

# SMART TRAINING

Seminar at Club La Santa Camp 2014



# The cold hard truth...

- **TRAINING** - only adds to genetic endowment  
There's no short cut or "secret interval" to proper conditioning  
e.g. Elites/Top A/G train 20-35/10-18h; 600-900/800-1200h p.a; 10yrs
- **NUTRITION** - bigger gains & losses than perceived  
Good diet + the right sports nutrition products = better gains  
e.g. low glycogen; protein timing; creatine augmentation, nitrates
- **TECHNOLOGY** - you should use pro level kit  
This can improve performance through "Kit Doping" (Aston 2013)  
e.g. efficiency enhancement wetsuits; drag reduction wheels, fatigue combating compression clothing etc etc.

# 1st Rule of Fit Club

## Base level 75-90% of time

That's <80% HRmax or in "low lactate" ZONE ONE

- *coach of Ironman Cozumel '13 winner "85% base training"*

- *World Conf Science of Tri - UK OD National Squad*  
*S25, C55, R20% of volume ~70% below race pace.*

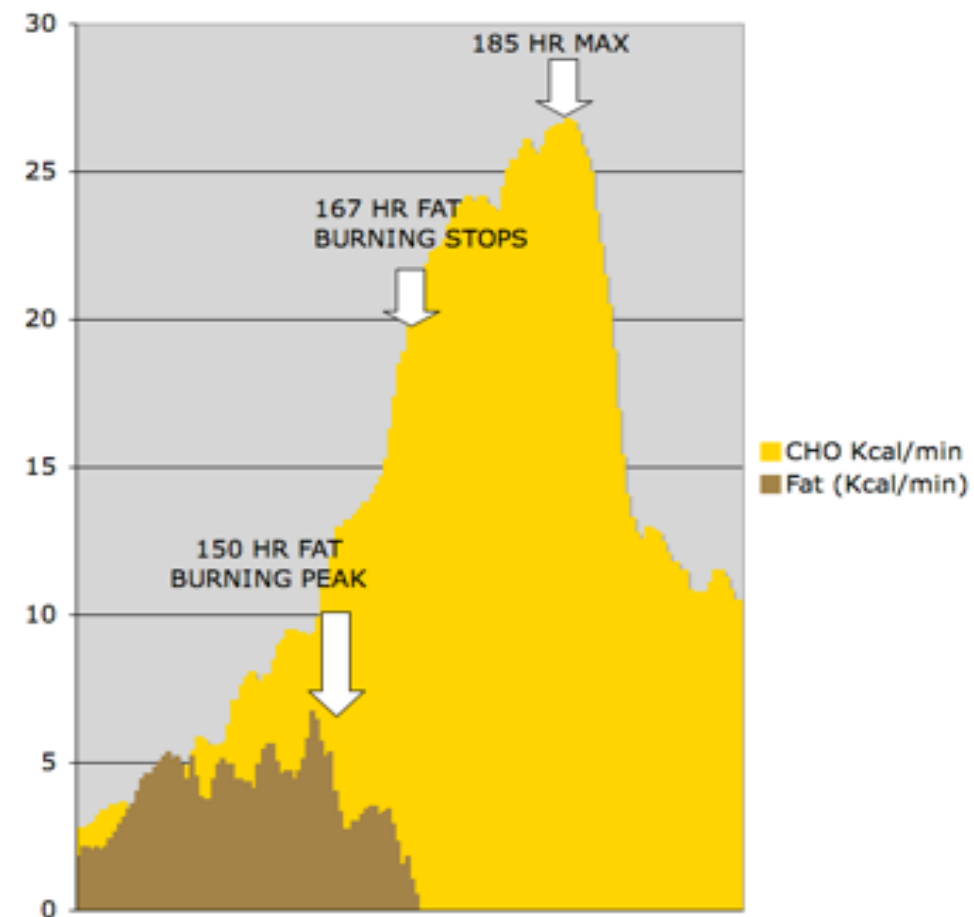
- *OD Top 10 Olympian 2012*

*>75% training in Zone 1 S74% B88% R85% in Z1*

# What happens in these ZONES?

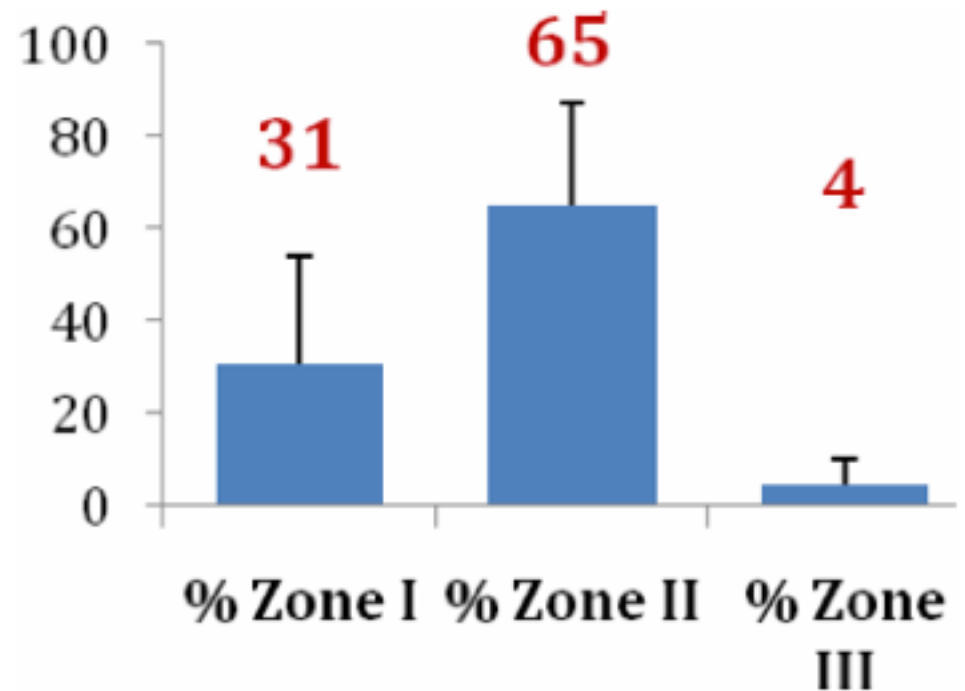
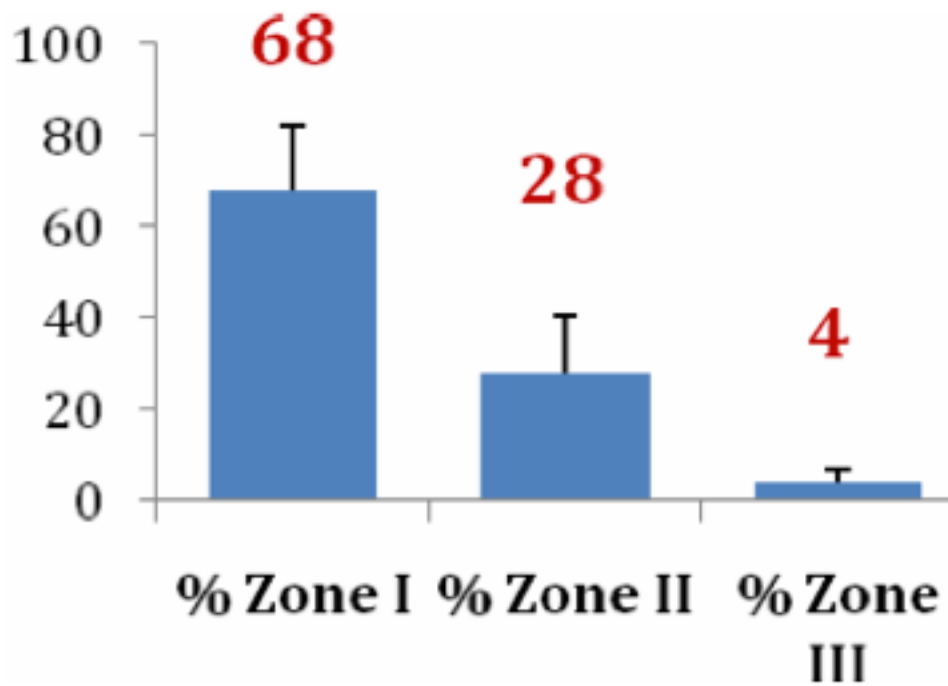
## Heart Rate Zones (bpm)

