

RUGBY

EATING FOR YOUR SPORT

Your sport:

Rugby Union is characterised by high-intensity passages of play interspersed with low-intensity activities including standing, walking and jogging. Rugby players rely on their instant muscle fuel sources during short bursts of play, while the aerobic energy system is important during sustained phases of play and during the recovery phase in a game.

Games consist of two 40 minute halves and include informal breaks for substitutions, injury stoppages and rule infringements. Optimal performance in this sport is determined by a complex and variable mix of physical and skill based talents. Players not only need to be able to run to the scene of play, but must also be able to execute specific skills including tackling, kicking, passing, jumping and lifting other players. In addition, they need to be alert at all times to enable them to read and anticipate the play and make tactical decisions.

As rugby union involves contact, players need strength and speed to be able to apply and withstand tackles, rucks, mauls and scrums. The characteristics of different positions within a team can vary markedly, meaning players may face different nutritional issues and challenges. Forwards are typically heavy with a large muscle mass and a relatively high body fat level. In comparison, backs are typically lighter with lower body fat levels.

This Nutrition Advice Sheet is aimed at those who compete and train at a recreational level. Elite players require individualised nutrition advice and guidance about what to eat for training and competitions.

TRAINING DIET:

Traditionally many rugby players have focused on fuelling up only on the day before a match or in the pre-event meal, however, the daily demands of training are best met by a consistent approach to adequate fuel intake. Rugby players require a variety of foods and should aim to include:

- Fruits and vegetables – aim for a variety of colours
- Breads and cereals - Pasta, rice, low fat noodles, starchy vegetables (e.g. kumara, potato), bread, oats, breakfast cereals
- Dairy products – choose reduced fat varieties including milk, yoghurt and cheese
- Protein rich foods – including lean meat, poultry (e.g. chicken), fish/seafood, eggs, tofu and pulses
- Healthy fats including vegetable oils, nuts, seeds and avocado



CARBOHYDRATE

Carbohydrate is the fuel of choice for training. Rugby players should try to base their meals and snacks on carbohydrate-rich foods which release their energy slowly. This includes oats, wholegrain breads and wholegrain crackers, pasta, rice, low fat noodles and starchy vegetables like new potatoes, kumara and corn.

Just before intense training sessions or matches, additional carbohydrate rich foods and drinks can be helpful to provide extra fuel. Afterwards sports drinks, lollies, ripe bananas and white bread honey or jam sandwiches are digested quickly for fast recovery. Sports drinks may be helpful to top up carbohydrate intake during training, particularly in hot conditions when sweat and fluid losses are likely to be high.

PROTEIN

The protein requirements of rugby players are greater than for those who live a more sedentary lifestyle. As rugby is a contact sport giving rise to a high level of muscle damage, and with resistance training being a regular component for rugby players, it is important to consume adequate amounts of protein rich foods each day to promote adaptations to training and recovery from games. The amount of protein required is usually between 1.3-1.8g/kg* of body weight per day. Foods high in protein include lean meat, chicken, fish, low fat milk, yoghurt and eggs. Aim to include a protein rich food at each meal and snack. Make sure you eat every few hours through the day to meet your energy and protein needs.

An Accredited Sports Nutritionist or Dietitian can provide further guidance.

FAT

A high energy (calorie/kJ) intake is important to maintain body mass and size, especially during periods of growth such as adolescence or intensive resistance training.

A moderate intake of healthy fats can help meet these high energy needs and is also important to help maintain good health. This means including foods such as nuts, seeds, vegetable oils and spreads made from these as well as avocado and oily fish like salmon, mackerel and sardines.

Poor quality saturated fat will not help fuel the type of exercise undertaken by rugby players and can slow an athlete down with dead weight. Therefore, rugby players should limit their consumption of high fat dairy foods, fatty meats, high fat takeaways and snack foods, fried foods and creamy sauces.

