.**

**Your feedback is important to us.**

**Please return this form by:** Handing it in to your facilitator  
**Post to:** Training Department, FitPro, Kalbarri House, 107-113 London Road, London E13 0DA  
**Email to:** training@fitpro.com  
**Fax to:** +44 (0)20 8586 7350

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