Zone	Description	Lower	Upper
<b>3</b>	<b>HIIT/Lactate Accumulation</b>	<b>163</b>	<b>185</b>
<b>2</b>	Anaerobic Threshold	155	162
	Progressive Anaerobic	148	154
<b>1</b>	Intensive Aerobic	130	147
	Extensive Aerobic	111	129
	Active Recovery	93	110

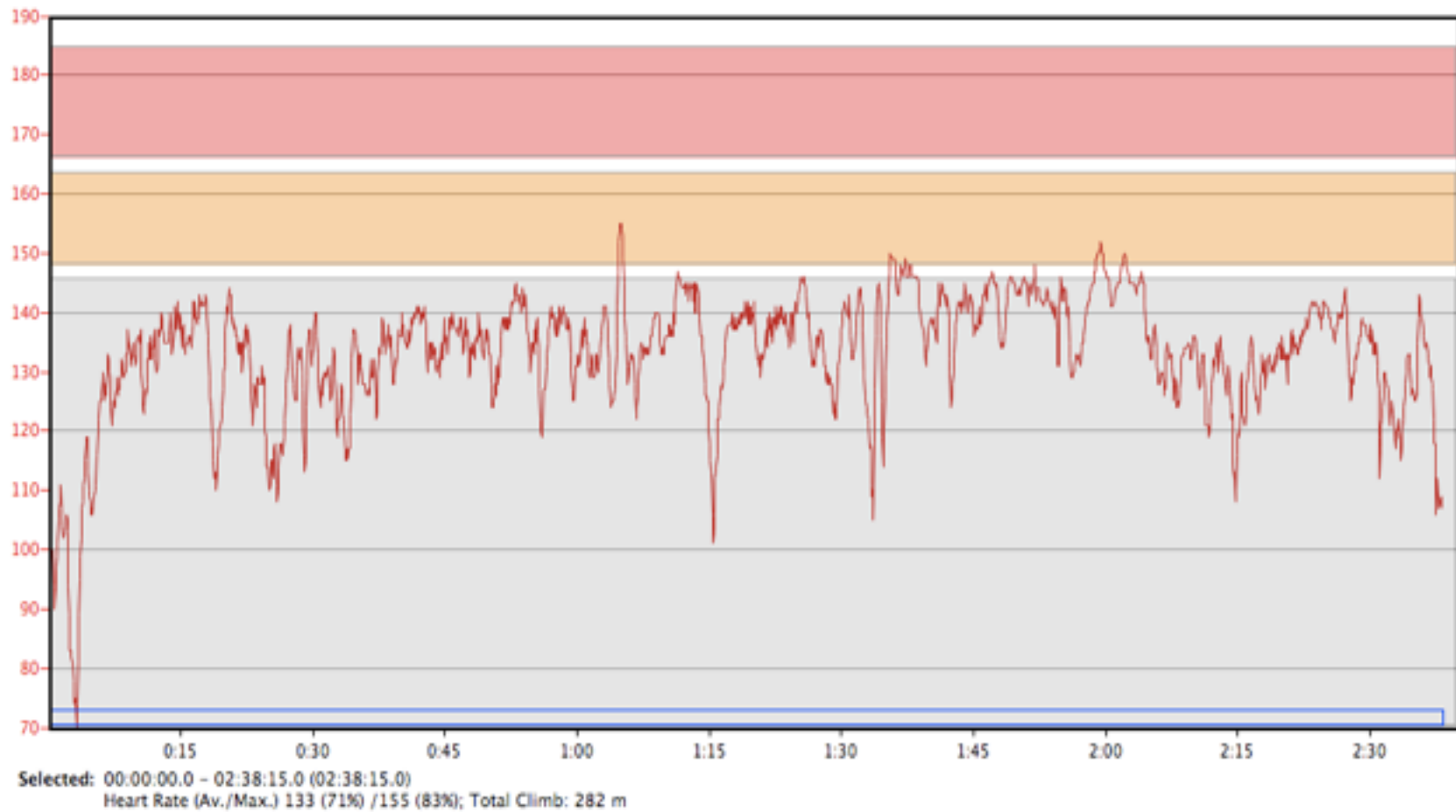


HR Zones via MyZones App

# Training level verses IRONMAN



# Do proper ZONE I “Training”



HR data downloaded via [iSMARTtrain.com](https://www.ismarttrain.com)