HYDRATION

Despite the fact that most rugby is played in cool weather, the high intensity of exercise can create large sweat losses. Dehydration can occur which can severely impair performance.** Players should aim to start exercise well hydrated by drinking water with meals and snacks and sipping on water bottles. Aim to pass copious amounts of pale straw coloured urine and to replace fluids as they are lost during exercise. Good fluid choices through the day include water, tea, trim milk and moderate amounts of fruit juice per day. Use sports drink in hard sessions that last more than an hour and in games. Poor fluid choices include soft drinks, energy drinks and alcohol.



A SAMPLE ONE DAY MEAL PLAN FOR A RUGBY PLAYER

BREAKFAST:

- Natural muesli with fresh or canned fruit in juice and low fat yoghurt/milk OR
- Wholegrain toast with poached eggs, baked beans and a glass of fruit juice OR
- Hot oats made with trim milk and a piece of fruit or juice

If travelling, pack a combination of fresh fruit, milk drinks or fruit juice carton with low fat yoghurt, cereal bars, creamed rice or sandwiches

MORNING TEA:

- Dried fruit and raw nuts OR
- Wholegrain crackers with tuna OR
- Low fat yoghurt and fresh fruit OR
- MILO with low fat milk

LUNCH:

- Wholegrain bread rolls or wrap filled with hummus, lean meat/canned fish/egg and salad ingredients OR
- Pasta/rice with tuna and vegetables

Add a piece of fruit and/or low fat yoghurt to each option

PRE AFTERNOON TRAINING:

- Good snacks one hour prior to training may include sandwiches, fruit toast with peanut butter and jam, yoghurt or milky MILO with a banana, muesli bars or fruit. Try a smoothie 1-2 hours before if you struggle to train with food in your stomach

DURING AFTERNOON TRAINING

Drink a bottle of water. You may need a sports drink if over 60-90 minutes of training.

AFTER TRAINING

- After intense training consume some carbohydrate immediately e.g. sports drink, jelly lollies, pikelet, crumpet, white roll, ripe banana
- To improve recovery it is recommended to consume some protein around 20 minutes after finishing training . e.g. pottle of yoghurt, glass of milk, milk based smoothie. Especially when your next meal is more than 1 hour away.

DINNER:

- Lean meat or chicken and vegetables with pasta and tomato-based sauce OR
- Steamed or grilled fish with homemade wedges and salad OR
- Lean meat or chicken and vegetable stir-fry with rice or noodles OR
- Lean steak, potatoes and 3 vegetables or salad

SUPPER:

- Milk-based pudding and fruit OR
- Fresh fruit and low fat yoghurt OR
- Protein rich smoothie

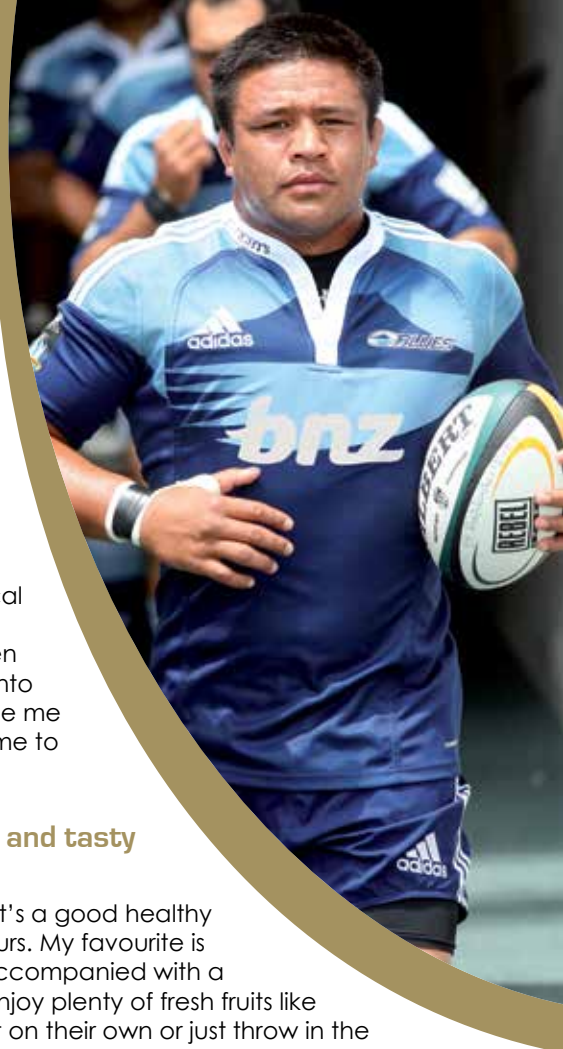
NUTRITION PROFILE: KEVEN MEALAMU

Why do you think nutrition is important for your sport?

