

Eating for impact: A practical Nutrition Plan for a recreational rugby player

This case study looks at how a simple, realistic nutrition plan can support a recreational rugby player who trains twice a week and plays one game every weekend. Even though the athlete isn't competing professionally, rugby still places big demands on the body like quick bursts of speed, heavy tackles, and long stretches of running all require solid fuel, good recovery, and smart hydration. Balancing these needs with everyday life, work, and other commitments means the nutrition plan must be practical and easy to follow. The goal of this case study is to show how thoughtful food choices can help the athlete feel stronger in training, recover faster between sessions, and show up on match day feeling ready to perform. The plan focuses on eating enough overall, getting the right mix of carbohydrates, protein, and healthy fats, and timing meals to support both training and recovery (Bytomoski, 2018). By looking at the athlete's current eating habits and weekly routine, this case study highlights how small, sustainable changes can make a noticeable difference. The result is a nutrition approach that boosts energy, supports performance, and fits comfortably into a busy, active lifestyle.

My chosen athlete is a #2 (hooker) in rugby, a position that carries a demanding weekly training load due to its physical, technical, and endurance-based requirements. He attends two team training sessions each week, along with one competitive match at the weekend, including structured warm-ups and cool-downs before and after each session. As part of his preparation, the athlete regularly completes strength and power training focused on major compound lifts such as squats and deadlifts. These exercises are essential for developing the lower-body strength and stability required for effective scrummaging, tackling, and maintaining dominant body positions during contact situations. In addition to strength work, the athlete also undertakes conditioning sessions aimed at improving repeated sprint ability, aerobic capacity, and overall match fitness. These sessions often include interval training, short sprints, and high-intensity activities that replicate the stop-start nature of rugby. Rugby-specific training forms another key part of the athlete's weekly load, incorporating lineout throwing practice, scrum technique development, tackling drills, and game-based conditioning scenarios. Overall, his weekly training schedule is considered moderate to high, combining strength, conditioning, and skill-focused sessions. This balanced approach ensures the athlete can perform consistently, recover effectively, and remain match-ready throughout the season.

A nutrition guide provides my athlete with a practical approach to support training, match performance, and recovery. It outlines daily macronutrient targets, meal and snack timing, hydration strategies, and optional supplementation. The plan emphasises accessible, familiar foods and realistic routines to ensure effective recovery and to maintain optimal performance on the rugby field (Hitendre, 2022)

As a recreational rugby player with a moderate weekly training load, your daily nutrition plays a crucial role in supporting energy levels, maintaining strength, and enhancing recovery. Because rugby involves repeated high-intensity efforts, short bursts of speed, and frequent physical contact, your body requires enough fuel to recover effectively between sessions and matches. Your daily energy intake is around 35–40 kcal per kilogram of bodyweight, though this may need to be adjusted based on your goals, such as maintaining weight, gaining muscle, or reducing body fat.

Your macronutrient intake should be carefully balanced to meet these needs. Carbohydrates are the body's primary source of energy for high-intensity activity, so aim for 4–6 g per kilogram of bodyweight per day. Good sources include rice, pasta, oats, potatoes, and fruit. These not only provide energy but also help maintain glycogen stores in your muscles, which are essential for repeated sprints and sustained effort during games. Protein supports muscle repair and growth, which is particularly important after matches that involve scrummaging, tackling, and repeated contact. Aim for 1.6–2.0 g of protein per kilogram, distributed evenly across meals and snacks. Include protein sources such as chicken, eggs, yogurt, fish. Hydration is a key part of your daily nutrition. Aim to drink 2–3 litres of water each day, with additional fluids consumed during warm weather, intense sessions, or matches. Staying hydrated helps maintain concentration, prevents early fatigue, and supports muscle function.

Timing your meals around training and matches is essential for maximising performance. 2–3 hours before training or a match, eat a carbohydrate-rich meal with moderate protein and low fat and fibre. This combination ensures you have enough energy without causing digestive discomfort. Examples include chicken with rice and vegetables, pasta with tomato-based sauce and lean meat, or porridge with banana and a spoon of peanut butter. 30–60 minutes before activity, a small, easily digested snack can provide a final energy boost. This might include a banana, a cereal bar, a small yogurt, or a sports drink.

After training or games recovery nutrition is equally important. Your body is most receptive to nutrients within the first 30–60 minutes, making this an ideal window to consume a combination of protein and carbohydrates. This supports muscle repair, replenishes glycogen stores, and helps reduce soreness. Practical examples of recovery foods include a chicken sandwich with salad, yogurt with fruit and granola, or a smoothie made with milk, protein powder, and berries.

In the hours before a game, it's important to focus on keeping your energy up, your stomach comfortable, and staying hydrated. Your main pre-match meal, eaten 2–3 hours before kick-off, should be packed with easy-to-digest carbs and some protein, while keeping fat and fibre low so you don't feel heavy or bloated. Good options include white rice with tuna and veggies, pasta with tomato sauce and chicken. In the last hour before the game, a small snack like a banana, cereal bar, or sports drink can give you a quick energy boost without upsetting your stomach. As a hooker, you'll be doing

lots of short, intense efforts, scrums, and sprints, so having enough carbs available is key to keeping your performance up. Make sure to drink steadily throughout the day, and take small sips of water or an electrolyte drink in the last hour to stay properly hydrated.

