



Rugby League

August 2009

About Rugby League

Rugby League is a popular Australian sport played by both professionals and amateurs. The competitive season runs from March to September with one game per week. Teams have 13 players including six forwards and seven backs. Forwards usually weigh between 90-110kg. They need to be heavier due to their involvement in the scrums and tackling. Backs usually weigh between 80-95kg. They need to be more agile and so tend to be smaller and leaner.

Matches have two forty minutes halves. During the game each player is likely to cover between 5 to 8km and be involved in 20 to 40 tackles. Most of the distance is travelled by walking or jogging but there are also bursts of high intensity sprinting and body contact. Glycogen (muscle carbohydrate) stores aren't usually depleted in a game, but are required for the high-intensity sprints, heavy-tackling or grounding the ball. Training sessions include running, skill work and strength training.

Training Diet

Training is physically demanding, which sets up large energy, carbohydrate and fluid requirements. A diet rich in carbohydrate foods is important to provide adequate energy to maintain a high standard of play and also assists recovery.

Rugby is a professional sport, but some players have full-time jobs or study to commit to, on top of training and match schedules. This creates a very busy lifestyle, and good nutrition habits can take a back seat, especially if the athlete lacks the skills to shop and cook.

Takeaways can be a trap, but learning how to choose better takeaways, reading food labels and learning how to cook and prepare ahead can make a difference both on and off the field by aiding recovery and reduce fatigue.

The training diet of a Rugby League player should contain;

- Carbohydrate-rich foods e.g. breakfast cereal, bread, muffins, muesli bars, rice, pasta, potato, fruit, smoothies. These should form the basis for most meals and snacks. This will help with exercise performance, recovery from training and muscle gain.
- Nutritious energy to help with muscle gain. Eating three meals and regular snacks everyday can help to meet this goal.
- Protein-rich foods e.g. meat, chicken, fish, dairy products and nuts. There is no need to eat masses of extra protein to "bulk up" – a balanced diet with adequate carbohydrate and protein will suffice.
- Minimal fat. Avoid too much margarine, fatty meats, high fat takeaway foods, fried food and creamy sauces.
- Plenty of fruit & veg for antioxidants, fibre and for preventing illness, building muscle and repairing injury.
- Minimal alcohol. Alcohol can lead to poor recovery, slow repair of injury and contribute to excess weight.

Fluid Needs

The fluid needs of rugby players during training and games are generally high because of the "stop and go" style of the game. Rugby league players can lose several litres of fluid during a game especially during the summer months. Dehydration negatively affects exercise ability, skill execution and decision making and thus can significantly affect performance.

Opportunities to drink during matches can be limited so players should aim to optimise fluid intakes during formal and informal breaks in play e.g. stoppage and injury time. Drinks containing carbohydrate (e.g. sports drinks) will assist with replacing energy stores. Fluids containing caffeine (such as coffee or cola drinks) and alcohol are not suitable for recovery since they lead to increased urine losses.

A player can assess how much fluid they have lost by weighing themselves before and after the training session or game and aim to drink **1.5L of fluid for every kilogram** of weight lost.

Thirst is generally not a good measure of fluid status and a player may be significantly dehydrated before becoming thirsty. Sports drinks can be useful during training and matches as they provide a source of carbohydrate (for fuelling on the field) and small amounts of electrolytes (salts) that may be lost during play. Producing regular amounts of clear urine is a useful indicator of good hydration status before exercise.

Tips to stay hydrated and keep cool

- Drink 250-500mls with every meal and snack - don't save it up until training. Aim to drink more than your thirst tells you to.

- Good fluid choices are water, sports drink, fruit juice, cordial and milk. Sports drink has the added benefit of containing sodium (salt) which helps your body to retain the fluid.
- Poorer fluid choices include alcohol, cola drinks, tea, coffee and energy drinks. These are diuretics and will increase fluid loss in your urine. Soft drinks are gassy and filling, making it difficult to drink enough.
- In hot conditions, pay extra attention to fluid needs by having plenty of cool, refreshing fluids on hand, drinking at every opportunity (e.g. during breaks and when coming off the field) and monitoring and replacing losses aggressively after a match/training session.

What should I eat before a game?

In the 24 hours leading up to a game, eat extra carbohydrate and drink plenty of fluid. This will give you the best chance of performing well the next day.

The pre-game meal should be eaten **3-4 hours prior to play**. It should be high in carbohydrate and low in fat. To avoid stomach discomfort, foods low in fibre and fat may be preferred. It is important to ensure the meal is well planned and uses familiar foods and fluids. (See below)

Follow this up with high-carbohydrate, low-fat snacks leading up to a match, such as a jam sandwich, muesli bar or fruit to top up fuel stores before the match.

3-4 hrs before: Pasta with a low-fat tomato sauce + 400ml fruit juice

2 hrs before: 200g low fat yoghurt + mini box sultanas (40g)

1 hr before: 500 ml sports drink

Practice eating your pre-game meals and snacks before heavy training to work out what your stomach can tolerate. And if you suffer from pre-game nerves or can't compete with a full stomach, try having nutritious drinks (e.g. smoothies) or eat early and top up with small snacks or drinks closer to the game.

What should I eat and drink during competition?

Although the half-time break is brief, it is the best opportunity for nutrition during play, and players should make use of this break to consume fluids. Most players will benefit from drinking sports drink as well as water during the break as they provide a carbohydrate boost and fluid during a game. Lollies, fruit and carbohydrate gels can be good sources of carbohydrate also.

At half time, aim for 200-400mls of sports drink or water and sip from a drink bottle during breaks in play and on the interchange bench. (Don't spit it out!)

What about recovery?

It is important to refuel with carbohydrate-rich foods after training and games in order to begin replenishing muscle glycogen stores for future training/games. This is especially important to bounce back after a game and during weeks of heavy training.

It is also important to include a lean protein source in recovery for muscle tissue repair and growth.

As a rule of thumb, aim to **consume a recovery snack within 30 minutes** of finishing a training session or match. This snack should contain carbohydrates, protein and a source of fluid.

Examples of good recovery foods include:

- A salad sandwich or banana roll
- A bowl of cereal with milk
- Cereal/muesli bars
- Fruit salad and yoghurt
- English muffins/fruit muffins
- Soup + bread roll

The next meal should resume the normal training eating pattern, and should again contain carbohydrate-rich foods, a source of protein and fluids. Players should try to consume this meal within 3 to 4 hours of finishing a match/training.

Other Nutrition Tips

- Players should have a snack containing protein and carbohydrate just before and just after weights sessions to maximise muscle gain and recovery e.g. low fat yoghurt, a ham sandwich or Sustagen®.
- Injury is a fact of life in Rugby League and many other contact sports. Alcohol can make injuries worse by increasing swelling and bleeding. This means that it is best to avoid alcohol for the first 24-48 hours after an injury occurs.
- Although there are many supplements on the market, many are expensive and have no proven benefit. Sports bars, sports drinks and liquid meals are a convenient way to top up energy levels especially if trying to gain weight. For more advice, click here to see a [sports dietitian](#) near you.

For more information and how to get involved, go to: http://directory.google.com/Top/Sports/Football/Rugby_League/Australia/

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