Nutrition is very important to me and my family in everyday living. For me as an athlete, good nutrition is vital in helping me get my body in the very best condition for training and the demands as a rugby player. Rugby is a very physical sport and with the combination of cardio and weight training, and then matches and recovery, what I put into my body each day needs to provide me with the necessary nutrients to get me to my very best.

What are some of the healthy and tasty foods you recommend?

A favourite food of mine is sushi, as it's a good healthy snack and has many different flavours. My favourite is salmon and avocado, and when accompanied with a miso soup, it's a great meal. I also enjoy plenty of fresh fruits like bananas or berries - things I can eat on their own or just throw in the blender and have as a smoothie.



KEY FOODS FOR A RUGBY PLAYERS FRIDGE/FREEZER

- ✓ Fresh/frozen fruit
- ✓ Fresh vegetables – the more colour the better
- ✓ Frozen vegetables
- ✓ Lean meats/poultry – beef, lamb, chicken, trim pork, lean ham
- ✓ Fresh and frozen fish
- ✓ Eggs
- ✓ Low fat milk (yellow/green top)
- ✓ Low fat yoghurt
- ✓ Edam cheese, cottage cheese
- ✓ Low fat spread canola/olive

NUTRITIONIST'S NOTE

This meal plan is an example only and not intended for individual purposes. This should be altered to suit individual energy requirements depending on age, gender and training load. For those who train at an elite level and/or twice or more a day additional pre training snacks and post training recovery food/drinks will be required. Contact a Sports Dietitian for guidance.

KEY FOODS FOR A RUGBY PLAYERS PANTRY

- ✓ Pasta, rice, low fat noodles
- ✓ Bread – preferably grainy
- ✓ UNCLE TOBYS Rolled Oats
- ✓ Canned spaghetti and baked beans
- ✓ Canned creamed rice
- ✓ Wholegrain crackers, rice crackers
- ✓ MILO Energy Food Drink
- ✓ Canned/dried fruit
- ✓ Low fat biscuits and muesli bars
- ✓ Canned salmon and tuna
- ✓ Canned pasta sauce, tomatoes, tomato puree
- ✓ CARNATION Light & Creamy Evaporated Milk
- ✓ Sauces and condiments e.g. sweet chilli, BBQ, mustard, relish
- ✓ Vegetable oil/spray
- ✓ Herbs and spices
- ✓ Spreads e.g. honey, jam, peanut butter (low salt & sugar)

COMPETITION DAY EATING

Well-planned game day nutrition keeps players running further and faster in the second half of a match. It also helps players to maintain skills and judgment when they would otherwise become fatigued. Depletion of fuel stores can become an issue when playing for longer than 60 minutes, especially for players in mobile positions or with a running game style including additional carbohydrate in the 24 hours preceding and consuming extra carbohydrate during the game can be helpful and ensures that you have enough fuel on board and help you perform at your best.^{***} Timing of the pre-game meal is important to allow time for food to be digested. This meal should be mostly slowly digested carbohydrate rich foods, with some lean protein.

Early afternoon game (1.00pm) – Have a normal breakfast followed by a light pre-game snack/meal 2 hours before the match.

Mid-afternoon game (2.30pm) – Have a normal breakfast followed by a pre-game meal 3-4 hours before the match (10.30-11.30am), and top up with a light snack 1 hour prior.

Evening game (7.30pm) – Have a normal breakfast, morning tea and lunch followed by a pre-game meal 3-4 hours before the match (3.30-4.30pm). Top up with a light snack 1 hour prior (e.g. piece of fruit or cereal bar).

