

This Clinic was a 4 day, 6-8 hour per day event. Classes were long and the depth and breadth of the subject matter was encompassing. Due to this fact, this report will be in parts. This is the first part of the report.

I have waited for this clinic about 2 years. An invitation to this clinic is a sign that a coach is ready to be included amongst the upper level of cycling coaches in the country. Level 1 Coaches must have been Expert (Level 2) coaches for 5 consecutive years and/or hold a graduate degree in science to be invited. The class only takes place every second year and only 25 coaches are invited. Currently there is slightly over 100 Level 1 cycling coaches in the country.

Before we arrived in Colorado Springs at the Olympic Training Center we had some idea of the topics that were to be discussed. Sam Callan, Manager of Education for USAC, had sent us the syllabus. I can only assume that others were thinking the same thing I was about the schedule. At first glance, it seemed like a review of college level exercise science with a bit of practical bike knowledge thrown in for good measure. In the end, some of my presumptions were accurate but overall my assumption was proven inaccurate. The clinic was awesome.

I am not sure where I read this saying but it went something like “you can only learn something when you are ready to learn it.” I think it may have originated from the Zen Koan “when the student is ready the master appears.” This clinic turned out to be such an experience for me. While there were a few jewels shared by each of our presenters over the days of the clinic, it was the “between the lines” thoughts that kept popping into my head that made me realize not only what a great experience this was, but that it seemed I was more than ready and prepared for this level. Aside from the classroom learning, another highlight was getting to know and discuss business and training issues with my peers.

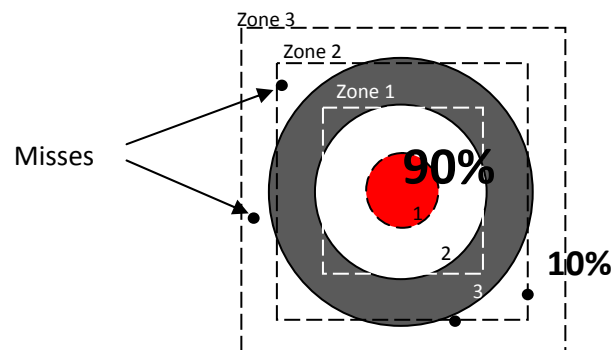
The first day of classes started with author, coach and registered dietician Bob Seebohar. Bob wrote the book *Nutrition Periodization for Endurance Athletes*. In it Bob discussed in detail the concept of varying an athlete's nutrition to meet the demands of training for any specific training cycle as well as the athletes' goals (weight loss for example). I purchased and read the book when it came out last year. So I can't say I was super excited nor did I have high hopes for my first “jewel” of the clinic to come from his presentation. This was the first time I was proven wrong.

First of all, Bob isn't your average RD. RD's by my definition at least, could be the most “stuck in the mud” professionals of all. Asking a RD about nutrition is like asking a computer about nutrition. The computer spits out what was put into it. This is usually the food pyramid. Bob approached this group like I feel he should have. This was a room full of coaches looking for PRACTICALLY APPLICABLE information to take back to their athletes. Well, Bob came through.

He discussed the concepts and information in his book. For those that haven't read it I would suggest it. He discussed, in detail, the amount of macro nutrients needed by endurance athletes in each training cycle in a gram/kilogram format. For those looking for this type of info it is stock full of formulas. After discussing these recommendations the book review seemed to stop and Bob expanded on his concept. He suggested that to determine an athlete's nutritional needs you first must establish what the current training cycle and goals are. For example, during the preparatory or base phase athletes are usually focused on things like building endurance, optimizing body composition, improving metabolic efficiency

and building strength. During this phase of training, intensity is relatively low compared to Race Phase while the training volume is relatively high. During this phase of training you want to decrease the amount of simple, starchy or processed carbohydrates since the body is using more fat for energy at these intensities. Many athletes do not make this change in their diet when they enter the Transition Phase. They continue with higher carbohydrate diets they followed during Racing and end up taking in more carbohydrates than needed and gain a few pounds. With this concept of matching nutrition with specific training needs Bob then helped us to outline what the nutrition might look for each training phase.

Bob then asked us to write down everything we ate the day before. The point he was making with this exercise was this type of quantitative analysis is often frustrating and not as useful as qualitative analysis. He said he felt that keeping a log can be painful for the athlete and ultimately didn't help as much as teaching the athlete about their nutritional needs so they could make better choices regularly. In my experience I have found the same thing. I have to say I was shocked to hear Bob say it. His position instantly left me with the question, "Then, how are you suggesting we help them?" That was when Bob presented us with his newest idea, the FuelTarget.



In Bob's FuelTarget the red Bull's-eye (#1) represents lean protein and healthy fats. The next outward ring (white - #2) represents fruits and vegetables with the outer most ring (gray - #3) representing whole grains and healthier starches. I will discuss the boxes labeled "Zone's" later. So, when choosing our food for meals Bob suggested we "aim" first for our lean protein and healthy fat. By making this your first 'Aim' or focus you insure it will not be omitted. You would then add plenty of vegetables and fruits (#2). This helps to insure plenty of fiber and nutrient density (total nutrients/total calories). Lastly, you decide how many additional carbohydrates you need to meet your caloric needs for the day (#3). The goal is to shoot for 90% of your calories on target and to have no more than 10% of your calories be misses. Before going further, Bob turned the discussion to WHY we should use the FuelTarget.

Controlling or stabilizing blood sugar is an important goal for those interested in optimizing performance and controlling their body composition. When blood sugar ebbs and flows outside of what the body defines as normal we experience difficulty controlling hunger, we experience bonks, energy surges and other non-optimal states. By using the FuelTarget it is easier to match blood sugar levels with blood sugar needs.

