

# Train Smarter?

*at @Triathlon\_Show 2015*



# Where to look for advice

- This presentation is from [JBST.com](http://JBST.com) / [CoachJoeBeer.com](http://CoachJoeBeer.com)
- Visit [220Magzine.com](http://220Magzine.com) and check “Training”
- Check out [www.bit.ly/road2gold](http://www.bit.ly/road2gold)



# The Brutal Basics...

- **TRAINING ZONES & GOALS**

Goals determine plans which should set the sessions you do.  
e.g. Elites/Top AG train 20-35/9-18h; 800-1200h/400-800h p.a.

**Racing teaches you the craft of racing.**

- **NUTRITION**

Correct diet + the right sports nutrition products = better gains  
e.g. low glycogen; protein timing; L-Carnitine augmentation

**Personalised nutrition programmes are the new marginal gains**

- **EQUIPMENT**

This can improve performance through “Kit Doping” (Aston 2013)  
e.g. optimised wetsuits; drag reduction bikes/clothing, compression

**It is developing faster than your genes (220 Science of Speed)\***

# 1st Rule of Tri

## Base level must be 75-90% of time

That's is 55-80% HRmax or in "low lactate" ZONE ONE predominates in all phases of the year:

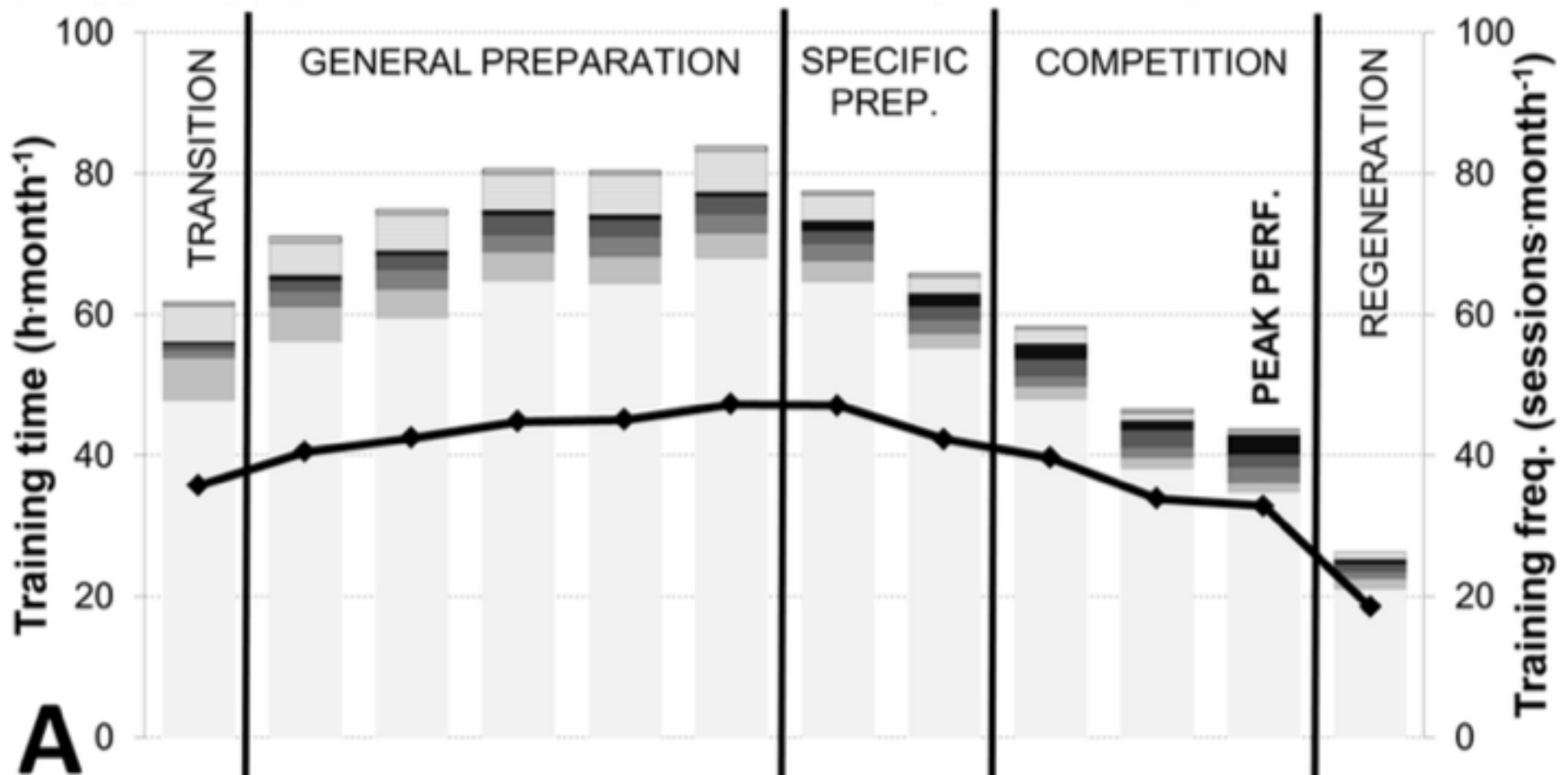
*Coach of Ironman Cozumel '13 winner "85% base training" (2013)*

