



February 2008

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THE REAL SKINNY ON AERODYNAMICS

Imitation Is the Most Sincere Form of Flattery

It's not just being strong that makes you a good cyclist.

(extracted from MIT published Wind Tunnel research - not triathlete hearsay)

Favorite Workout-Run

Can you pass the following aero-test?

Tri "Lingo"

1. What produces more drag- your wheels or your helmet?
2. True or False- 75% of how fast you go is determined by your body positioning?
3. Does water bottle placement drastically affect aerodynamics?

Great Training Songs

Here are the answers to these questions and some additional rules of thumb for **all triathletes**. Here's how to increase bike speed without spending big bucks.

Now That's a Triathlete!

Want to increase your bike speed and spend money wisely?

Tri Connections

- Any speed above 12 MPH makes it worth being in an aero position on aero bars
- A nonaero helmet creates 4x the drag of a nonaero wheelset
- Roughly 2/3 of drag is created by the cyclist
- Cable routing actually affects aerodynamics materially
- A water bottle on your seat tube is much more aero than one on your down tube
- Making your race number fit flatter drastically affects aerodynamics
- Your bike accounts for about 15-25% of your overall drag

The Real Skinny on Aerodynamics

Preparing for Your "A Race"

Triathlete Spotlight

The MIT ranking of value in terms of cost/second saved for practical triathletes is:

Healthier Options on the Go

1. Detailed factors, e.g. cable routing, race #, etc.
2. Helmet
3. Position
4. Frame
5. Wheels

Tri Tips- Swim Start, Gel Supplements

Sponsor Promotions

Note - the water bottle shape was actually considered 2nd most important but was tested using a MIT custom designed one not available to the public.

IMITATION

Max Performance, often imitated, never duplicated!

Enjoy!

There are trade-offs though, between body positioning aerodynamics and power output efficiency. It's not effective if you are super aerodynamic but losing lots of pedal power because of your positioning. Proper bike fit will help you in this regard since it determines a comfortable and aerodynamic position on the bike.

Final Takeaways

So, you now have more information on whether to spend \$2,000 on a wheelset or \$200 on a helmet. Aerodynamics is critical since a 5% improvement can mean big time savings. Every rider is different too, so there is no single right answer for everyone. Are shaved legs faster than hairy ones? TBD...

FAVORITE WORKOUT- RUN: HILL CLIMBS

The most time/benefit productive aerobic workout around in our opinion. In fact, we know several professional cyclists & collegiate swimming All-Americans who do them even though they are not triathletes.

Goal: Leg strength and aerobic conditioning

Warm-up: jog 10-15 minutes

Main Set:

Find a 200-300 yard hill of a challenging grade
Run all the way up hard, taxing your comfort level to about 7-8 on a scale of 10.

– Jog or walk back down to make sure you catch your breath

– Work your way up to as many as 10 sets over your training period

Give yourself adequate recovery with these puppies and don't do more than 1 set per week, maybe 1 set per 2 weeks based on your training goals.

They will hurt near the top but they produce huge strength and aerobic gains.

Good luck!

PREPARING FOR YOUR "A RACE"

Making your training plan most effective

Written by: Brandi & Steve Dion, B&S Fitness, USAT Triathlon Coaching Services

Are you guilty of the "training routine trap?" Do you know how to make sure your training plan has you peak at the right time in the triathlon season?

It has been about seven years now that my husband Steve and I have been coaching triathletes, mostly beginners, for that big day of crossing the finish line of their first race or even a new PR in their 50th race. The most common mistake that we see many of our clients make is training the same way year in and year out.

There are many ways to train, three include: Random, Mixed and Periodized methods. Random training is exactly how it sounds - random. You do what you feel like doing with little to no thought of planning your workouts other than, "Hmmm, it's raining outside. Guess I will swim today."

Mixed training is when athletes make their workouts progressively harder over a period of time, but never let the body rest or don't plan purposeful rests until the week before an event. Many triathletes see results with this type of training but this method will inevitably result in plateau or over-training which can lead to illness and/or injury.

The most effective way to train, and what we teach our athletes, is periodized training. 'Periodized Training' is when the training year is divided into distinct periods with each having a purpose. Most of our clients start with, and are familiar with, random or mixed training before they start training with us. This is typically the norm.

To train and peak for your big race, AKA your "A Race," we are going to show you how to periodize your race season. Whether your plan is a 12-week, 12-month or even a 48-month periodized training plan, the guidelines and principles are the same.

First start with the date of your "A" race on a calendar and go backwards with how long you have to train. Typically you will want at least 3-months for Sprint or Olympic Distance race, and 6+ months for Half Ironman to Ironman distances.

