Recovery Nutrition

Training for an event like the Dubbo Stampede – be it the 5km, 10km, Half Marathon or Full Marathon, can place considerable demands on your body. While each distance places different demands on your body, considering your recovery needs initially (and especially) during your period of training, but also after the “race” itself, is a vital aspect of whether you will enjoy the run on the day.

Given the varying distances that one may be training for, it is important to understand that recovery nutrition will vary depending on how much training you are doing – both in terms of the length of your training session, whether you are doing multiple training sessions in a day, and the type or intensity of the training session.

What is Recovery Nutrition and Why is it Important?

For the purposes of this blog, “Recovery” is defined as a return to a normal condition or state of health, mind or strength. This usually involves a number of aspects including wearing compression garments, getting adequate rest and sleep, scheduling regular massages, hydrotherapy, and planning and organising one’s nutrition. We know that recovery nutrition is particular important in the immediate period following a training session due to the body releasing key enzymes to digest, metabolise and store consumed carbohydrate as glycogen (which we use later to fuel our next session), and this has a positive impact on our next training session. These enzymes are at their most efficient in the first hour after training and continue to work for another 3hours.

What are the Goals of Recovery Nutrition?

The goals of nutrition after exercise will vary for each person, but in general some main goals include:

1. To replenish fuel used (i.e. glycogen stores) during the training session or race
2. Provide protein and essential amino acids
	1. To help repair any muscle damage caused during the exercise session
	2. To synthesise new muscle stimulated by the exercise session
3. Replenish and restore fluids and electrolytes lost in sweat
4. To support the immune system by providing adequate energy and protein for key bodily processes so there’s enough left over to fight infection should you become exposed.

When adequate nutrition along with the right nutrients are provided to the body in a timely and targeted way, the body can quickly adapt to the training demands being placed upon it. This in turn enables the body to elicit gains from the training program, help you develop in strength and endurance, and also train at a higher intensity.

However, as mentioned above, what each person is going to require is highly individualised and is based on workload, type, intensity, duration, body size, body composition and period of time before the next session. Essentially, this is where an individualised plan from a dietitian with training in Sports Nutrition can be a valuable tool in your training kit!

REFUELLING – WHAT, WHEN, HOW MUCH?

**What:** Recovery meals and snacks should contain Carbohydrate to restore muscle glycogen stores, Protein for muscle repair and development and plenty of fluids and electrolytes to replace any fluid lost in sweat

Carbohydrates include *sweetened dairy foods* like flavoured milks, flavoured yoghurt, dairy desserts, or *grain based foods* like breads, rice, pasta, muesli bars, or *fruit* like bananas

Protein includes meats like chicken, lamb, beef, turkey pork, or eggs and dairy foods such as milk, cheese and yoghurt, or plant proteins such as soy, chickpeas, lentils, nuts and seeds

Fluids and electrolytes can be sourced from specialised sports drinks which enhance the uptake of fluid in the gastrointestinal tract due to their balance of sodium, potassium and glucose OR another naturally rehydrating fluid is Dairy milk due to its natural balance of electrolytes.

**When:** starting to refuel either immediately or at least within the first hour after a training session is beneficial for a number of reasons. But 2 major ones are:

1. The body has key enzymes in abundance for the synthesis of glycogen during this time and they start to decrease after 1 hour and more rapidly after 4hours after training
2. As we exercise, we use up glycogen, and this starts to trigger stress hormones to be released. It is thought that consuming carbohydrate during and immediately after exercise can counter the rise in stress hormone production and consequently may also reduce the negative impact of exercise on the immune system

As stated above though, there is a 4 hour window after training/exercise in which the body’s glycogen storage enzymes are elevated, so refuelling within this period is your best strategy – so if you can’t eat or drink something in the 1st hour, then you still have 3hrs to refuel appropriately.

If, however, you have multiple training sessions planned for the 1 day, then re-fuelling within the 1st hour really is a must in order to provide your muscles with the building blocks to repair and prepare in time for the next session (and make that next session worth it!)

**How Much:** This really depends on how long your training session has been for OR if you are doing multiple sessions on 1 day.

*An Important thing to Notes: You only need to apply active Refuelling Strategies on Days that you train. On rest days, resume your normal diet.*

In General:

If your training regime consists of exercising a couple of days a week, or even once a day for a short duration (e.g. 30-60mins at light intensity), then you should be able to get the nutrition you need from your normal diet.

However, once your training increases to **daily >60min sessions at moderate-high intensity, or twice daily sessions, or sessions within quick succession** (e.g. Morning then evening, or evening then next morning), then the Nutrition strategies outline below will become vital.

Carbohydrate: 1.2g/kg of Body weight per Hour for the 1st 4hrs after training

* E.g. 70kg runner requires 1.2kg/kg/hr for 1st 4hrs after training
	+ 1st hour: 70 x 1.2 = 84g Carbohydrate
	+ 2nd-4th Hours: 84g x 3 = 252g Carbohydrate
	+ After 4hrs resume normal diet

Protein: 20-30g of High Biological Value protein, (i.e. Will contain all the 9 essential amino acids we can’t make – so either animal protein or carefully combine plat protein)

* This amounts to approximately 100g serving of meat
* Research also shows that protein absorption and gains are maximised when eaten roughly evenly at each meal during the day, rather than mainly at 1 meal

Fluids: Replace 120-150% of the fluid lost over the next 4-6hrs after training.

* To work out your average sweat rate, weigh yourself before and after a run, factor in how much water you have consumed and work out the difference.
* E.g. 70kg runner before training, consumes 600mL water during training, weighs 69kg after training
	+ 70-69+0.6 = 1.6kg
	+ This runner lost 1.6kg of fluid during their training session
	+ 🡺 needs to replenish between 1.9-2.4L over the next 4-6hrs

PUTTING IT ALL TOGETHER

There’s no one “best” option for what to eat after exercise. Everyone has different foods they like to eat, and what to go for can depend on convenience, how much time you have, portability, storage availability, flavour preferences etc. However, an important point I want to get across though is that you CAN get your nutrition from everyday foods – you don’t have to reach for or rely on specialised sports nutrition supplements or powders that are both expensive and not always overly nice.

Dairy foods such as flavoured milk, smoothies or fruit yoghurt can be a great option as they can provide carbohydrate, protein, fluid and electrolytes ticking all of your recovery goals in one go. Some other ideas that you may like to consider include

* Lean chicken and salad roll
* Bowl of muesli with yoghurt and berries
* Fresh fruit salad topped with Greek yoghurt
* Spaghetti with lean beef bolognaise sauce
* Chicken wrap with salad and cheese
* Small tin of tuna on crackers plus a banana

NEED MORE ADVICE OR WOULD LIKE A PERSONALISED NUTRITION TRAINING PLAN?

Feel free to give me a call at the Dubbo Specialist and Rehabilitation Centre

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