

# FUELING TACTICS: THREE WINNING STEPS TO PERFORMANCE EATING. STEP TWO — ALTER YOUR CARBOHYDRATE INTAKE RELATIVE TO YOUR ACTIVITY

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*Dave Ellis began as a strength coach at the University of Nebraska in 1982. While studying dietetics he started to counsel athletes about body composition and nutrition. Over time, demands grew to the point where it consumed his energy so less time was allocated to being a strength coach and more time to counseling in matters such as nutrition and body composition. That led to a full-time job as sports nutritionist at the University of Wisconsin, Madison. He returned to Nebraska four years later, in 1994, and is currently the Director of Performance Nutrition. He has a full-time assistant to work with women's sports and seven paid grad students to help with all the other sports. The program currently works with 700 athletes in 24 sports. [Ed.]*

The first step, discussed in Volume 7 Number 6 of Performance Conditioning Cycling, revealed how stress reduction through natural sources of vitamin A, C, and E could be accomplished in the metabolic mix of proper athletic nutrition. Also presented was the philosophies behind fueling tactics. In nutrition, you have to think about meals at home and on the road, and be involved with keeping a team or your athlete fueled throughout the year. It becomes a tactical experience of management.

Fueling tactics is a three-step system. Every time we write a menu, whether eating at home or on the road, these three steps are accomplished with regard to the food items offered at the meal. Before moving to step two, be sure to review the information presented in step one. Fueling tactics is all about supporting athletes through the rigors of day-to-day, week-to-week, and month-to-month training. If the athletes have less down time due to illness, better energy levels and faster rates of recovery, they will have the potential to outwork the competition. Smart work, and more of it.

## Carbohydrate Nutritional Principle To Live By

There is no doubt of the preferential role that carbohydrates play as high energy foods for hard working muscles, and that storage forms of carbohydrate in our muscles are limited

when compared to body stores of fat. Outworking the competition starts at practice and carbohydrates are going to play a critical role in helping you with the quality of your workouts. You don't just try to eat right the day of competition. In fact, we make it a rule to not try anything new just before a competition.

To help make sure that we have enough carbohydrate to do work and then recover from that work, we teach our athletes, "When building meals before and after activity, try to eat about half the food on your plate from a variety of carbohydrates."

This principal should not be compromised when the quality of performance counts. But when an athlete is not working out, on off-days or during breaks between seasons, do they need to eat the same way as they do on an active day when the quality of their performance is being monitored? The answer is no. Something has to give to lower an athlete's calorie intake to correspond with their lower calorie output. We teach our athletes to reduce their total carbohydrate intake at meals when not active in order to give fat a chance to contribute as an energy source to a greater degree.

Fat is best suited to keep pace with energy demands when idling about on inactive days. If we eat half the foods on our plate from carbohydrates on inactive days, our bodies will preferentially burn the carbohydrate over fat even though fat could have predominantly met our energy needs of an idle day when just hanging out until the next practice.

## Third Choice Carbohydrates Hidden Problems

The metabolic mix changes. The carbohydrates we ask our athletes to reduce from their intake on inactive days are the fast digesting ones, classified in the accompanying chart as "Third Choice Carbs." These are low fiber or high sugar foods that send your blood sugar soaring which, if done frequently on inactive days, can result in some very unhealthy consequences starting with body fat accumulation and later in life, even increase the incidence of diabetes and heart disease.

Because most carbohydrates are by nature low in fat, and food labels focus on fat, many Americans have fallen prey to the idea that grazing on low-fat, high-carbohydrate foods between meals, then eating high carbohydrate meals every day, is the way to go. In reality they have left themselves exercise dependent to significantly mobilize their own fat stores for energy. This is one of the reasons why Americans are eating less fat and yet are fatter than ever. We want our athletes to learn how to first eat slower digesting carbohydrates that we classify as "Best or Second Choice" when building a meal and let the "Third Choice" carbs into the mix when the demand for energy is at it's highest — before and after activity. When we turn the thermostat up at practice or on game day do not compromise your carbohydrate intake. If, at the start of the preseason an athlete is overweight and you have to compromise your calorie intake to manage weight in order to maintain, take this approach:

- keep your carbohydrate intake low all day during off-days (maybe 1-2 small servings of best or second choice carbohydrate with each meal).
- early in the work week (Monday and Tuesday) increase the carbohydrate intake to half the foods on your plate or tray at the post workout meal only.
- from midweek on, gradually increase the carbohydrate intake at the pre-activity meal up to half the foods.
- be liberal with your carbohydrate intake at all meals and snacks 24 hours prior to competition.


When athletes are up-tight on game day they deplete carbohydrate at a faster pace than normal, so limiting carbs before, during or after competition is not advised. Never take it upon yourself to cut calories in season from carbohydrates on active days until you discuss the situation with your nutritionist, coaches or trainers. If they agree it is necessary, then at least they will understand you may be dragging early and

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mid week until you get your carbohydrate intake back up for the ensuing weekend training, competition or any physical testing. If you take care of business in the off-season with regard to major changes in your body composition, like gaining muscle or losing body fat, you won't have to do anything in-season that will compromise your ability to compete at practice.

To summarize, we have more latitude to eat "Third Choice Carbs" at meals before and after activity. This

is not to say you can never have an ice cream cone after dinner on an inactive day, or that you can't have a piece of hard candy late in the afternoon when you are feeling fatigued on an idle day. Moderation and small amounts are the keys to remember with "Third Choice Carbs." on inactive days. Just promise me that on inactive days you will not live off of high sugar cereals, bagels, pretzels and soft drinks with the idea they would not make you fat because they have low fat grams on the label. Be sure to watch for the third and final step in proper fueling tactics for the athlete. 