Below is a pretty straightforward table of the 4 key training phases: prep, base, build and peak/race with the important variables to help in the planning. Use this as a guide to planning your training and race season.

Phase	How Long?	Frequency of Training / days per week	Duration - length of training bouts	Intensity How Hard	Volume Total amount of work
Prep	4-8 weeks	High	Short-Medium	Very Little	Low
Base	12-24 weeks	High	Medium-High	Moderate	Moderate-High
Build	4-8 weeks	Moderate-High	High	Heavy	Moderate
Peak/Race	3-5 weeks	Moderate-High	Short	Heavy	Low

This approach will help you practice effective and efficient workouts. As your most important race gets closer, here are other suggested guidelines to keep in mind.

1. **Quality over quantity:** Everyone has priorities bigger than a triathlon and time must be

TRI "LINGO"

"A-Race"

Used to help you select one (occasionally more) very important race(s). You then tailor your training plan to hopefully have you peak for that race.

optimized. When you train with limited time (60-minutes or less per training session), train at or slightly below your lactate threshold (that muscle burn). This can include steady state intervals at an intensity 3-5 beats below threshold. Total volume of training on that occasion should be no more than an hour (i.e. 4x 15-minutes, or 3x 20-minutes). Each steady state training session should include intervals of 20-minutes and each LT training session should have no more than 10-minute intervals.

2. **Race specific training:** Know what the race course is like- hills, flat, off-road, rough water, pond, etc. When training, visualize what you will be going through and plan your tactics. This will help prevent any race day surprises that you could have or should have known about and prepared for.

3. **Block training:** When you know you have major commitments that will inhibit your training for a couple days, plan on block training. Very simply, block training consists of 2-3 high quality high intensity training days followed by an equal amount or more days of active (or off) recovery days. This is an effective method of increasing the total time of quality training during the week without over doing it.

4. **Rest:** This is a four-letter word for many athletes including myself. But remember, it's during the recovery phase that the body super-compensates and becomes stronger. You will always be better off at your "A" race slightly under trained, than any amount over trained. Take those days off when you need them and listen to your body. Get a massage every 2-3 weeks to thank your body for putting up with all your demands.

As you begin planning your "A" races, have a back up plan. Find other races on consecutive weekends. That way, in the event of a family emergency, illness, a miss timed taper, or just plain old bad luck, all is not lost. This happened to me one year- my bike pedal broke on the way out of the transition area and was unfixable at the race. I then signed up for another race the following weekend that was cancelled because of bad weather. So needless to say, at that point I was ready to hang up the tri-gear until the following year.

GREAT TRAINING SONGS

What makes them great? They either psych you up or simply make you feel good! *[Please don't wear headphones when you ride outside though!]*

- "Two-Step" by Dave Matthews Band
- "Jukebox Hero" by Foreigner
- "Ain't No Other Man" by Christina Aguilera
- "Paralyzer" by Finger Eleven
- "Ex Girlfriend" by No Doubt

There you have it! Pretty simple huh? If you are confused at this point, contact a USAT Certified Coach (I know a great one!) and discuss your season plan and race goals. It is always better to go into the season with a plan instead of randomly training or mixed training format. Structure, focus and motivation equal great results and a phenomenal race year. Train smart and in good health!

TRIATHLETE SPOTLIGHT

Abigail Young

Profile- I am an apparel designer at Reebok for men's Tennis and Running apparel. I was adopted from Bogotá, Colombia at 4 months old and am now 25 years old and live in Braintree. Aside from my athletic life, I have a dog named Benni, am an artist and love painting, jewelry making, woodworking and Latin dancing. My favorite TV shows are Friends, Prison Break, and the Discovery or Learning channels. My favorite band is Dave Matthews Band. I have a great family and I love life.

The "beginning"- My first tri was June 2007 and since then I have completed 7 other tris. Last Summer I did three Olympics, three sprints and a half Iron man. I began road riding four years ago. I wanted to start tris in 2005 but a car hit me on my bike while training. Needless to say, I had to ease off in 2006 because of injuries and also fear. I got back to riding summer 2006 but was not ready to race. Here I am in 2008; I just finished my first Marathon in Disney and plan to do all the Max Performance races as well as 2 ½ Ironmans, two or three Olympic distances, and a couple



- "She Cries" by Turn 3
- "Rehab" by Amy Winehouse
- "Take Me Out" by Franz Ferdinand

sprint distances. I have to say that I think I like long distance races the best.

Athletic Interests- In school I played soccer, and I ski raced. I began running & working out in the 7th grade. I also love hiking, snowshoeing, rollerblading, surfing, dancing, and yoga. I teach spin and Zumba.

