



**National  
Performance  
Nutrition  
Newsletter**

**May 2011**



**Rugby Grub - Issue [3]**

## Maintaining the Gains... Sustaining Offseason Gains

With such a focus on game preparation & the necessary recovery required to play at your best each week, training loads inevitably back off during the season. This has the potential to reverse some of the great body composition changes achieved during the pre-season, with the potential for...

- **Unwanted loss of muscle size & strength**
- **Unwanted gains in body fat**
- **A combination of muscle loss & fat gain**

Preventing these undesirable body composition changes can often be addressed by making some adjustments to your daily diet. Think back to previous seasons & ask yourself if any of the above scenarios are common to you. If so, use the tips below to help ensure these unwanted changes don't occur in 2011 or beyond.

### Unwanted loss of muscle size & strength

Given the frequency of weight training sessions back off during season, some athletes struggle to maintain muscle mass, especially when they can't put 100% into lifting due to muscle soreness or fatigue. The key is to ensure you make the most out of the session/s you do have scheduled because if you can, there's no reason why you can't maintain your size & strength, even on just one quality session a week.

### Unwanted weight gain

Weight gain can be a common concern for many athletes during season as there are days where you aren't doing the same amount of work & thus energy requirements are lower yet appetite often remains the same. There's also more time available & issues associated with regular buffet meals when on tour. The solution is to make smart choices on these lighter training days during the week... selecting foods that make you feel fuller for longer.



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*Peta, Kate, Christine, Sophy & Gary*

**Take Home Tip...**

*Your daily nutrient needs can vary markedly during the week when in-season. Focusing more of your energy needs on heavier training days immediately before, during & after training helps ensure your energy intake can vary from one day to the next (given you won't be having this on non-training days). This also supports other nutrition goals of pre-exercise fuelling & post-exercise recovery.*

## Sustaining Offseason Gains cont...

### **Stick with the following tips to prevent unwanted size & strength losses during the season...**

- Always take a hit of carbs within the 60-90 min before weights. Research shows taking carbs before a gym session increases the number of reps you can do during a session.
- During a compound session with weights followed by sprints (or similar) or vice versa, use a sports drink throughout the session. It gets fuel to the muscles when they need it most.
- Always take a small hit of high quality protein soon after gym. Weights & a hit of protein work together to boost muscle building more than either alone. A little goes a long way... just 20-30 g of protein is all you need. Suitable post training snack ideas include a milk based smoothie or 500 ml flavoured milk, 2 tubs of yoghurt or a sandwich with ham, cheese & salad. If you use a protein supplement remember you don't need much, just 20 g of a whey protein covers your needs. Including carbs with the protein helps further boost energy reserves.
- Include a small hit of protein at all meals & snacks. The sensitivity to your muscles to protein after gym remains for upwards of 24-48 hrs after a session. This can be as simple as...
  - A generous serve of milk & yoghurt with your cereal at breakfast or 2-3 eggs
  - 1-2 tubs of yoghurt or other dairy snack as a mid meal snack
  - 60-80g (3-4 slices) ham, pastrami, corned beef, silver side, skinless chicken or tinned fish (small tin) with 1-2 slices cheese on your sandwich at lunch, &
  - 120-150 g piece lean beef, skinless chicken or seafood at dinner
  - Milo or flavoured milk at supper
- Maintain your meal frequency, including both training & non-training days. While energy needs may not be as high on lower volume training days during the season it's still important to include mid-meal snacks.
- Keep a check on your weight once a week. If it starts dropping off, see your sports performance dietitian ASAP.

### **Stick with the following tips to prevent unwanted weight gain during the season...**

- Allocate plenty of your plate real estate to veggies (cooked or salad) & knock these back first to put a dampener on your appetite. Aim for 2 cups of veggies at both lunch & dinner
- Drink water with your meals, it helps with both hydration as well as appetite control
- Include a small hit of protein rich food at meals & snacks, it'll keep you fuller for longer. However don't cut sick, too much protein will blow your energy budget & may actually promote fat gain
- Keep it clean...lower fat varieties of foods tend to be lower in energy
- Adjust your carb intake to reflect energy needs...more on heavier loading days, less on lighter days
- When on tour, avoid the 'Sizzler Syndrome', piling a bit of everything onto your plate. It's more than likely what you missed at one meal will be available for you to sample tomorrow
- Don't concern yourself with what & how much anyone else is eating. Energy requirements will vary from one person to another & from one day to the next. Focus on your own needs
- No self-discipline...then try this. First plate must be only a large serve of veggies, either cooked or salad veggies. Thereafter, eat to match your appetite for your second round that can include your carb & protein needs.