*UK OD National Squad ~70% below race pace.*

*Top 10 Olympian 2012 - S74% B88% R85% in Z1*

# NEW EVIDENCE

Tonnessean (2014) XC Ski/Biathletes “Road to Gold”...ZI predominates



# THE BIG MISTAKES

- **Going too hard to soon**  
All interval studies, Elite training plans and their diaries include time to get the muscles warmed-up. Too-hard, too soon activates “stress” response
- **Calling low Z2 “base” training or steady**  
80(83?)%HRmax and above is stressful “no-mans land” training - if you are meant to be there good, otherwise it truly is junk!
- **Not doing sessions to a plan**  
Its your training so be in control of session plans, outcomes and future tweaks (route, time of day, training partners, equipment)

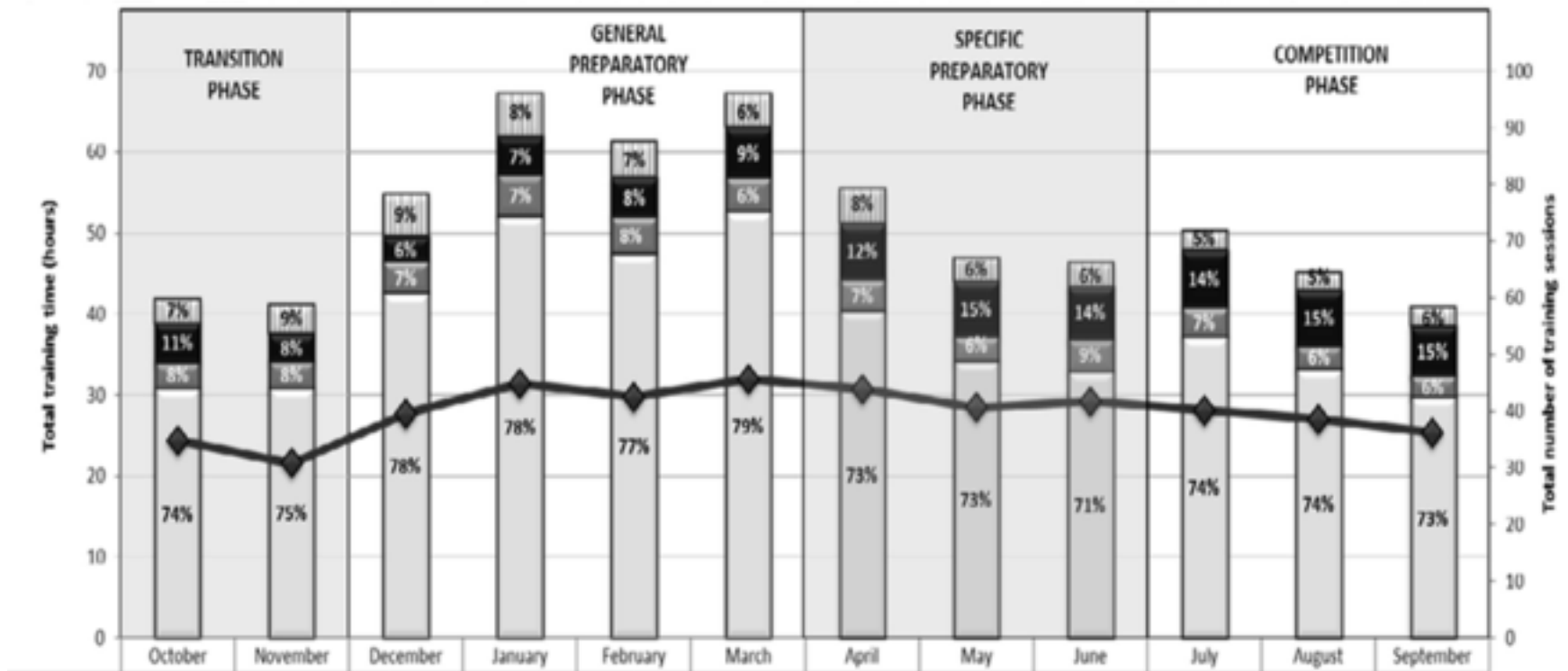
## 2nd Rule of Tri

# Quality must be quantified

- **Using planned intervals works best**  
Such as the proven 6 x 4' @ 88-90%HR (+RI 2 - 4')  
This is very potent therefore must be surrounded by pure Z1 days
- **It's only worth doing HIT when LIT is correct**  
So Z2 "lapses of concentration" come out of your HIT allowance  
You may be doing HIT too many days per week (2-3 optimum)
- **Only add HIT if required**  
For a beginner, those in "get round" mode or coming back to training the top of Z1 into Z2 to get "race-ready" (2-3 x 10') is hard enough to achieve race completion and enjoy training.

# NEW EVIDENCE

Tonnessen (2015) Orienteering: 55-82% = ZI (>70%)





# THE BIG MISTAKES

- **Randomly doing an interval session or “block”**  
Intervals cannot just be added to volume rises, competitions starting or when recovery is chronically affected.
- **Doing an interval that is traditional yet unproven**  
Several are erroneous: minute-on/minute off; build of speed towards end of long-ride/group run; TC time trials to replace endurance
- **Failing to let adaptation take priority once work is done**  
If Elites/Top AG only do 2-4 intervals per week how can you do more and add additional “racing” sessions and then properly adapt?

# 3rd Rule of Tri

## Strength Training is essential

- **Make time to keep strength/conditioning:**  
Resistance training (machine, free weights, body weight) and Pilates/Plyometrics(?) NOT circuit training
- **Make things harder through late base into PRECOMP:**  
e.g. swim: two costumes/drag shorts, paddles, less drafting.  
e.g. bike: +weight, low cadence hills (4-6'@60rpm), +CRR  
e.g. run: 8-15" hills, heavy shoes, DWR, Buggy, WeightBelt(?)
- **For prehab, rehab and to beat ageing/BMD drops:**  
It makes an athlete more “complete” and is no longer considered damaging to s/c/r

