PROGRAM

McGill 3: High Performance Training: Progressing backs from pain to performance

**Where is the event being held?**

Hotel van der Valk Eindhoven

Aalsterweg 322
5644 RL Eindhoven

Netherlands

https://www.hoteleindhoven.nl/

**What time do we start?**

Registration starts 18th May at 08:00 hours.

Sun 19th May   08:30 – 17:00

**COURSE OBJECTIVES**

**Global Objectives:**

To update delegates on some recent developments in enhancing performance of formerly pained and injured backs.

To give practice and technique development with workshops throughout the day.

**COURSE OUTLINE**

This one day course is for advanced clinicians and performance specialists. Mechanisms and training techniques used with world class athletes will be introduced and discussed. The development of movement/motor patterns, endurance, speed, and power within the principles that minimize back injury, or exacerbation of existing injury are work-shopped. Quantifying the athletic demands together with the current capabilities of the individual, influence program design. Specific topics include building resilience, training capacity, and strength and speed techniques within pain-free progressions. The day comprises of 3 lectures and 3 hands-on workshops.

**Part 1: Foundation**

* The code of elite trainers
* Normal and injury mechanics
* Tolerance and Capacity
* Stability (and mobility)
* Injury (and Pain) mechanisms
* Creating a client – building training capacity
* An algorithm from pain to performance
	+ Pristine movement (Engrain motion patterns, motor patterns, corrective exercise)
	+ Build whole body and joint stability
	+ Increase endurance
	+ Build strength
		- Pull
		- Push
		- Lift
		- Carry
		- Torsional Buttress
		- Specific isolationist and integrative exercises
* Develop power, agility

**Workshop 1: movement patterns sparing the spine**

* Basic Strength skills
	+ Composite strength
	+ Joint positions
	+ Power breathing
	+ Twitch and relax
* Mobility
* Basic motions
* torso control with hip function
* Movement skills

**Part 2: Assessment**

* Many approaches – When?
* Intake
* Tune each training cycle
* When to increase load (or decrease)
* Presence of Pain
	+ Yes:
		- Provocative tests will reveal pain mechanism
		- Motions, postures and loads
		- Specific tissues
	+ No:
		- Assess general competency & movement choice
		- Assess demand of task/sport
		- Assess these as capabilities of the individual
		- Train the difference
* Programing
* Interview
* Personality
* Anatomy

**Workshop 2: Assessment**

**Part 3: Tricks of the super athletes**

* Features of excellent performance
	+ Trade-off of fitness variables
	+ Rate of muscle activation and relaxation
	+ Power Breathing
	+ Mindful training
	+ Core stability and hip mobility
	+ Athletic progressions
* Superstiffness
	+ Technique #1 Rapid contraction and then relaxation of muscle
	+ Technique #2 Tuning of the muscles
	+ Technique #3 Muscular binding and weaving
	+ Technique #4 Directing neuronal overflow
	+ Technique #5 Eliminate energy leaks – Make the impossible, possible
	+ Technique #6 Get through the “sticking points”
	+ Technique #7 Optimize the passive connective tissue system
	+ Technique #8 Create shockwaves
	+ Always: Proximal stiffness for distal explosiveness

**Workshop 3: Enhancing performance**

* For each exercise
	+ Is it the best tool for the goal?
	+ Incorporates assessment and training
	+ Coach corrections (good form)
	+ Create progression (or regression)
	+ Enhances injury resilience and performance
	+ Optimizes stability mobility continuum
	+ Skill development
* Workshop List:
	+ Qualifying tests
	+ Warmups
	+ Patterns of movement
	+ Relaxation rate
	+ Double peak
	+ Power breathing
	+ Strength tricks
	+ Tuning mobility, stability and unleash speed power
	+ Squat
	+ Bench
	+ Pullup
	+ Jump
	+ Strongman techniques
	+ Turkish getup
	+ Sled drag
	+ Speed power
	+ Foot work
	+ Sport specific

**SUGGESTED READINGS**

This presentation synthesizes many research articles. However, the information has been synthesized into three books:

1. Back Mechanic, written for the lay public, guides the reader through an assessment of their pain triggers. Then it coaches them what not to do to desensitize the pain and build movement capacity. Then it guides them on exercises to build a pain-free foundation for movement.

2. McGill, S.M. Ultimate back fitness and performance, Sixth Edition, Backfitpro Inc, 2017
Available at: [www.backfitpro.com](http://www.backfitpro.com)

Ultimate Back Fitness describes the science of back function as it pertains to training for higher performance function (either occupational or athletic), provides algorithms for examining the critical components of different activities to identify what needs training, and the full exercise spectrum and progression from corrective exercise to stabilization exercise, endurance training, true strength development and speed, power and agility enhancement. Techniques used by some of the top athletes in the world are quantified and described.

3. McGill, S.M. Low Back Disorders: Evidence based prevention and rehabilitation – Third Edition, Human Kinetics Publishers, Champaign USA, 2016
Low Back Disorders, written for clinicians and scientists, describes the science of back function, prevention of back troubles and rehabilitative approaches. It has a robust description of patient assessment involving provocative testing to create a precise diagnosis that guides each patient on the most effective path for them.

Three DVD’s illustrating the Assessment and Therapeutic exercise techniques and Performance enhancing techniques used in the clinical portion of the course are also available:

McGill, S.M. (2012) The Ultimate back: Assessment and therapeutic exercise, Second Edition

McGill, S.M. (2010) Enhancing Performance, [www.backfitpro.com](http://www.backfitpro.com)

McGill, S.M. and Brandon, Lee. (2016) The new science of golf