# TRAINING: Adding quality?

- **Look for the moment when top Z1 gets hard to attain**  
then do intervals at 80%HRmax (e.g. 5x5' Top Z1, with 1'RI)  
to build further aerobic fitness (~Feb/March/April)
- **Phase in Top Z2/Z3 to bring on “form”**  
“85-90%HRmax” intervals/races bring on “form”:  
such as the proven 6x4'@Z3 (+2'RI) (March/April onwards)  
this can make up 5-15% of your week, but its very potent!
- **Only add if required**  
A beginner, those in “get round” mode or coming back to training  
top of Z1 is hard enough to achieve 90-95% of your gains:  
Only 5-10% “icing” comes from Z3 work

# TRAINING: Adding strength?

- **Make things harder - 2nd half base (Jan/Feb):**  
e.g. swim: two costumes/drag shorts, paddles, drag shorts.  
e.g. bike: add weight, low cadence hills (1km@60rpm)  
e.g. run: hills, heavy shoes, pool running **WEIGHTED BELT**
- **Include weights work if you have time/get injured:**  
Again its very potent, but does not always make an athlete faster - do you need it (bone density, injury prevention, winter variety?) **CONSUME 25g WHEY**
- **Body composition is as important as strength:**  
if you lose fat you'll go faster, especially running



# 2nd Rule of Fit Club

## #NEVERGETCOLD

- **Never get cold prior to training:**  
e.g. dress warm (Dryrobe), aim to peel of layers  
It's not about having shorts on in 5-degrees and hail
- **Use clothing to vent heat but be warm not cold**  
e.g. Gilets, capes, gloves, beanies, legs, arm warmers
- **After training wrap up before getting excessively cold**  
e.g. donning clothing whilst even ice bathing legs (Brownlee)  
Diverting energy to keeping warm leaves less for recovery



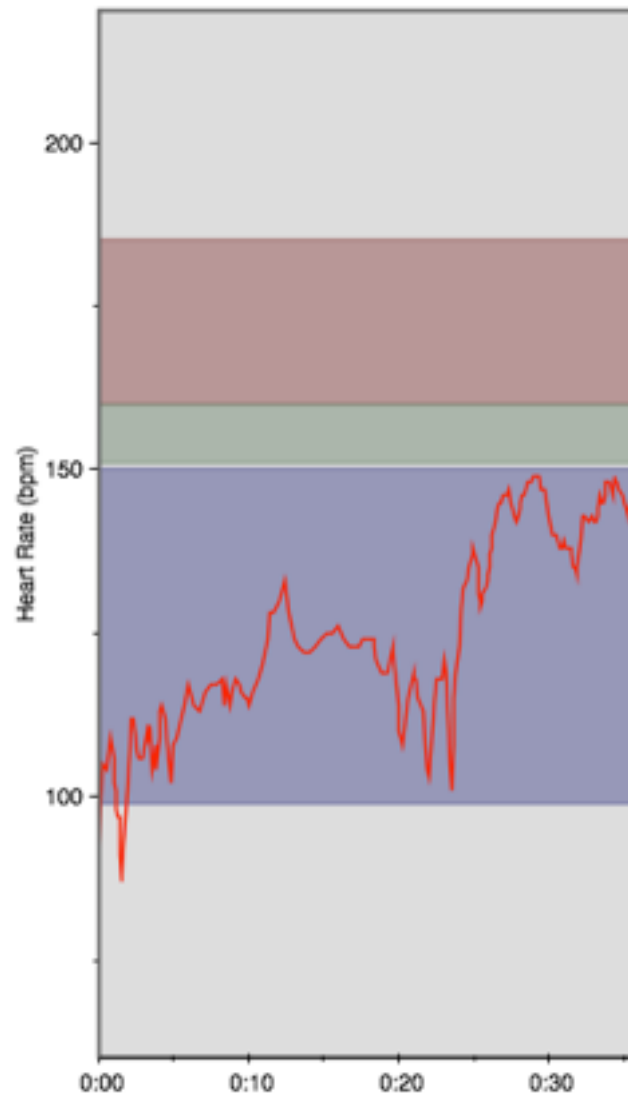
- **Used in 2013 by UK Elites**  
e.g. keep warm then ditch just before swim & keep warm after when icing injuries
- **Saves dressing in car**  
Lets be a bit more savvy and keep warm before/after
- **Those that try it “get it”**  
[JBST.com](http://JBST.com) has a demo service for athletes to try it

