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FUELLING YOUR TRIATHLON

INTRODUCTION

At Secret Training we have developed a range of products to ensure that you can properly fuel your triathlon, optimize hydration & speed of recovery and adaptation. However, no one strategy or flavor will suit every individual, event or conditions. Whatever your choice of nutrition, it is important to have a plan that covers the important factors. The following shows how you can construct a plan and tailor to your needs and preferences.

Whilst there has been increased interest in ketogenic diets and other experimental nutritional strategies race day performance is largely dictated by the management of carbohydrate supply.

This is complicated by a limited ability to process carbohydrate during exercise, hydration demands, gastric tolerance and race logistics. Over-eating can be as detrimental to performance as under-fueling and drinking too much is potentially dangerous.

To get the basics right draw up a chart like the one below from a successful Austria Ironman performance.

	TARGET TIME	PRODUCT	% SOLUTION	QUANTITY	CARBS	ROLLING CARBS/HOUR	
			g/L	ML			
WARM UP/ LINE UP	30	TRAINING MIX	4%	500	20		
SWIM	30	LAKE WATER?				40/HR	
T1		ENERGY MIX	8%	400	32	72/HR	
BIKE	150	ENERGY MIX	8%	1500	120	57.33	Do I need to increase drink concentration?
		1 X BANANA Gel			22		
		3 X ISO			66		
					260	86.7	**OR 2 JUICE BARS & 2 GELS = 90**
T2		ENERGY MIX	8%	400	32		
RUN	90	GELS 3, 2 ISOTONIC , 1 CAFFIENE	(OR JUST SMASH THE CAFFIENE!)		66		
					358G	79g PER HOUR OVER 4.5 HOURS	
EVENT	270					71.6g PER HOUR OVER 5 HOURS	
EVENT + W/U	300			0			
			DRUNK	2800	ML IN /5 HOURS		
APPROX 4.30 - 5 HOURS							

First, think about the event and estimate realistic completion times for each leg of the triathlon - Note these down in the table and leave space for warmup/line up and each transition.

A good starting point is to aim for an average slightly greater than 60g per hour at the end of the run. Since it is generally more difficult to eat whilst running it is a good target to aim for a rolling average of 90g per hour at the end of the bike leg.

SWIM LEG

OK, you might actually be drinking more than you think in the swim and this can have implications for T1 (see notes re salt water) but you won't be stopping for bars and gels. There is often quite some time just before the start when drinks can be consumed; The important question here is 'how much can I consume and comfortably swim after?'. In extreme heat it may be beneficial to start with a large volume but this needs testing in training. Put this in the chart and then think about the carbohydrate of the drink. In the above example the triathlete was happy to drink 500ml of 4% solution, so at the end of a 30 minute swim his rolling average was 40g/hour. TRAINING MIX works well for a warm up/pre race drink because it is made with a special slow release sugar that will not result in an insulin response. If extra carbohydrate or less fluid is required then JUICE BARS are made with similar technology. In long endurance events it is often best to avoid caffeine gels during the early stages as caffeine with carbohydrate can blunt fat metabolism and place greater strain on carbohydrate reserves – save them for later in the day.

In T1 there is a temptation to get out as quickly as possible and this can be crucially important in drafting races, however it is also an opportunity to get ahead on hydration and fueling without the opportunity cost of having to carry extra weight. Again, think about how much you can efficiently drink and still ride comfortably, put this on your chart and again think about the carbohydrate concentration**. BiG Endurance is probably the go to product here**.

NOTE:- if it has been a salt water swim the chances are that you will have consumed a significant quantity of salty water. In this case it might be useful to switch from an electrolyte containing drink to unflavoured Training mix ORS and/or just water and a few gels.

BIKE LEG

For the bike leg it is worth thinking about what drinks and foods are available on the course and how well you tolerate them. Even if they are not your favorite, or not even the best formulations their consumption may be effective compared to the opportunity cost of having to carry more gels and bars. Try to get the nutritional information, put them into your plan and don't get distracted by extra-large portions of confectionary that isn't in your plan! Water is generally easy to pick up so it is always useful to plan to use the on course water, especially if there is any climbing in the bike leg. This means that you can start the race with stronger concentrations than normal or even take some bottles with just powder and add water on route, remember 1 liter of water is 1kg.

