

the **CrossFit** JOURNAL ARTICLES

On Recovery

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As a CrossFitter you have likely been: fatigued, sore and generally beat up at one time or another, or perhaps continuously! This is a result of training. What will largely determine the results you obtain from training is a multifaceted concept, recovery. Adequate recovery allows for more training and ultimately improved performance. In some respects recovery is the Night to our exercise Day (this analogy will be more true than we can imagine). In exercise we release hormones, mount immune responses, cause inflammation and use things like glycogen and lipids for fuel. Recovery complements this process. Accelerating the things we want and mitigating the less desirable processes will provide more return on our exercise investment.

Much in the spirit of “World Class Performance in 100 Words” recovery comes down to: Eat a Zone favorable or other hormonally intelligent diet with predominantly antioxidant rich “Paleo” foods. Sleep 8–10 hrs per day in a completely dark room. Go to bed as early as possible. Laugh. Avoid excessive stress.

This is admittedly a black box approach to the recovery issue. One need know nothing about why these recommendations will optimize recovery to reap ALL the benefits. Occasionally however understanding some “whys” will improve both implementation and compliance, so let’s look at these topics a bit more closely.

Nutrition

A quick search of Google with the topic “post-workout nutrition” produces an impressive chunk of information concerning the nutrition and recovery. Most of the recommendations seem to point towards a combination of carbohydrate and protein to optimize muscle gain

and glycogen replenishment. Scientific literature and empirical evidence seem to support this plan but I recommend a more moderate approach than most of the bodybuilding and endurance sources that love cheap insulin spiking carbs like maltodextrin. I like to see lean protein sources combined with predominantly fruit, yams/sweet potatoes or squash for the carbs. This ensures variety, low glycemic load and high nutrient density with an emphasis on antioxidants. The basic protein/carb plan regardless of composition appears to be beneficial for the aforementioned anabolic action directly by non-insulin mediated nutrient transfer but also indirectly by suppression of cortisol. With the smart selection of antioxidant rich plant materials, one is also reducing inflammation and providing alkalinizing material for acid/base buffering. The acid base buffering can facilitate greater workout intensity and may be important in deep sound sleep. Good stuff!

For those familiar with the Zone it should be obvious that following a basic Zone diet will fall into step with these recommendations. There is however a post-exercise window of enhanced insulin sensitivity. This is a period of time in which nutrients are transported into the cell without the action of insulin. Some make the argument for a larger amount of carbs to be consumed at this time. For Zoners this could mean shifting some carbs from other meals to the post exercise window. This is heresy for Zone purists but many have found success with this approach. Whether one follows a strict Zone diet or experiments with nutrient timing to take advantage of post exercise insulin sensitivity, I think the combination of hormonal control and food quality ensure that the nutrition side of recovery will be addressed.

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On Recovery (continued...)

Supplementation is a pretty hot topic with an enormous array of potions guaranteeing a competitive edge. I think very few are worth considering and here they are:

Creatine – 2-5g per day may be beneficial for a wide variety of reasons. Check the CrossFit message board archives for more details.

Alpha Lipoic Acid – 500mg per day. ALA enhances insulin function, acts as both a fat and water-soluble antioxidant and is a key player in the production of our own antioxidants.

Phosphatidylserine – 200mg per day. Seems to reduce cortisol.

Vitamin C – 500mg post workout and before bed may reduce cortisol and mitigate inflammation. Avoid consuming vitamin C with iron rich foods.

Sleep

I likely recommend this book 100+ times each year but here comes my plug again, *Lights Out: Sleep, Sugar and Survival* by TS Wiley and Bent Formby. If you have not read it yet, please do so. If you have read it already, give it a shot again. The bottom line with sleep is get 9–10 hrs per night in a completely dark room. This will normalize inflammatory conditions, autoimmunity, insulin resistance and hormone status (good things like growth hormone, testosterone and estrogen).

Remember the last section discussing nutrition? If you lack sleep you do not digest or absorb food normally. All that effort to weigh out perfect Zone block meals is derailed. Do you also remember the little line I mentioned about nutrition affecting sleep? This is where all this recovery stuff gets very interwoven: Sleep affects digestion, nutrition affects sleep. Things like stress affect both.

Stress

Psychologists have quite an array of terms for “stress”: (real, perceived). What we are concerned about is stress that: raises cortisol, compromises immune function and disturbs sleep and digestion. Interestingly, if one is well fed and adequately rested one is more resistant to stress. I hope I am getting across the highly intertwined and selfreinforcing nature of all this. If one is under stress it becomes even more critical that nutrition and sleep are as good as they can be.

Contrast Hydrotherapy

It may seem amazing that one activity could have a positive bearing on sleep, digestion and stress, however some do exist. One of my favorites is contrast hydrotherapy, or simply alternating hot and cold water soaking. In an ideal world one would have a fairly hot tub of water, say 100–104°F and a cold tub, say 34°F. One would sit in the hot tub for 3–5 min and then go immediately to the cold tub for 30–60 seconds. This process could be repeated 3–5 times with a profound state of relaxation and euphoria being the result. Coldwater immersion seems to be a part of many folk medicine traditions and there is an impressive body of evidence that indicates the practice improves insulin sensitivity and reduces stress and inflammation. If one does not have tubs of hot and cold water available alternating the shower temperature is a pretty close second.

Putting it Together

How does one integrate this information into a daily program? Here is the action item list:

1. Eat a Paleo Zone favorable diet. Possibly add a few select supplements.
2. Sleep 9-10 hrs per night in complete darkness.
3. Find ways to manage stress. Watch Dr. Phil and Oprah, if they have no usefull advice at least you can laugh at them.
4. Add a contrast hydrotherapy session post workout and prior to bed.
5. If one area of recovery must be compromised the others need extra attention if disaster is to be avoided. Keep in mind that recovery is a holistic, multifaceted process.