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## **Rugby Nutrition:**

### **Practical nutrition guidelines for female rugby players**

Female rugby players need to focus on the same dietary strategies as male players. These are to:

- Achieve and maintain optimal body composition (this may involve gaining muscle mass or losing body fat depending on the individual player and their position)
- Meet energy demands during, pre- and in-season training and then matches
- Provide adequate nutrition for strength and muscle-building
- Practice appropriate hydration strategies
- Eat for recovery

### **Commonly asked questions by female rugby players:**

#### **Do I need the same amount of protein as a male rugby player?**

Although protein requirements for female rugby players are approximately 15% less than males, strength and power are still important components of your performance. If you need to increase your lean muscle mass, your protein requirements will be higher in the early phases of resistance training, but will drop considerably when your muscles have adapted. You may be at risk of insufficient protein intake if you are a vegetarian/vegan, follow a very restrictive diet to lose weight, and if you cut out certain food groups from your diet.



## Is a vegetarian diet suitable for female rugby players?

A well-planned vegetarian diet can support optimal sports performance. There may be some dietary challenges faced by vegetarian players:

- Energy intake – there may be insufficient energy if the diet is too high in fibre.
- Protein requirements may be difficult to meet as plant or vegetable proteins are incomplete, missing one or more of the essential amino acids. Combine different plant proteins to ensure all amino acids are consumed.
- Increased risk of developing iron-deficiency or anemia, as iron from plant sources is poorly absorbed. Best to choose alternatives to meat which are rich in iron, calcium, zinc, vitamin B<sub>12</sub> and riboflavin.<sup>[1]</sup>

### Tips for Vegetarian rugby players

- ✓ Be sure to include protein-rich foods that are nutrient-dense at every meal (e.g. dried beans, lentils, tofu, tempeh, soya products, textured vegetable protein, nut and seed spreads, low-fat dairy)
- ✓ If you do not use cow's milk or other dairy products, choose calcium-fortified soya milk. Other calcium-rich foods include tofu and dark green leafy vegetables (e.g. broccoli, spinach). If you don't include 3 servings of dairy or calcium-fortified soya milk products in your daily diet, you need to consider a calcium supplement.
- ✓ If you are a strict vegan (or restrict eggs and dairy), you may need to consider vitamin B<sub>12</sub> supplementation (some fortified soya milks may contain vitamin B<sub>12</sub>).
- ✓ Vegans will also need to be vigilant about including sources of riboflavin e.g. fortified breakfast cereals, textured vegetable protein, yeast extract spreads like Marmite, grains, and soya milk products.
- ✓ Make a special effort to include iron in your diet. Vegetarian sources include fortified breakfast cereals, textured vegetable protein, dark green leafy vegetables, legumes, nuts and dried fruit. Keep in mind that this iron is poorly absorbed compared to iron in animal foods. It is a good idea to combine a vitamin C rich food or drink (e.g. orange juice, tomatoes) with meals to enhance absorption. You will also need to avoid drinking tea and coffee with your meals, or adding bran to food, as these limit absorption of iron.

### **Is it normal for female rugby players to stop menstruating?**

It does seem that menstrual irregularities are more common in female athletes compared to non-athletes. If energy intakes are too low, hormones required for normal menstrual function are affected. Another concern is that this negatively affects bone health, increasing risk for stress fractures and osteoporosis.

#### **If you stop menstruating:**

- ✓ Consult a sports doctor and/or gynecologist to investigate any other causes. A bone mineral density scan may also be advised.
- ✓ If your diet is a concern, you should see a registered dietitian working in sport.

### **I have recently lost a considerable amount of weight – will this affect my health?**

A lower body fat is considered to contribute to performance enhancement in some rugby players – depending on the position played. However, extreme weight loss methods can adversely affect health and performance, resulting in low energy availability, menstrual irregularities, and poor bone health. Lower energy availability increases your risk of developing nutrient deficiencies, chronic fatigue and increased risk of illness. Research has also shown that athletes who practice extreme dieting and rapid weight loss are more likely to develop eating disorders.

#### **How can I lose body fat without compromising my health?**

- You will need to set a realistic goal – aim to lose no more than 0.5kg per week.
- Do not become too obsessed with body composition data – use it as a guide. You need to keep in mind that there are no generally accepted optimum values for body weight or fat mass for rugby – different individuals and players in different positions will have varying ‘optimal’ weights and body fat levels. <sup>[2]</sup> At the professional level of the game, body composition management will become more important, and will have greater impact on performance.
- Avoid fad or ‘quick weight-loss’ diets, and weight loss supplements.

### Practical Tips to promote body fat loss

- Reduce kilojoule/calorie intake by limiting calorie-dense nutrient-poor foods/snacks and drinks (e.g. crisps, pastries, doughnuts, chocolate, sweets, sugar, sugary drinks, alcohol).
- Control portion sizes.
- Practice mindful eating (e.g. do not watch TV while eating, never eat out of a container – always plate your food, eat slowly).
- Use low fat cooking methods i.e. grill, bake, poach, stir-fry, or steam, rather than deep fry.
- Fill up on plenty of vegetables (raw or cooked).
- Get professional help from a registered dietitian instead of opting for extreme weight loss measures.

### Are there any other important nutrients that I need to be aware of?

Female **athletes** (even non-vegetarians) tend to be more prone to **iron** deficiency and iron deficiency anemia. Iron deficiency anemia is associated with symptoms such as fatigue, breathlessness, weakness, reduced aerobic capacity, and therefore performance. Some athletes with iron deficiency (without anemia) may also experience similar symptoms. It is very important to get a proper diagnosis by a sports physician, who may regularly monitor blood levels and clinical symptoms and who may also refer to a dietitian working in sport for a dietary assessment.<sup>[3]</sup> Rowland Iron supplementation may need to be considered, but needs to be done under the guidance of your medical professional.

### Tips to increase your dietary iron intake:

- ✓ Choose iron-fortified breakfast cereals.
- ✓ Include red meat 3-4 times a week.
- ✓ See more dietary tips under 'vegetarianism'.

Many female athletes also tend to consume less **calcium** than they should, which is of concern as calcium is vital to achieve peak bone mass during adolescence, and a poor calcium intake has been linked to stress fractures. If you have low energy availability, impaired menstrual function, or avoid dairy or fortified soy products you may be at a higher risk for a sub-optimal calcium intake and poor bone health.<sup>[4]</sup>

### Tips to Increase Calcium Intake

- ✓ You should aim to include 3 dairy or calcium-fortified soy products daily.
- ✓ See tips under vegetarian eating for additional sources of calcium.
- ✓ Chat to your registered dietitian about calcium supplementation.

For more information on *Rugby Nutrition*, go to the BokSmart website [www.BokSmart.com](http://www.BokSmart.com) or go to the following link: <http://boksmart.sarugby.co.za/content/eating-and-drinking-right>

### REFERENCES

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*Document Compiled by S Meltzer RD (SA) and Rowena Visagie RD(SA), Shelly Meltzer & Associates*