# 3rd Rule of Fit Club

## WARM UP PROGRESSIVELY

- **Take time and the right route:**  
e.g. flat cycle before hills, easy run before meeting group  
>10mins before hitting upper Z1  
Too soon to upper Z1 (or Z2!) and it signals stress
- **Reduce average speed focus to relax the warm up**  
e.g. turn off speed, Strava, average Power  
Relax this is the transition into “exercise land”
- **Factor pre-race patterns to include warm up**  
e.g. turbo next to car, swim bands, into water swimming

# Warm up: in the real world...

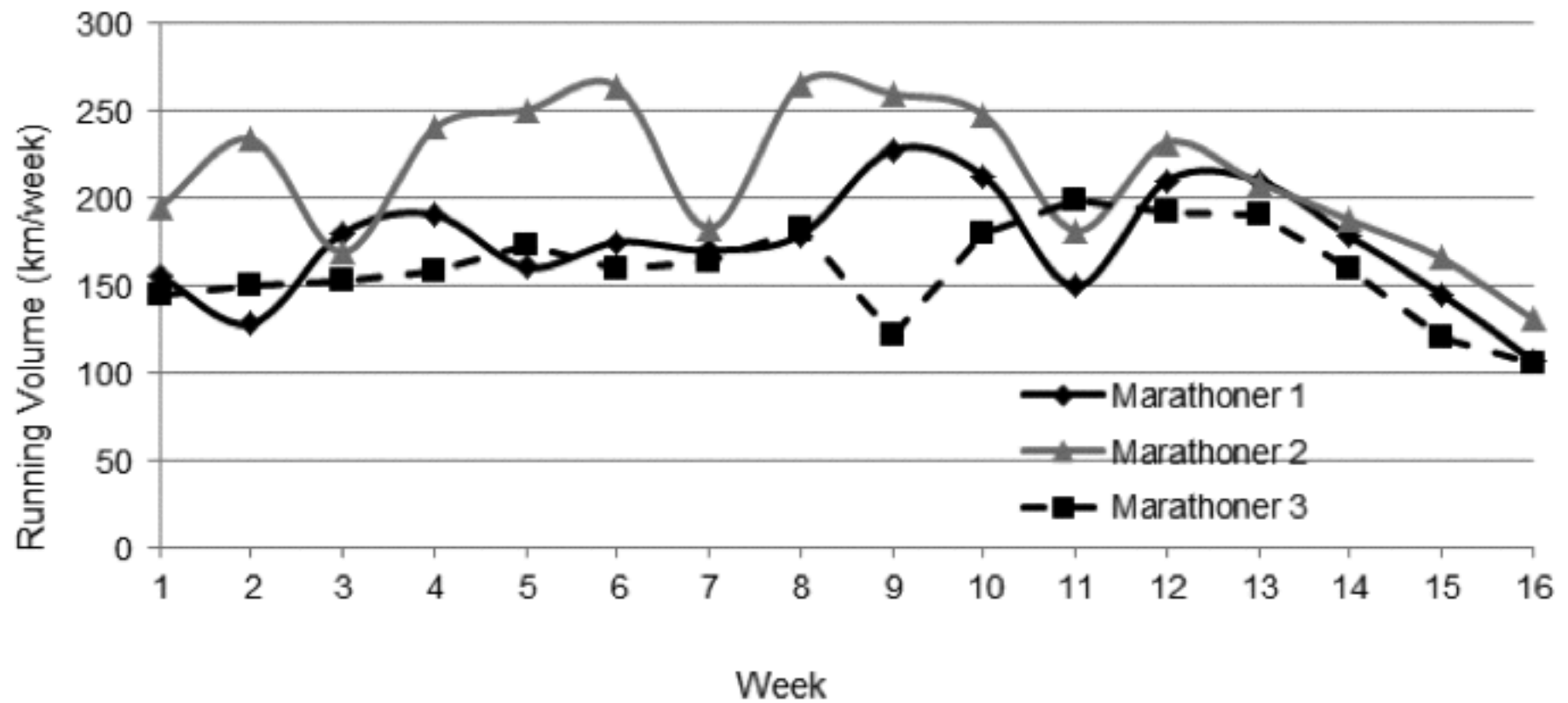


# 4th Rule of Fit Club

## Plan 3:1 Blocks of Training

- **Make recovery a part of your weekly plan:**  
e.g. lighter days (low ZI technique), transition training, non-training days, alternative non-competitive sports
- **Use realistic training volume (8hrs; 220 Reader Survey)**  
Don't get hooked on a number it will vary: 8, 10, 12, 6  
The training bank builds your fitness over time.  
It's all about ability, consistency and "ABSORBING"
- **Don't go OTT after season**  
Less is gained Oct to Dec, more from Feb to April.  
Aim 60%-75% of volume you intend to peak at Mar-July

# TRAINING: use 3:1 loading



# 5th Rule of Fit Club

## Feed your body

- **Good Sleep is central to development**  
It's all about ability, consistency and “ABSORBING”  
Elites 10-12h/d and Amateurs 50-hour rule
- **Make daily wholefood nutrition a natural habit:**  
e.g. slow release carbs, real-food proteins, quality fats  
Don't try to be perfect just remember YAWYEAD  
(You Are What You Eat And Drink)
- **Body Work/flexibility must focus on your imbalances**  
e.g. poor shoulder mobility, leg tightness or cramping  
Its finding the right expert that is the challenge

# Habits of the better athletes?

	Eritreans ( <i>n</i> = 7)	Spaniards ( <i>n</i> = 9)
Usual living and training altitude (m)	2590±313	589±198**
Previous experience of regular training (y)	2.7±1.6	12.3±2.7**
