

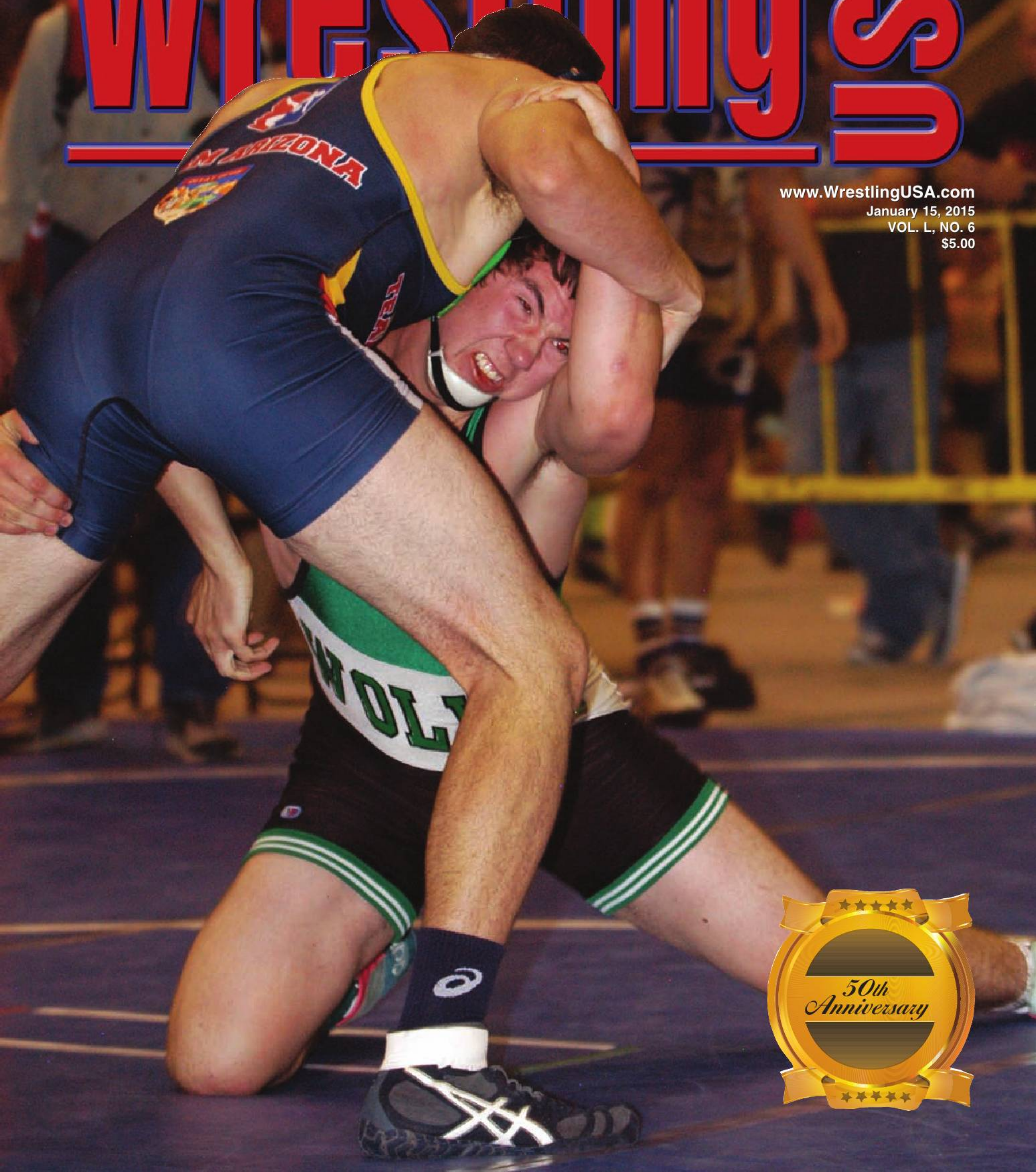
# Wrestling USA

[www.WrestlingUSA.com](http://www.WrestlingUSA.com)

January 15, 2015

VOL. L, NO. 6

\$5.00



# THE THREE RS OF NUTRITIONAL RECOVERY

By Matt Brzycki

**M**ost coaches and athletes think that recovery simply means scheduling enough time between workouts and getting adequate rest (sleep). Although this is certainly a large part of the process, it's also important to address the nutritional aspects of recovery. Clearly, proper nutrition – especially following an intense activity – can accelerate your recovery and better prepare you for your next physical challenge.