During the game itself, your goal is to maintain energy levels and hydration to perform at your best from start to finish. Carbohydrates remain the most important fuel source during high-intensity play. For matches around 60–70 minutes, your pre-match meal will generally supply enough energy, but for longer games or when including a warm-up, small, easy-to-digest snacks like a banana, energy gel, or carbohydrate-based sports drink during breaks or at halftime can help sustain energy. Hydration is equally critical. Drink small, frequent sips of water or an electrolyte-containing beverage throughout the game to replace fluids lost through sweat, support concentration and coordination, and reduce the risk of fatigue or cramping.

After the game, recovery nutrition should focus on restoring energy, repairing muscles, and preparing your body for the next training session or game. The optimal recovery window is within 30–60 minutes post-match, when consuming a combination of carbohydrates and protein can maximise glycogen replenishment and muscle repair. Examples of quick and practical recovery foods include a chicken sandwich with salad, yogurt with fruit and granola, a smoothie with milk, protein powder, and banana, or a bowl of porridge with berries and a scoop of protein powder. Your next meal should continue to provide a balance of carbohydrates, protein, vegetables, and healthy fats to fully support recovery. Hydration remains a priority, so continue drinking water to replace sweat losses, and include an electrolyte drink if you have sweated heavily during the match. By prioritising timely nutrition and hydration, you can reduce soreness, support recovery, and maintain readiness for upcoming sessions.

A well-designed nutrition plan for a rugby player, even at a recreational level, must be grounded in scientific evidence to meaningfully support performance, recovery, and adaptation. One of the most consistently supported findings in sports nutrition is the importance of carbohydrate availability for high-intensity, intermittent sports like rugby (Amawi,2024). Carbohydrates are the primary fuel for repeated sprints, tackles, and scrummaging because they are rapidly broken down into glucose and stored as muscle and liver glycogen, which fuels both anaerobic and aerobic energy systems during play and training. Research suggests (WEilliams,2015) athletes should consume a carbohydrate-rich diet, often in the range of 5–8 g per kg a day, to maintain these stores and support performance and training adaptations. Carbohydrates consumed before, during, and after exercise help maintain energy availability and improve performance, particularly in the stop-and-go activities typical of rugby (Williams,2015). This involves prioritising easily digestible carbohydrate sources such as rice, pasta, oats, and starchy vegetables in regular meals, with higher intakes on training and game days. Combining carbohydrates with protein immediately after training or games enhances glycogen

resynthesis and supports muscle recovery. Studies on carbohydrate-protein co-ingestion following rugby-like exercise have shown improvements in recovery and faster return toward baseline performance within 24 hours compared to carbohydrate alone (Margolis, 2021). These findings support a strategy that includes a carbohydrate-rich pre-training or pre-competition meal, small carbohydrate snacks soon after exercise, and a larger, balanced recovery meal containing both macronutrients within the first 60 minutes post-exercise. Protein plays a critical role in rebuilding muscle fibres that undergo any strain during repeated tackles, scrums, and high-intensity efforts. Evidence indicates athletes aiming to support muscle repair and adaptation benefit from distributing 1.6–2.0 g per kg per day of protein across meals and snacks, which maximises muscle protein synthesis throughout the day (Cintineo, 2018). Including protein sources such as lean meats, dairy, eggs, or plant-based alternatives in every meal especially around recovery periods which enhances the anabolic response following exercise and supports strength improvements over time.

Hydration is another priority of performance. Maintaining fluid balance through regular water intake is essential because even mild dehydration can impair both cognitive and physical function. Consistently drinking water throughout the day, and adding electrolytes when sweat losses are high, supports thermoregulation and muscle function, reducing fatigue and cramping during training and games (Rieble, 2013). Supplementation can complement a solid nutrition foundation. Creatine monohydrate is one of the most extensively studied ergogenic aids and is well-supported for improving strength and high-intensity performance (Wax, 2021). By increasing intramuscular phosphocreatine stores, creatine enhances ATP resynthesis during repeated high-intensity efforts, helping maintain performance during scrums, sprints, and other explosive actions (Wax, 2021). While some individuals may experience mild water retention or gastrointestinal discomfort, these side effects are often minimized by using a daily maintenance dose without a loading phase (Naderi, 2016)). Protein powders like whey can also be useful, particularly when whole-food meals are not feasible, helping players meet daily protein goals conveniently.

In conclusion, effective nutrition for rugby does not rely on strict timing or overly complex strategies, but rather on consistent daily habits that support training and recovery. By maintaining a balanced diet, staying well hydrated, and using supplements thoughtfully, players can enhance both performance and overall wellbeing. Ultimately, a steady and evidence-based approach to nutrition provides the most reliable foundation for sustained progress on and off the field (Hickson, 2024)

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