Adding carbohydrate to water bottles carried on the bike is the most efficient way to carry more carbohydrate, so often it is worth experimenting with higher concentrations than normal. Secret Training BiG Endurance has been developed to supply up to 200g of carbohydrate per liter. On the basis that you should be aiming for approx. 90g of carbs per hour over a 70.3 distance this can be delivered using BiG Endurance spread over three 500ml bottles

Once you have calculated the carbohydrate average rate per hour with what you can carry on the bike in liquids and what you expect to pick up on the course you can then work out the difference to get to 90g per hour. Gels are generally the easiest way to consume carbohydrate without compromising hydration. A good strategy is to start with REAL FRUIT GELS and move to ISOTONIC GELS when deeper into the race and hydration status is more critical. It is possible to build in some 'solid' food like bars, or even comfort food like chocolate or even a savory snack BUT, think more 'hors d'oeuvres' than full sized burger.

Remember that it is important to train your gut to accept and digest the amount of carbohydrates required to get through a 70.3 or an ironman.

Note: There is merit in including comfort food in the nutritional strategy be it chocolate or chorizo. Something that you really enjoy can produce a dopamine response that will lift spirits and have a real positive effect on performance. Build these treats in, build them in early but remember it's a race not a gastro tour, (Think mini mars bar) run the numbers and remember why they are in the strategy. Technical race nutrition is engineered to maximise fuel and hydration uptake, comfort food tends not to be. Take sufficient for a positive effect rather than gastro distress a mile down the road!

TRANSITION 2

Once you have finished the bike leg and carbohydrate consumption is close to 100g per hour and paced the bike leg correctly then you will be in a good position to take on the run. Carrying food and drinks is more difficult whilst running and it is unrealistic to consume food and drink at the same rate as the bike leg. Finishing the marathon fully fueled and hydrated would also be detrimental to performance. E.g. finishing less than 3% dehydrated will mean that you have been running heavier than you needed to be. T2 again offers the opportunity to fuel and hydrate but think about how much you can realistically drink on the run. You may also consider running out of T2 with a bottle that you will dispose of rather than keep carrying it.

THE RUN

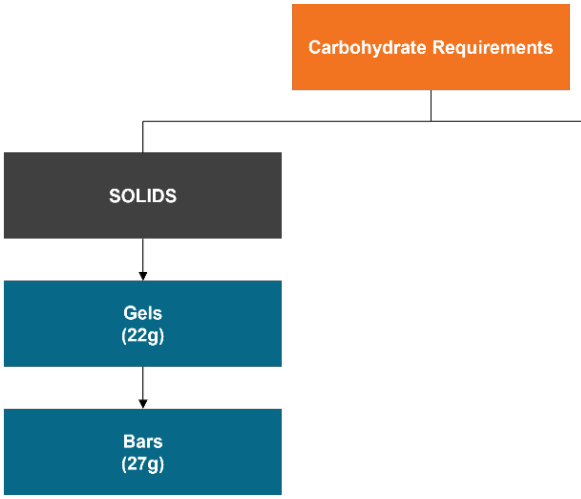
If the law of diminishing returns for carrying food applies during the bike leg it is infinitely more important during the run. On a laboratory treadmill it may be realistic to consume 3 gels per hour. However, if a realistic half marathon time for you is 2 hours i.e that is approx. 6 gels with an 1 taken during transition means results in an average of 60g per hour over the run, and if 1 of these is taken in transition then a more manageable load of 7 gels is required. Try running with a full load of 8 gels and bottle and it may be better to run with 6 and pick up some on course energy supplies to bridge any gap.

If you have managed to keep off the caffeine gels prior to the run now is the time to include them -there is a large individual variation to caffeine so make sure you experiment in training first. Take account of any other caffeinated drinks you may have consumed during the race but 3-4 CAFFEINE & BETAINE gels should give the required lift in performance. ISOTONIC GELS can be especially beneficial during the run since some degree of dehydration is to be expected and even desired. A good strategy would be to pop a caffeine gel at KMs 3,8, 13 and 18. For Hydration let thirst be your guide, expect to lose 2-4% of body mass during the event, do not try to drink sufficient to maintain starting mass.

SUMMARY

Many athletes aspiring for a good time on race day ignore the importance of fueling correctly. So many underestimate the amount of carbohydrates required and the protocols around taking them. It is vitally important to have a nutrition strategy and practice it at least once before race day. You need to know what works and what doesn't. It is not a good idea to only start thinking about your nutrition plan in the few days before the race. In the end it comes down to taking on the correct amount of carbohydrates and then deciding whether you will take those carbs in a solid or liquid form and when you will take them.

- **Have some carbohydrates before the swim (gel or drink)**
- **Have some carbohydrates in T1**
- **Aim for 90g of Carbohydrates per hour on the bike**
- **Have some carbohydrates in T2**
- **Aim for 60g of carbohydrates per hour in the run**
- **Have electrolytes in all your drinks**
- **Carbs can come from drinks, or gels/bars**
- **Plan in some treats**
- **In longer races only use caffeine in the last one, or two hours of your race**



Have a great RACE.

Don't forget your RECOVERY PROTEIN!

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