## Rugby Grub...

### Moroccan lamb shanks

#### Ingredients (serves 6)

- 1 tbs olive oil
- 6 (about 1.2kg) small lamb shanks
- 1 brown onion, finely chopped
- 2 carrots, peeled, coarsely chopped
- 3 garlic cloves, crushed
- 2 tsp ground cumin
- 1 tsp ground turmeric
- 1 tsp sweet paprika
- 1 x 7cm cinnamon stick
- 1L (4 cups) chicken stock
- 600g orange sweet potato (kumara), peeled, coarsely chopped
- 1 x 400g can brown lentils, rinsed, drained
- 100g pitted dried dates, halved
- Cooked couscous, to serve
- Fresh coriander leaves, to serve



#### Method

1. Heat the oil in a large frying pan over medium-high heat. Cook half the lamb, turning occasionally, for 4-5 minutes or until browned. Transfer to a plate. Repeat with remaining lamb, reheating the pan between batches.
2. Add the onion, carrot & garlic to the pan. Cook, stirring, for 5 minutes. Add the cumin, turmeric, paprika & cinnamon & cook, stirring, for 30 seconds or until aromatic. Stir in the stock.
3. Place the lamb, onion mixture, sweet potato, lentils & dates in the slow cooker. Cook, covered, on low for 5 hours.
4. Uncover & cook on high for a further 30 minutes
5. Divide the couscous among serving dishes. Top with the lamb & sauce. Sprinkle with coriander leaves to serve

| ANALYSIS per serve      | 6 (no couscous) | 6 (+1C couscous) | 6 (+2C couscous) |
|-------------------------|-----------------|------------------|------------------|
| <b>Energy kJ</b>        | 1530            | 1830             | 2130             |
| <b>Carbohydrate (g)</b> | 38              | 53               | 68               |
| <b>Protein (g)</b>      | 39              | 41               | 43               |
| <b>Fat (g)</b>          | 7               | 7                | 7                |

Female (mum/ wife/ partner/ potential girlfriend) Impact Factor: ★★★★★

Source: Taste.com.au website

**Freezing Tip:** Cool at the end of step 4. Place in an airtight container in the fridge to chill. Label date & freeze for up to 3 months. Thaw overnight in the fridge. Reheat in stockpot, covered, over medium heat until heated through. Continue from step 5.

Want some inspiration? Check out the Taste website for a huge range (>21000) of recipes... [Taste.com.au](http://Taste.com.au)

Got a kick butt recipe you want to share? Submit your recipe to Gary at [gary.slater@rugby.com.au](mailto:gary.slater@rugby.com.au)



## Supplement Low Down... Sports Drinks

***Want to know about a supplement that's got more scientific support behind it than any other? A supplement that can be used during both training & games to delay fatigue & increase your work capacity? A supplement that always comes out on top when you do a cost vs. benefit assessment? A supplement that also tastes good & may help enhance immune function?***

While few athletes even think about sports drinks as a sports supplement these days, they should be one of the first items to include in your sports nutrition toolbox when looking to boost rugby performance. Amazing what a blend of carbs, electrolytes & fluid can achieve. However, as with all supplements, sports drinks need to be used at the right time & in the correct amounts if you are to make the most of them.

While sports drinks can certainly be used to enhance body fluid & carbohydrate stores before exercise & restore depleted muscles after training or a game, they have been designed primarily for use during exercise... getting fluid, electrolytes & carbs to the muscles when they need it most. What's more, because sports drinks tend to taste better than water you'll usually drink more of them. The salt in a sports drink also keeps you thirsty, further boosting your fluid intake & keeping the performance implications of dehydration at bay.

### Water vs sports drink

**The decision to use a sports drink or water shouldn't be based on how hot it is.** Reality is, there isn't too much difference between water & a sports drink from a hydration perspective, especially when used outside of exercise. Rather, the big difference between water & a sports drink is the carbohydrate fuel in a sports drink. As such, use the following few simple questions to guide your fluid choice during training...

- |  |                |
|--|----------------|
| 1. <b><i>Is the session longer than 60-75 minutes?</i></b>                       | <b>YES/ NO</b> |
| 2. <b><i>Is it 2 or more hours since you last ate?</i></b>                       | <b>YES/ NO</b> |
| 3. <b><i>Will you have another training session within the next 6-8 hrs?</i></b> | <b>YES/ NO</b> |

**If you answered YES to 2 or more of the above you really should be using a sports drink during training. In fact, for most athletes, taking a sports drink for ALL sessions longer than 60-75 min is generally a good idea & the same goes for games; it gets fuel to the muscles when they need it most.** The amount of sports drink you need may vary depending on your training loads as well as a number of the individual factors like body composition goals & sweat rate. Discuss this with your sports performance dietitian when developing your own fluid intake strategies.