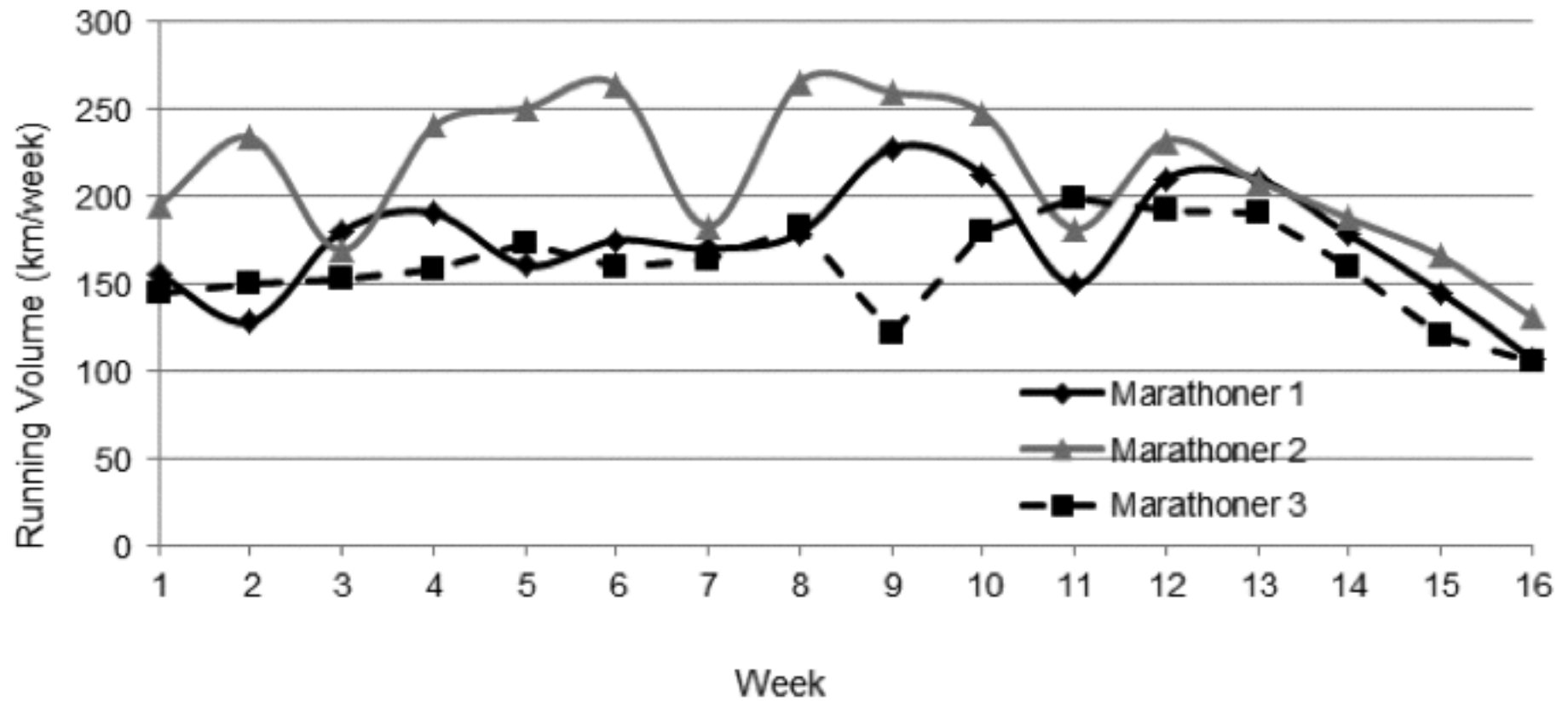
# 4th Rule of Tri

## Plan 3:1 Blocks of Training

- **Use technology (paper & pen) or computer to plan:**  
e.g. 3:1 weeks, lighter days (low ZI technique), transition training, non-training days, alternative sports in offseason
- **Use realistic training volume (8hrs; 220 Reader Survey)**  
Don't get hooked on a number it will vary: **10, 8, 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

# NEW EVIDENCE

Stellingwerff (2012) Elite marathoners training (74% ZI; 2-3 CHO availability sessions)