## NUTRITIONAL TACTICS

As part of the recovery process, athletes must refuel, rehydrate and repair. Let's take a closer look at the three Rs of nutritional recovery.

## REFUEL

Here, fuel refers to the source of energy that's used to perform physical work. For the most part, your body relies on a mixture of carbohydrates (carbs) and fat to provide energy. (Protein can also provide energy but its use is negligible at rest and minimal during exercise.)

Whether your body uses more carbs or more fat as fuel depends on the intensity of an activity. At lower levels of effort – like sleeping, sitting and walking – your body prefers to use a greater percentage of fat; at higher levels of effort – like running, drilling and wrestling – your body prefers to use a greater percentage of carbs. In short, as the intensity of an activity increases so does the reliance on carbs.

So after an intense activity, your levels of carbs are depleted;

your gas tank is on "E" and needs filling. It makes sense, then, to consume carbs, refilling your gas tank in preparation for the next time that you step onto the wrestling mat or into the weight room. (Carbs are stored in your liver and muscles as glycogen and circulate in your bloodstream as glucose.)

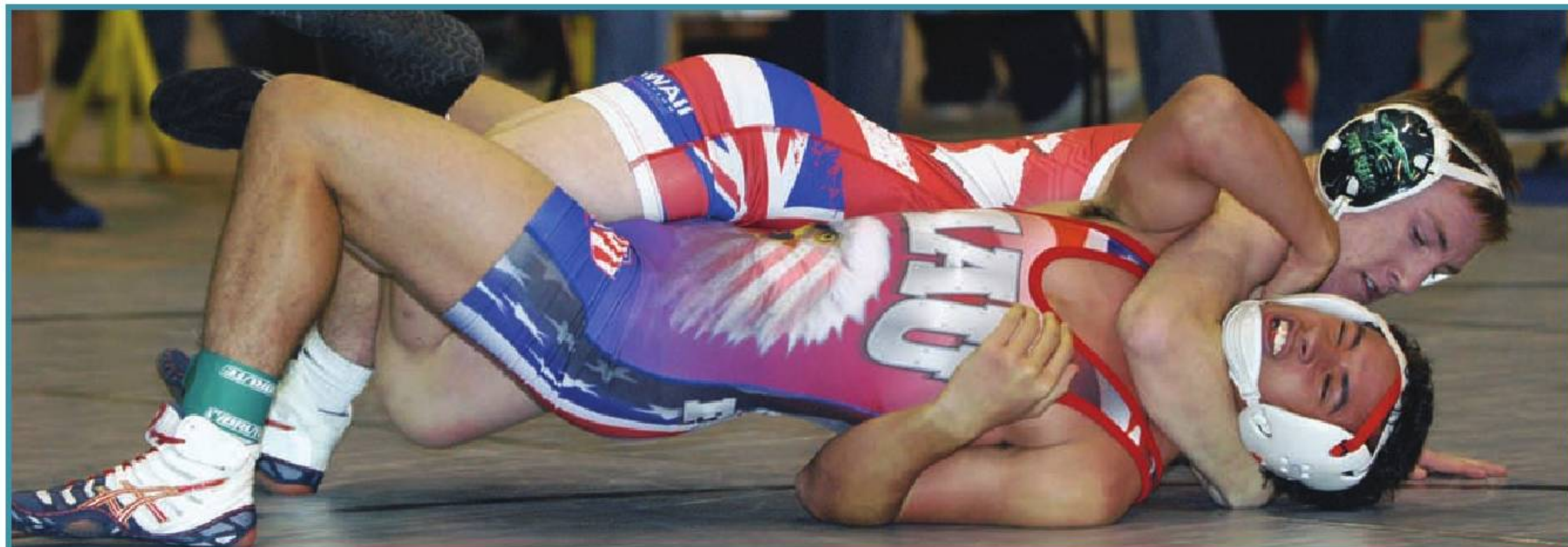
And the sooner that you refuel, the better. Delaying the consumption of carbs significantly reduces the rate at which your glycogen stores are replenished. This will impede the recovery process and impact your future performance.