Controlling hunger and promoting the feeling of satiety is very effective in controlling body composition. The first two targets, protein/healthy fats and fruits/vegetables when combined (protein and fiber) are shown to be very effective in controlling hunger and promoting satiety. This combination protein and fiber also has a higher rate of thermogenesis than other foods or combinations of foods. Thermogenesis is the energy used by the body in the digestion process. It can make up as much as 10% of the energy used by the entire body on some days.

What I found most interesting about Bob's recommendation was that he wasn't recommending large amounts of whole grains and Starches year round. I have to believe that was shocking to many coaches in the room. Personally, being a believer in Dr. Barry Sears' *Enter the Zone* I wasn't shocked by the information BUT I was shocked that a RD was saying it. I have a friend that is a medical doctor. Back in the late 1990's I was telling him I was convinced that a Zone type diet was better than the pyramid being prescribed by the government, many MD's and RD's. We discussed my ideas but in the end he wasn't buying it. Well, after further research of his own, about 3 years ago that same MD friend came back to me and said, "I have to admit I have come to an understanding that in many ways the diet you were describing with more emphasis on lean protein and good fats was actually in many ways a better eating plan than the pyramid. Since then I have adopted a similar plan."

IMPORTANT – You must understand that replenishing carbohydrates after exercise is a crucial goal for athletes. Bob suggested taking a close look at our current training and establish the actual NEED of carbs and matching the need with the right, or best types of carbs. It is very well documented that not replenishing glycogen levels after exercise is a sure fire track to overtraining (See: *Overtraining – with Dr. Randy Wilbur* in the Plan2Peak.com Resource section for more on this). To reinforce this fact of the need for adequate glycogen replenishment, Bob began a discussion on the concept of Recovery Nutrition.

Bob said that he felt the athlete population has started to receive the message about post-workout nutrition and the concept of the "open window" after exercise. His point of focusing on what he wanted to call "recovery nutrition" is glycogen replenishment can take a full 12-16 hours after a workout. Nailing Post-workout nutrition can **greatly help** to replenish glycogen storage to maximum but without follow-up nutrition over the next 10-14 hours the next workout can be started without having these stores fully replenished. This can start a cycle of training without these glycogen stores being maximized. In this case scenario (starting training without being completely replenished) the next complete glycogen replenishment phase could take as much as 24 hours. (Review my article on overtraining to understand the risk of this scenario.) Glycogen depletion or inadequate glycogen replenishment is found in EVERY PATHWAY to overtraining. In other words, no matter how doctors or scientists trace the causes of overtraining each and every pathway has glycogen depletion somewhere as an issue in its pathway. Bob drove home the point that post-workout nutrition (which most people think is the first 2 hours after exercise) is NOT adequate to insure optimal glycogen replenishment. Athletes and coaches need to think of every hour after training and racing as a chance for Recovery Nutrition.

Let's get back to our discussion on using the FuelTarget. When the athlete moves into a phase of training where intensity increases, like in the Build/Race Preparation Phase and/or the Race Phase they should incorporate more carbohydrate in the source of Whole grains and starches. This will now help

meet the demand of the higher intensity work (the carbohydrate depleting work) being done by the athlete. To help visualize this concept of changing demands Bob created Zone's (the boxes) around the dart board. Zone 1 is the smaller box used during lower intensity higher volume work phases (Base) when athletes are trying to control weight or lower volume phases like Transition Phase. The larger box Zone 2 is for Base Phase for athletes that might not need as much body composition management. Zone 3 is reserved for high intensity and relatively high volume phases like Build and Race Phases.

As you can see from The FuelTarget, Zone 1 does include some whole grains and starches (the corners of the boxes extending into the third ring) while Zone 2 includes more whole grains and starches and adds a few "misses". To begin using Bob's FuelTarget, he recommended that each individual athlete should take the time create 3 lists of food. Each list represents one of the rings of the dart board. Start with a list of all the lean proteins and good fats, foods like chicken breast, pork loin, fish, egg whites, almonds, olive oil etc. Then create a list of your favorite fruits and veggies and lastly a list of your favorite whole grain and starches. Then you, or you and your coach, can determine which phase of training you are in thereby determining which Zone you should target (and there for which of your lists). Don't forget to take into account body composition goals. Some people need to optimize body composition before they can achieve optimal potential. The Transition and Base Phases are the perfect time to do that. By strictly following Zone 1 eating and really focusing on not getting glycogen depleted by watching the "corners" this type of athlete can maintain the energy levels needed to complete the workouts in these phases while optimizing their body composition during a non-critical "performance or result centric" training phase. Waiting until Race Phase to address body composition can be a big problem for performance and recovery.

So, for quick review on the steps:

1. Determine which training cycle you are in, and the demands of this training
2. Determine personal goals (like body composition)
3. Determine daily nutrition - Create your 3 lists (#1 Protein/healthy fats – #2 Fruits/Vegetables- #3 Whole grains/Starches)
4. Determine training nutrition – Which Zone matches with the athletes training cycle



Peter Cummings specializes with training with Power meters and the use of the TrainingPeaks platform and WKO+. He was certified by the American College of Sports Medicine in 1993. He is a Certified and Licensed USA Cycling Level II (Expert) Coach, and Certified USA Cycling Skills Instructor. As a health club owner and coach he has directed and overseen the programming of over 10,000 individual and has been racing bicycles since 1991. His athletes have won 5 Nationals Championships, over 15 State championships and many other Local championships and races. He is available for consultations, presentations, testing, programming or coaching. Those interested can contact him at Peter@Plan2Peak.com. For more articles on training and racing with power and other cycling specific topics by Coach Cummings visit www.Plan2Peak.com.