

Nutrient Timing for Optimal Recovery

When you are training and competing, there are several physiological consequences that occur which make you fitter, faster, stronger and/or improve your skill level. A sound recovery nutrition protocol will ensure you can optimize training adaptations and perform at 100 % of your body's potential in the next training bout or in preparation for competition. Recovery nutrition strategies are important, not only after matches but also when training day-to-day. The goals of recovery can be summarised by the 4 R's.

1. **Restore/Replenish** muscle and liver glycogen (carbohydrate stored in muscle) after training. Glycogen is the storage form of carbohydrates.
2. **Rehydrate** with fluid and electrolytes based on sweat loss in training. Use urine color as a hydration guide pre-training.
3. **Repair** muscle repair and synthesis
4. **Reinforce** training adaptations and immune system support. Recovery strategies should support the synthesis of red blood cells and other cellular components as part of the repair and adaptation process.

Recovery strategies for different training intensities and duration

Training session duration	Intensity	Recovery strategy
Session < 90 minutes	Light intensity	Recovery strategy 1
	Moderate – High intensity	Recovery strategy 2
Session > 90 minutes	Light intensity	Recovery strategy 2
	Moderate – High intensity	Recovery strategy 3
More than 1 session per day of which 1 session > 90 minutes OR 1 session > 150 minutes	Light intensity	Recovery strategy 2
	Moderate – High intensity	Recovery strategy 3 + PVM Protein XTR at night

Recovery strategy 1

Ensure you replenish the fluids lost during the training session. Sip on water according to thirst. Consume your snacks and meals/meal replacement according to your regular meal plan.

Recovery strategy 2

The ideal recovery protocol for high intensity training involves:

- Consumption of 0.7-1g/kg body mass carbohydrates in the first 0-30 min (1st recovery interval)
- Consumption of protein at 0.2-0.5g/kg body mass in combination with carbohydrates.

1st recovery interval:

- A recovery drink such as **PVM Reignite** is recommend **ASAP** after exercise **OR** see table 1 for food options. Combine the protein and carbohydrates.
 - **PVM Reignite** directions for use: Mix 1x **50 g** portion with 400 ml water.
 - If you choose the food options ensure you also consume at least 400 ml water.

Recovery strategy 3

- Consumption of 0.7-1g/kg body mass carbohydrates in the first 0-30 min (1st recovery interval) and again after 1-2 hours (2nd recovery interval)
- Consumption of protein at 0.2-0.5g/kg body mass in combination with carbohydrates.

1st recovery interval:

- A recovery drink such as **PVM Reignite** is recommend **ASAP** after exercise **OR** see table 1 for food options. Combine the protein and carbohydrates.
 - **PVM Reignite** directions for use: Mix 1x **50 g** portion with 400 ml water
 - If you choose the food options ensure you also consume at least 400 ml water.

2nd recovery interval

- Consume a recovery meal consisting of at least 0.7-1g/kg body mass carbohydrates and 0.2-0.5g/kg protein 1-2 hours after exercise.
- **Ideally, this recovery meal will be lunch and/or dinner.**
- See the sample menu provided below for meal ideas. Alternatively you can use 80 g **PVM Fusion** + 400 ml water.

*Carbs – choose 1	*Protein – Choose 1
⅔ cup muesli OR ⅓ cup muesli + 1 Fruit	60 g cheese (2x matchbox size)
⅔ cup rice	30 g Cheese + 30 g Biltong
3 Provitas + 1 Fruit	1 Boiled egg + 20 g cheese
2 slices bread	60 g cooked chicken/beef
2 Digestive biscuits + 1 Fruit	2 Tbsp. Peanut butter
1 small muffin + 1 Fruit	350 ml milk (not flavoured)
250 ml Fruit juice (100%)	⅔ cup yoghurt
1 ½ cup fruit salad	50 – 60 g Biltong
1 Pancake with cinnamon sugar + 1 Fruit	¼ cup cottage cheese + 30 g biltong
Carbohydrate and protein combinations	
PVM Reignite: Mix 1x 50 g portion with 400 ml water	
350 ml low fat milk + 2 tsp Nesquik or Milo	
1 PVM Energy bar (45 g) – any flavour	

**Specific for a 58-65 kg athlete*

***Woolworths Recovery Meal options**

Moroccan Chicken Couscous Salad 225 g

Beef & Mustard Mayo Sandwich

Chicken & Herb Flatbread

Asian Beef with Rainbow Slaw Wrap

Fajita Chicken Burrito 250 g

Tikka Chicken Pasta Salad 250 g

Chicken Curry Roti 200 g

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Late night snack ideas

Always combine carbohydrates and protein

½ cup yoghurt + 1 Fruit

1-2 cups popcorn (homemade) + 30 g Biltong

2 Rice cakes + marmite + 30 g cheese

1 bite size (20 g) PVM Energy bar

On very hard training days (recovery strategy 3) – 50 g Protein XTR + 250 ml water