After an activity, fluids might be the best choice to deliver carbs. For one thing, in the aftermath of an intense activity, your appetite is suppressed which makes fluids more appealing than solid foods or a meal. In addition, fluids tend to be more readily accessible than foods. Fluids also help to cool your body after training. Finally, as you'll see in a bit, fluids rehydrate your body.

Guideline: Consume about 0.5 grams of carbs per pound of your bodyweight within 30 minutes of completing an activity. Repeat this again within two hours of completing the activity. Say, for instance, that you finished training at 5:00pm. If you're 150 pounds, you should consume around 75 grams of carbs – or 300 calories of carbs – by about 5:30pm and another 75 grams of carbs by about 7:00pm.

## REHYDRATE

Water is good for replacing the fluids that you lose during exercise. However, a rehydration beverage – aka a sports drink – can work better than water since it also offers electrolytes (most notably, sodium and potassium) as well as some carbs



2014 Monster Match - 126 lbs. Zachary Wigzell (All Phase) using a turk to turn Riley McSherry (Rapid City) and work for a fall. Wigzell finished the match with the fall at 3:44. Photo by Dean Vande Berg.

which help you to refuel. (Because all sports drinks are different, you should read the Nutrition Facts panel to be sure of the exact contents.)

Guideline: Drink about 16 ounces of fluid for every pound of bodyweight that you lose while training or wrestling. Note that the volume of fluid that's needed can vary greatly from one athlete to the next based on such factors as age, size, level of fitness and the duration and intensity of an activity as well as the environment. (Cold, heat, humidity and altitude all increase the need for fluids.)

## REPAIR

There's some evidence to suggest that combining carbs with a small amount of protein can expedite recovery by improving the rate at which your glycogen stores are replenished. However, it appears that simply increasing the quantity of post-activity carbs will accomplish the same thing. Nonetheless, consuming a small amount of protein after completing an intense activity may aid in the repair of muscle tissue.

An easy, inexpensive and effective way to get high-quality protein after training, practicing and competing is drinking low-fat chocolate milk. It's believed that low-fat chocolate milk has a near-perfect blend of carbs and amino acids – all nine essential amino acids, in fact – which helps to stimulate the synthesis of muscle protein. As an added benefit, low-fat chocolate

milk supplies a number of key nutrients, including several vitamins (A, D, B-12 and riboflavin) and minerals (calcium, sodium and potassium).

Guideline: If carbs and protein are consumed in combination after an activity, it should be in a 4:1 ratio, meaning 80% carbs and 20% protein. Staying with the previous example, a 150-pound wrestler would consume 120 grams of carbs and 30 grams of protein instead of 150 grams of carbs. (Note: Research shows that the rate of muscle protein synthesis levels off with an intake of about 20 grams of protein so this recommendation offers more than enough to achieve the desired result.)

## THE LAST REP

Your performance as an athlete will never be as successful as possible if you can't recover from training, practicing and competing. For complete recovery, you'll need to schedule enough time between workouts, get adequate rest and incorporate the three Rs of nutritional recovery: Refuel with carbs, rehydrate with fluids and repair with a small amount of protein.

*Matt Brzycki has authored, co-authored and edited 17 books on strength and fitness including four that are devoted to wrestling. His latest book is A Practical Approach to Strength Training (4th edition).*



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