Motivation- I am a bit addicted to Triathlons- they are challenging but I love a challenge. I live every day like it's my last and I believe that we should never give up on dreams and always have many goals. My mom is my inspiration.

Goals for 2008- 2 marathons, 2 half iron, 2 Olympic distances, 3 sprints.

HEALTHIER OPTIONS ON THE GO

"NOW THAT'S A TRIATHLETE!"

"I walked outside of the restaurant last night and my brand new bike was stolen right off the top of my car! But I borrowed a road bike from my friend and I'm actually anxious to see what's going to happen today."

So you're on the road driving from an appointment. Maybe you haven't prepared any food for lunch today or you need something quick before your next workout. No energy bars or drinks to be found. Face it; you're ill prepared for your travels. What to do?

When your nutritional strategies have failed and you're looking for a quick fast food option, there are actually a handful of healthier choice options at major market fast food chains. The following is a compilation of nutritional statistics on some of the best and worst options to choose at fast food chains. You might be surprised at the numbers!

Panera Bread

Panera's options feel healthier when you're ordering up at the counter, but beware of some options which can be appetizing, but are loaded with fat.

Good	1/2 Chicken Tomesto Sandwich & Vegetarian Black Bean Soup	400 Calories, 8g Fat, 58f Carb, 26g Protein
Bad	Frontega Chicken Panini	800 Calories, 32g Fat

McDonalds

McDonalds is historically known for its fatty burgers and fries, but has quite a few newer healthy options.

Good	Grilled Chicken Snack Wraps- BBQ	260 Calories, 8g Fat, 28g Protein
Good	Caesar Salad w/Grilled Chicken (sub low fat Balsamic Vinaigrette for Caesar Dressing)	220 Calories, 6g Fat, 12g Carbs, 30g Protein

Quiznos

Who doesn't like a toasty sub on a cold New England winter day?! Quiznos subs are a nice alternative to cold and chilly competitors.

Good	Honey Bourbon Chicken Sub	310 Calories, 4g Fat, 49g Carbs, 20g Protein
Good	Black Angus Steak Flatbread Sammie	200 Calories, 4g Fat, 28g Carbs, 11g Protein
Bad	Roasted Red Pepper SAUCE (just the sauce on a small sub!)	18g Fat
Bad	Honey Mustard SAUCE (just the sauce on a regular sub!)	33g Fat

TRI CONNECTIONS

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[2007 Photo Gallery](#)
See if you made the gallery!

[Suggestion Box](#)
Got any???

[BnS Fitness](#)

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[Vescio MPS](#)

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[Xterra Wetsuits](#)

Wendy's

Yet another fast food chain known for its beefy square burgers, has some nice alternatives for health conscious folks. Also, a nice feature that some may find helpful is Wendy's online listing of Food Allergens used in each menu item.

Good	Ultimate Chicken Grill	320 Calories, 7g Fat, 36g Carbs, 28g Protein
Good	Large Chili	330 Calories, 9g Fat, 35g Carbs

Summary: We know that it's not your standard meal of Brown Rice, Salmon, and Steamed Vegetables, but many of the options above are practicable and doable. A glaring factoid that we found is how much sodium is overly present in a majority of sandwich items, so make sure you drink enough water with each meal. All of the fast food chains offer nutritional information on their websites too, so you can find out stats on your favorites, Bon Appetit!

TRI TIPS: SWIM START TROUBLES & GEL SUPPLEMENTS

Swim Start Troubles

The swim start can definitely be intimidating to both new and experienced triathletes. In fact, one of our 2007 polls said that >72% of racers experienced breathing issues at the swim start. A good way to combat this common occurrence is to mimic the race start in the pool. How? After warm-up, swim fairly hard the first few laps (above your race pace) and then calm back down as you continue the swim. Don't stop and catch your breath but practice catching your breath as you continue so it mimics the race start.

Gel Supplements- when do I take them?

Many triathletes use gels to give them an added boost during a race, works for us too. How do you know when to take them to get the most benefit? The best answer is to experiment with trying to determine when the kick occurs during your training sessions. Training is also the time to test different flavors and quantities. Many of us feel that it takes around 10-15 minutes to feel the effect but everyone is different.

Future issues will cover wetsuit giveaways, featured MA races, and more!

All the best,

Tim Richmond

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with your friends!***

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TRI-ZONE SALE!



Tri-Zone is a premier online triathlon store and has been serving triathletes since 1997. Tri-Zone is very excited to be working with the Max Performance Race Series this season and would like to extend the following **special offer to all Max Performance racers.**

Save 10% on all Tri-Zone nutritional products
Save 15% on all other Tri-Zone merchandise
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