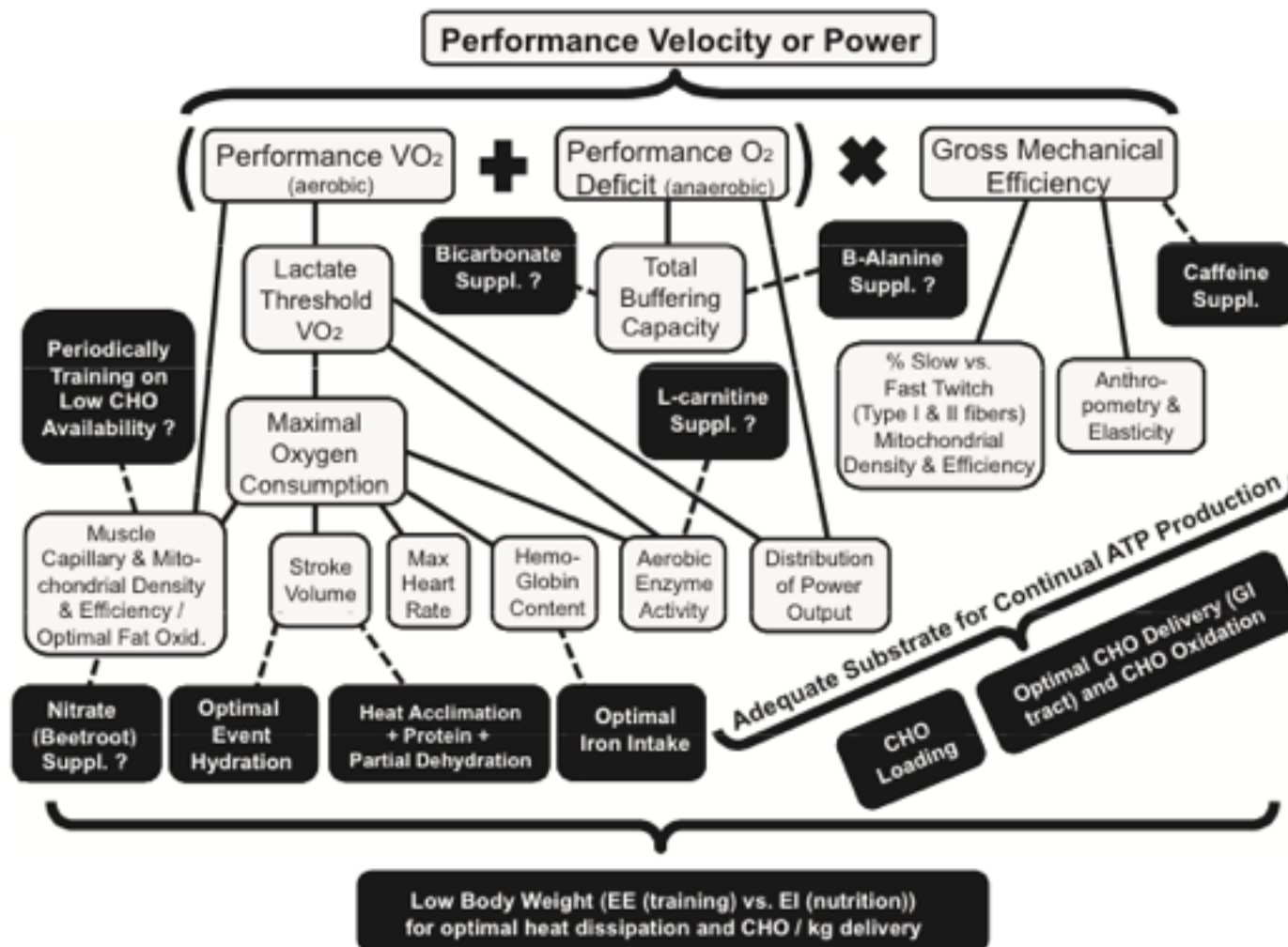
# 5th Rule of Tri

## Nutrients can tweak genes

- **Use carbs in training - its the predominant fuel choice**  
Some fasted sessions help lean-burn ability but do compromise quality and the session must be controlled ZI
- **Protein timing has been shown to help “adaptation”**  
e.g. around weight training or endurance sessions. Plus shakes add an extra “easy” quality protein dose to the diet
- **Assessment of nutrient status is vital**  
e.g. blood profiling for Vitamin D, B12, Folate, Testosterone and others to ensure RBC, immune and health optimisation