Have water with your meals and snacks, milk drinks/smoothies if you get nervous or can't tolerate much solid food on game day and try adding a sports drink at regular intervals for a hydration and a fuel boost. Practice all food plans in training sessions to determine what your stomach can tolerate.

During a game it is important to top-up fluid levels and carbohydrate to minimise fatigue and help with concentration. Players should aim to drink small amounts regularly whenever breaks in play permit and use half-time to catch up on fluid intake. Drinking sports drinks in addition to water at breaks and half time can assist with fluid intake and help to top-up carbohydrate levels.

Poor recovery after a game can lead to decreased energy throughout the following week of training and can slow down muscle damage repair. Re-hydrating with a sports drink, or water bottle and a handful of jelly lollies as soon as possible in the changing sheds will increase muscle refuelling rates. Drink some flavoured milk before your shower for protein to start muscle damage repair and growth.

SPECIAL ISSUES & REQUIREMENTS FOR RUGBY PLAYERS:

- For many rugby players, increasing muscle mass and strength can provide a competitive advantage and help players withstand the physical contact of the game. To achieve muscle mass gains players need to commit to an appropriate resistance training programme and support this with a high energy diet and consume protein 30 minutes before and after lifting weights. Extra energy should come

from low fat, carbohydrate based meals and snacks, which also provide protein, vitamins and minerals.

- Periods of inactivity, such as the off-season or a break due to injury, are often a time of significant gain in body fat. Players should restrict eating excess sources of 'empty' energy (i.e. foods which provide calories/kJs but few nutrients) yet still maintain an adequate intake of nutrient-dense carbohydrate and lean protein. Key areas to target include alcohol, high fat foods and refined carbohydrates like those found in cakes, biscuits, lollies and soft drinks. It may also be necessary to reduce the size of meals and reconsider the number of snacks consumed. The better you do here, the better you will play next season.
- In rugby, alcohol is often a large part of post-game activities. Drinking alcohol to excess can compromise recovery, resulting in slow repair of injury and contribute to excess weight gain. Players should concentrate on rehydrating and refuelling with carbohydrate rich foods and fluids before having any alcoholic drinks. Alcohol is best avoided for after competitions as it can delay recovery.[†]

* Stuart M Phillips et al. (2011). Dietary protein for athletes: From requirements to optimum adaptation. *Journal of Sport Sciences*, 29(s1): S29-S38

** Walsh, R.M., T.D. Moakes, J.A Hawley, and S.C Dennis. 1994. Impaired high-intensity cycling performance time at low levels of dehydration. *International journal of Sports Medicine* 15: 392-398.

*** Louise Burke et al, 2011. Carbohydrates for training and competition, *Journal of Sports Sciences*.

† Louise Burke et al 2006. *Clinical Sports Nutrition*, 3rd Edition, Nutrition for Recovery after training and competition, pg 424.

MOROCCAN LAMB BURGERS

Makes 6

- 400g lean lamb mince
- 1 pkt MAGGI Garden Mint Gravy
- 2 tsp Moroccan Spice (see below)
- 1 egg
- 3 cups salad vegetables (red onion, tomato, lettuce, avocado)
- 6 wholemeal burger buns

- Mix the first 4 ingredients together and shape into 6 patties.
- Line a frying pan with baking paper and dry-fry the patties or grill or barbecue for 7 minutes on each side.
- Serve on a burger bun with you favourite fillings.

MOROCCAN SPICE MIX

- 1 tbsp cumin seeds, toasted
- 1 tsp coriander seeds, toasted
- 10 black peppercorns
- 1/2 tsp cardamom seeds
- 1 tsp sumac or lemon pepper
- 1 cinnamon quill

Either pound spices to a coarse powder using a pestle and mortar or put spices between 2 pieces of baking paper and crush with a rolling pin. Store in an airtight container until needed.

ANALYSIS	per serve
Energy [kJ]	1222
Carbohydrate [g]	26
Protein [g]	20
Fat [g]	12



This recipe is from the *Fit Food Fast* cookbook. For more recipes visit www.tastyrecipes.co.nz.

By Nutritionist Claire Turnbull - www.claireturnbull.co.nz