Typical training volume during the previous 3 months (km·week <sup>-1</sup> )	105±12	129±10*
Maximum training volume during the previous 3 months (km·week <sup>-1</sup> )	120±10	166±16*
Amount of rest (d·week <sup>-1</sup> )	0.5±0.5	0.5±0.4
No. of training sessions per week	7.8±1.6	9.2±2.4
Weight training (yes or no)	No ( <i>n</i> = 7)	Yes ( <i>n</i> = 9)
Skill and (or) technique training (yes or no)	Yes ( <i>n</i> = 4) No ( <i>n</i> = 3)	Yes ( <i>n</i> = 9)
Stretching (yes or no)	Yes ( <i>n</i> = 10)	Yes ( <i>n</i> = 9)
Massage (yes or no)	Yes ( <i>n</i> = 6) No ( <i>n</i> = 1)	Yes ( <i>n</i> = 7)
Sleeping habits (h·d <sup>-1</sup> )	11±2	8.5±1.2*



# What makes a better athlete?

- **All athletes did skill/technique work**  
i.e. teaching muscles to be coordinated
- **Altitude living athletes (incl. “tent” users) are faster**  
However the need for blood testing to ensure oxygen carrying level is maximal (e.g. RBC, Hbn etc)
- **These elites “only” trained 7-9x per week**  
Yet many AG’ers start with “3 per sport, plus strength, plus”

# Your TAKE AWAY messages:

- Base training mentality is the key to success
- Kit must be used to keep warm
- Warming up can never be scrimped
- Training must have a variable loading
- Prioritise sleep, nutrition & bodywork

# Your essential ACTIONS:

- Get a HRM
- Invest in kit to be warm and dry
- Set exclusion zones & imbed “group respect”
- Diary plan your training before it happens
- Diary monitor sleep, nutrition & bodywork

# TOP 10 for 2014

- Beetroot “nitrate” loading
- New aero frames and kit enhancements
- Colostrum & Probiotics
- HIT bike intervals for better run-off-bike
- Hydrotherapy & Compression
- Fasted and low-carb training
- Vitamin D offseason supplementing
- Blood profiling/optimisation services
- Compression pants & Altitude tents.

# Questions & Answers?

send them via [JBST.com](http://JBST.com)