For athletes with larger energy needs who struggle to put on weight or prevent unwanted weight loss, larger volumes of sports drinks are encouraged. For athletes attempting to decrease their body weight, using smaller amounts of sports drink periodically may be better, with a greater proportion of your fluid needs coming from water. Irrespective, **using a mix of sports drink & water may be best for all athletes as sports drinks, like other acidic sugary drinks, aren't great for your teeth. As a general guide, use a water chaser every time you have a hit of sports drink.**

### Are some sports drinks better than others

While the formulations of sports drinks like Gatorade & Powerade differ slightly, this probably isn't a concern for rugby athletes. Your best bet is to find a sports drink that you enjoy the taste of that can be purchased as a powder from a supermarket. Powdered sports drinks are much cheaper than a 'pre-made'. In fact you can usually buy a tub of powder from a supermarket that makes up 8L of sports drink for the same price as 3 x 600 ml bottles from your local store. If for some reason you just can't tolerate a sports drink during a session in which taking a hit of carbs will boost performance, you may wish to consider using a sports gel. A gel plus 300-400 ml of water is approximately the same as taking 300-400 ml of sports drink.



## Guru Goss... Answering Your Questions

***“I really don’t like using sports drinks during a game cause it keeps me thirsty. It just doesn’t quench my thirst so I prefer to use water. Does that matter?”***

Sports drinks have been designed especially for use during exercise, providing fuel & fluid to the muscles when they need it most. The salt added to sports drinks not only makes them taste a little better but it also maintains the drive to drink, thus the reason why it keeps you thirsty. As such, you’re likely to drink more throughout exercise, keeping dehydration at bay. We know taking carbs during a game will also probably increase your work output so persisting with a sports drink would be a great idea. However, you may want to use a small hit of water after each gulp of sports drink to rinse your mouth out. Alternatively, you could try using a sports gel at half-time & perhaps before the game depending on your energy levels. Remember to drink plenty of water each time you take a gel though... at least 300-400 ml of water with each gel. Check out the supplement lowdown on page 4 of this newsletter or chat with your sports performance dietitian for more info on sports drinks/gels & how to use them correctly.

***“Is Red Bull good to take before a game to help boost my energy levels?”***

Red Bull is one of the most popular energy drinks, which are made from a very different recipe compared to sports drinks like Gatorade & Powerade. Red Bull contains a mix of several ingredients, including caffeine, B group vitamins, glucuronolactone & taurine ± sugar, depending on whether you use standard or ‘sugar free’ Red Bull. While there is some research showing a performance boost from caffeine consumption, little is known about the other ingredients on rugby performance. However, this is really an issue you need to discuss with your sports performance dietitian as too much caffeine can have major health & performance implications, including seizures, heart attack & possible death in otherwise healthy individuals.

***“Does being a little dehydrated matter now that things are starting to cool off?”***

You should aim to avoid being dehydrated as much as possible because it’s sure to compromise your performance. While the impact of being ‘dry’ might be a little less during the cooler months, it’ll still mean you aren’t performing at your best. Dehydration occurs because of a mismatch between fluid intake & losses, with much of the losses coming from heavy sweating during training/games. While sweat losses tend to decrease through winter, so too does the drive to drink & as a consequence the frequency of athletes becoming dehydrated during exercise doesn’t tend to change too much over the year. Stay on top of your drinking practices year round by following these simple tips...

- Adjust your fluid intake based on training loads, more on heavier loading days & less on lighter days
- Drink with your meals & snacks, the electrolytes in food help retain the fluid in your body
- Keep a drink bottle with you throughout the day, it’s a great reminder to drink
- Make use of a wide variety of drinks over the day. This can include caffeinated drinks like tea & coffee. However be careful with drinks like soft drinks, cordials, juices & sports drinks, especially if you find it difficult to maintain your weight. Your body’s ‘I’m full’ receptors don’t tend to recognise the calories in these drinks so they can be a common reason for unwanted weight gain.

## Research Ramblings

### ***The Science...***

A study released in 2002 revealed that getting drunk caused the body’s testosterone levels to halve. What’s more, cortisol, a stress hormone that stimulated protein breakdown, increased some 50% following a night on the town. This, combined with the fact that alcohol is a stomach irritant that often causes your food intake to back off the next day, suggests getting drunk should be avoided by any rugby athlete hoping to increase or maintain muscle mass.

### ***Take Home Message...***

If you choose to drink, do so in moderation & in line with your clubs alcohol policy.

*Frias et al. Effects of acute alcohol intoxication on pituitary-gonadal axis hormones, pituitary-adrenal axis hormones, beta-endorphin & prolactin in human adults of both sexes. Alcohol & Alcoholism 37:169-173, 2002.*

