

# VOLLEYBALL & BEACH VOLLEYBALL

## EATING FOR YOUR SPORT

### Your sport:

Volleyball is a dynamic, fast-paced game. Participation ranges from the elite, who train for 30+ hours each week, to recreational players who train or play once a week. There are two versions of volleyball:

- **Indoor Volleyball:** This is played on a hard floor in a stadium. There are six players on each side of the net and the game is played to the best of five sets.
- **Beach Volleyball:** This is played outdoors, on sand. There are two players on each side and the winners are the players who win two sets.

Volleyball players rely heavily on the anaerobic energy system to provide the explosive strength and agility required for their sport. Aerobic endurance is also important for stamina, tolerance to heat and helps with a quick recovery when there is a break in play. Good muscular strength is required for jumping (legs), and for spiking, serving and blocking (upper body). In conjunction, low to moderate body fat levels may also assist to improve the speed, agility and jumping ability of volleyball players.



### TRAINING DIET:

- **Fruits and vegetables** – aim for a variety of colours
- **Breads and cereals** - Pasta, rice, low fat noodles, starchy vegetables (kumara, potato), bread, oats, breakfast cereals
- **Dairy products** – choose low 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

Volleyball players have high requirements for carbohydrate and should ideally make nutrient dense, carbohydrate rich foods the focus of their meals and snacks. This includes oats, grainy breads and crackers, pasta, rice, low fat noodles and starchy vegetables like potato and kumara. Including plenty of fruit and vegetables in meals and snacks is also important for volleyball players. Not only because they are great sources of carbohydrate,

but also because they are rich in vitamins, minerals and antioxidants.

During and after intense training sessions or games, additional carbohydrate rich foods and drinks can be helpful to provide extra fuel and help with recovery. Bagels, wraps, muesli/cereal bars and creamed rice are some ideas. Sports drinks may be helpful to top up carbohydrate during training, particularly in hot conditions when sweat and fluid losses are likely to be high. Low carbohydrate diets are not suitable for volleyball players and can impact on performance and health. The amount of carbohydrate you need will depend on your training load and your weight goals. A sports Dietitian or Accredited Sports Nutritionist can provide further guidance.

### PROTEIN

It is important for volleyball players to include protein in most of their meal and snacks. This includes lean meat, fish seafood and chicken, eggs, pulses, nuts and low fat dairy products. Protein is important to optimise muscle growth and recovery from exercise.\*

### FAT

Having some fat each day is essential for good health. Try to include small amounts of good quality healthy fats, such as vegetable oils (e.g. canola and olive), nuts, seeds, oily fish and avocado should be included in the diet.

Unhealthy fats should be avoided as much as possible. This includes the skin on chicken, white fat on meat, butter and fat often used in cakes, biscuits and many takeaways. Including small amounts of healthy fats each day is however important for good health. This includes avocado, nuts, seeds, oily fish and vegetable oils (e.g. canola and olive). The amount of these fats that are needed will depend on your weight goals and energy requirements (how many calories/kJ you need each day).

### FLUID

The combination of a high-intensity sport being played in hot environments can result in high sweat losses. Frequent breaks should be scheduled during training to allow you and other players to rehydrate.

A sports drink can provide fluid as well as carbohydrate for energy and concentration during the game

### RECOVERY NUTRITION

When training is intense, it is important to have a recovery snack if the next meal is not due soon after training finishes. Dairy-based snacks such as low fat yoghurt, smoothies or low fat milk and MILO are suitable. A banana or other snacks like sandwiches/wraps, muesli/cereal bars and creamed rice are other good ideas.



## A SAMPLE ONE DAY MEAL PLAN FOR A VOLLEYBALLER

### BREAKFAST:

- Oat based cereal with low fat milk and/or yoghurt with fruit OR
- Wholegrain toast with peanut butter and a low fat yoghurt OR
- Smoothie made with fruit, milk, yoghurt and honey

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

### MORNING TEA:

- Dried fruit and raw nuts OR
- Wholegrain crackers with cottage cheese and avocado OR
- Yoghurt and fresh fruit

### LUNCH:

- Wholegrain bread rolls or wrap filled with hummus, lean meat/canned fish and salad ingredients OR
  - Pasta/rice with tuna and vegetables
- Add a piece of fruit and / or yoghurt to each option

### PRE AFTERNOON TRAINING:

- Sandwiches with wholegrain bread OR
- Fruit toast with peanut butter and jam OR
- Smoothies OR
- Muesli/cereal bars and fruit OR
- Fruit and low fat yoghurt

### DURING/AFTER TRAINING

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

### DINNER:

- Lean meat and vegetable stir-fry with rice or low fat noodles OR
- Meatballs with pasta and a side salad OR
- Grilled fish and oven baked wedges with a salad

### SUPPER:

- Hot MILO made with low fat milk

### 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.

## ATHLETE PROFILE: MANAIA HARRIS

### Why do you think nutrition is important for your sport?

Preparing and moderating my diet allows me to compete at a higher level and provides me with the best opportunity to succeed.

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

Porridge, healthy sandwiches and home baking are some of the options I enjoy.

### Do you have specific healthy food routines before a game?

2 hours before I have a balanced meal and then 30 minutes before (if I need to eat more) I will eat something extra for a little more energy.