# NEW EVIDENCE

Stellingwerff (2014) Nutrition can plug various areas of fatigue



# THE BIG MISTAKES

- **Missing the basics of diet & sports nutrition**  
Nothing is THE super food or pill. Carbs fuel, water hydrates, treats are treats, protein should be spread out, good fats are “essential”
- **Random use of a supplement or super-nutrient**  
Most affective results are using a effective dose+response  
e.g. colostrum x 10g x 2 weeks or more = rebuilding/immunity
- **Assuming you “are” fit and you “have a great diet”**  
If you don’t know your “nutrient status” how can you tell what you need: latest article, health food e-mail etc = just a waste of money  
1990 Student: Hbn 13.3 ... 2015 Post Training Camp: 15.7

# 6th Rule of Tri

## 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 minimum 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  
The right expert that is the challenge



# 7th Rule of Tri

## Kit can make you faster

- **Buoyancy, flexibility, drag reduction wetsuits**  
It has to fit, be practised and be removed fast
- **The bike has evolved beyond belief (Sat 10:15)**  
Aero tubing, integrated hydration, electronic shifting, power measurement
- **Running requires good rebound, hence foam**  
Light mass means fast but rebound must aid running - use of DeepWater Running, body work and regular new shoes

# THE BIG MISTAKES

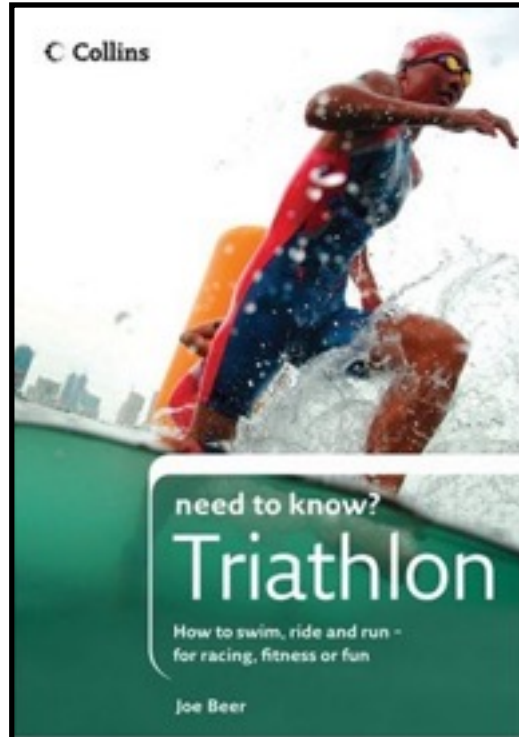
- Not doing the sessions on your plan and training randomly
- Using equipment based on a whim not on science/sense
- Ignoring the importance of strength & conditioning
- Too high vitamin C and random supplementation
- Seeing bike power measurement/aerodynamics as “elitism”
- Not broad enough Zone One [55% - 80%]
- Ignoring recovery tools (foam rollers, compression, sleep)

# TCR 2015 Advice

- Training <80% must be a central habit [bit.ly/road2gold](http://bit.ly/road2gold)
- Hard work sessions must be well planned/spaced
- Nutrition timing and type impacts significantly
- Bike power measurement is a serious but effective tool
- Bodywork, DIY foam rolling etc remains a priority
- Fasted sessions & low-carb training has a place
- Blood profiling is the new “train smart” see [InDurance.co.uk](http://InDurance.co.uk)



Out now



Coming this Summer