### More Information Please!

Be sure to watch for Step Three in future issues. For a copy of the poster Performance Meal Guide, item #AZ218P that includes all the three steps with food selections call 1-800-578-4636. Cost is \$4.95 plus \$1.95 shipping and handling. Also available is the Fueling Tactical Video #AZ218V for \$19.95 plus \$3.95 shipping and handling. For both the poster and video #AZ218PV, the cost is \$23.95 plus \$4.95 shipping and handling. You can contact the author by telephone at 402-472-3333 or send him an e-mail at dellis@huskers.unl.edu

# 3 WINNING STEPS — PERFORMANCE MEAL GUIDE

### Best Choice Carbs

- **BEANS:** Black, Brown, Butter, Kidney, Navy, Green, Red, Soy.
- **PEAS:** Split, Dried, Chickpeas (garbanzo beans).
- **PASTA:** Fettuccini or Egg Noodles.
- **GRAINS:** Barley, Rye or Lentils, Supro® Protein Enriched: Pasta/Noodles, Grits, Oatmeal, Soups or Breads.
- **VEGETABLES:** Amaranth, Artichokes, Cucumbers, Pickles, Eggplant, Mushrooms, Onions, Turnips, Water Chestnuts, Summer Squash (Crookneck, Scallop, Zucchini) or Acorn Squash.
- Most Vegetables Listed in Step 1.
- **FRUITS:** Cherries, Pears, Plums, Nectarines or Blueberries.
- Less Than 10g. Sugar (Sucrose) Fructose.

### Second Choice Carbs

- **WHOLE GRAIN BREADS & ROLLS:** Whole Grain, Multi-Grain, Oatmeal, Bulgur Bran, Rye, Pumpernickel, Sourdough, Bagels, Pita Bread, Taco Shells, Flour Tortilla.
- **GRAINS:** Barley Flour, Buckwheat, Bulgur, Couscous, Cornmeal, Whole Meal Rye, Whole Wheat Flour, Oat Bran.
- **RICE:** Brown or Wild.
- **MUFFINS:** Apple, Bran, Blueberry, Carrot, Corn, Oatmeal.
- **BREAKFAST CEREALS:** All Bran, Bran Chex, Cheerios, Cream of Wheat, Life, Muselix, Rice Bran, Mini Wheats, Shredded Wheat, Special K.
- **CRACKERS/SNACK CHIPS:** Rye Crisp, Wheat Crackers, Wheat Thins, Water Crackers, Popcorn.
- **PASTA:** Linguine Noodles, Macaroni, Ravioli, Spaghetti, Pasta Noodles, Tortellini, Vermicelli, Orzo.
- **VEGETABLES/STARCHES:** Acorn Squash, Butternut Squash, Beetroot, Sweet Corn, New Boiled Potatoes w/Skin, Boiled White Potatoes, Sweet Potatoes or Yams (unsweetened), Green Peas, Grits.
- **BEANS/PEAS:** Baked Beans, Blackeyed Peas, Pinto Beans, Ramano Beans, Lima Beans, Haricot (Navy) Beans.
- **SOUPS:** Black Bean, Green Pea, Lentil, Split Pea, Tomato, Pasta or Noodle Based.
- **FRUITS:** Apples, Unsweetened Applesauce, Bananas, Cranberries, Grapes, Raisins, Unsweetened Apple Juice, Tomato Juice, Most Fresh Fruits.
- Unsweetened Fruit Juices Listed in Step 1.
- **SWEETS:** Pound Cake, Banana Cake, Sponge Cake, Oatmeal Cookies, Digestive Cookies.
- More Than 10g. Sugar, Lactose.
- Sports Alliance Energy Mix & Recovery Mix or Bar.

### Third Choice Carbs

- **WHITE BREAD & ROLLS:** Non-Whole Grains, Bread Sticks, French Bread, Kaiser Rolls, Croissant, Crouton, Doughnut, Danish, Melba Toast, English Muffin, Animal Crackers, Angel Food Cake, Vanilla Wafers.
- **CEREAL:** Non-Whole Grains, Coco Pops, Corn Bran, Corn Chex, Corn Flakes, Crispix, Golden Grahams, Grapenuts, Total, Puffed Rice, Rice Crispy Treats, Weetabix, Granola, All the Cartoon Character Cereals.
- **GRAINS:** White Rice, Instant (Parboiled) Rice, Millet, White Flour, Tapioca, Brown Rice Pasta, Rice Cakes.
- **QUICK BREADS:** Crepes, Pancakes, Waffles, Biscuits.
- **CRACKERS/SNACK CHIPS:** Pretzels, Cheese Puffs, Corn Chips, Tortilla Chips, Saltines.
- **POTATOES:** Hashbrowns, Mashed, Baked Russet, French Fries, Fried Chips.
- **VEGETABLES:** Parsnips, Rutabaga, Refried Beans, Fava Beans (Broad Beans).
- **FRUITS:** Dates, Figs, Kumquat, Prunes, plus A Few Other Concentrated Fruits Identified as "3rd Choice."
- **SWEETS:** Sweetened Soft Drinks, Teas, Fruit Drinks, Frozen Ice Milk, Yogurt, Frozen Custard, Most Candy Bars, Hard Candy, Chocolate, Maltose, Glucose, Honey, BBQ Sauce, Catsup, Cocktail Sauce, Jam, Jelly, Molasses, Syrup, Teriyaki Sauce or Glaze.

### Step #2 Alter Your Carbohydrate Intake Relative To Your Activity...

- When building meals before or after activity try to eat about half the food on your plate from a variety of carbohydrates...
- When not active, reduce your total intake of carbohydrates especially "Third Choice Carbs" (high insulin response)...
- Instead, select "Best or Second Choice Carbs" (low insulin response)...