### KEY FOODS FOR A VOLLEYBALL PLAYERS PANTRY

- ✓ Rice, pasta, low fat noodles e.g. egg noodles/udon
- ✓ Wholegrain breakfast cereals
- ✓ Wholegrain bread, bread rolls, wraps, chickpeas, kidney beans, lentils
- ✓ UNCLE TOBYS Rolled Oats
- ✓ MILO Energy food drink
- ✓ Wholegrain crackers, pretzels and rice crackers
- ✓ Dried and tinned fruit
- ✓ Nuts and seeds
- ✓ Canned tuna and salmon
- ✓ Canned Tomatoes
- ✓ Baked beans, canned spaghetti
- ✓ CARNATION Light & Creamy Evaporated Milk
- ✓ Vegetable oil/spray oil
- ✓ Peanut butter

### KEY FOODS FOR A VOLLEYBALL PLAYERS FRIDGE/FREEZER

- ✓ Low fat milk (Green/yellow top)
- ✓ Low fat yoghurt
- ✓ Cottage cheese, Edam cheese
- ✓ Fresh and frozen vegetables
- ✓ Fresh and frozen fruit
- ✓ Lean meat/chicken/fish
- ✓ Hummus



## COMPETITION DAY EATING

Volleyball tournaments are generally held over a number of days, with multiple matches scheduled on each day. It is important that recovery is promoted between matches. Ideally you should aim to practice your food and fluid choices during training, prior to the competition so that you feel confident when the big days come round. To ensure the foods that you find work for you are available, it is advisable to plan and pack suitable options yourself. Much of the food available at sporting venue canteens (such as chocolate, pies and chips) are not ideal as they are high in fat and could cause tiredness and stomach upsets.

It is also important to regularly have fluid throughout the day, as well as during a match. Take your own water bottle and take regular sips.

The amount of time between matches will dictate the size of the meal or snack that you are able to eat. If you have a couple of hours then larger meals such as filled rolls, sandwiches, pasta or rice dishes will be fine as they have time to be well digested before your match. For times shorter than this, small snacks such as fruit, liquid breakfast drinks, muesli/cereal bars or smoothies will be more suitable. It can be important for parents, athletes and the team management.

### KEY COMPETITION FOODS:

- ✓ Low fat yoghurt and dairy snacks
- ✓ MILO Energy Food Drink
- ✓ Fruit
- ✓ Muesli bars and cereal bars
- ✓ Muffins/crumpets/fruit bread
- ✓ Rice cakes or low fat crackers and biscuits
- ✓ Cordial/sports drink

### SPECIAL ISSUES AND REQUIREMENTS FOR VOLLEYBALL:

1. Management of **heat and humidity** is important in both indoor and beach volleyball, as these conditions can increase the risk of dehydration, causing fatigue, impairing skill, concentration and decision making – all important factors in this sport. With beach volleyball, playing on sand requires extra energy, and the combined sun, heat and humidity increases the body's requirement for fluid. Make sure you make the most of opportunities to hydrate, such as during time outs, time spent on the bench and breaks between sets. You should have your own drink bottle so that you are able to drink at any opportunity. A sports drink can provide fluid as well as carbohydrate for energy and help you to perform your best during the game. Estimation of sweat losses during training can be a useful tool in planning fluid requirements during volleyball matches. This can be done in conjunction with a Sports Dietitian or Accredited Sports Nutritionist.

2. **Young players** may have additional energy needs to support both their growth and volleyball training, and will therefore have a high daily requirement for carbohydrate.

Young female players especially need to ensure they have enough iron. Including foods high in iron such as lean red meat and breakfast cereals and drinks which have iron added (e.g. MILO) can help optimise iron levels. For vegetarians, it is important to include plant sources of iron such as chickpeas, kidney beans and lentils. To enhance the absorption of iron from these plant foods, include vitamin C rich foods/drinks in the same meal, e.g. fruit juice, kiwifruit, broccoli or berries

3. If **weight management** or increased muscle mass is your goal, it is important to ensure you have a balanced diet including lean protein sources, carbohydrate with a low glycemic index and lots of fruit and vegetables regularly throughout the day.\*\* At the same time, it is necessary to minimise the amount of total fat (particularly unhealthy fats) and sugar. If you are old enough to drink alcohol, this will need to be limited too. For more information see the 'Weight Loss' and 'Muscle Gain' nutrition advice sheets, or work with a Sports Dietitian or Accredited Sports Nutritionist.

\* Stuart M Phillips et al. (2011). Dietary protein for athletes: From requirements to optimum adaptation. Journal of Sport Sciences.

\*\*Nutrition for Athletes 2012. A practical guide for health and performance. Changing body composition: gaining muscle and losing fat. Pg 10-12. International Olympic Committee

## THAI-STYLE FISH CAKES

### Serves 4

- 1 pkt MAGGI Mash Creamy Potato
- 210g can pink salmon, drained and mashed
- 1/2 cup chopped spring onion
- 1 tsp crushed fresh ginger
- 1 bunch coriander leaves and stalks, finely chopped
- 1/4 cup wholemeal breadcrumbs

- Preheat oven to 200°C. Make MAGGI Mash according to packet directions, but use only 1/2 cup boiling water.

- Add salmon, spring onion, ginger and coriander. Mix well to combine. Shape into 8 equal-sized cakes and press into wholemeal breadcrumbs to coat.
- Arrange cakes on a baking tray lined with baking paper and bake for 20 minutes, turning once to brown both sides.

ANALYSIS	per serve
Energy [kJ]	826
Carbohydrate [g]	23
Protein [g]	12
Fat [g]	6



This recipe is from the *Fit Food Fast* cookbook. For more recipes visit [www.tastyrecipes.co.nz](http://www.tastyrecipes.co.nz).

By Nutritionist Claire Turnbull - [www.claireturnbull.co.nz](http://www.claireturnbull.co.nz)

For more information and to obtain further copies of any of the Eating for Your Sport Nutrition Advice sheets, visit [www.nutrition.nestle.co.nz](http://www.nutrition.nestle.co.nz) or [www.autmillennium.org.nz/nutrition](http://www.autmillennium.org.nz/nutrition)

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