

NUTRITION FOR VOLLEYBALL

Indoor volleyball is a dynamic, fast paced game. Indoor volleyball is a game of explosive strength, agility, skill and concentration. The game relies highly on the anaerobic energy system though aerobic endurance is important for recovery between points, stamina and tolerance to heat.

Training

At the elite level, players train for 30+ hours per week. Training includes skill, strength and conditioning programs. In addition, athletes may undertake extra individual skill or conditioning sessions. For the elite player, indoor volleyball is a year-round sport. At lower levels, volleyball tends to be a winter sport although short summer rosters may also be run. Many players may play a combination of indoor and beach volleyball throughout the year. Training levels vary from twice daily at the elite level to no training for those playing in recreational or mixed rosters.

Competition

Elite indoor volleyball players require frequent match practice. In Australia, this requires regular overseas tours to find quality opponents. Elite players contest around 50 International matches per year. The majority of indoor volleyball players participate in rosters that involve a weekly match. Weekend tournaments may also be scheduled throughout the year. The main professional indoor volleyball competitions are in Europe. Most elite Australian players spend the Australian summer on contract to professional teams in Europe.

Physical Characteristics

Height is an obvious advantage for indoor volleyball players. In addition, having reduced body-fat levels can help optimise speed, agility and jumping ability. Indoor volleyball players need powerful legs to assist with jumping and strong upper bodies to develop power for spiking, serving and blocking. Players need to balance strength and lean muscle mass with the ability to jump and land repeatedly.

Common Nutrition Issues

Training Nutrition

Young volleyball players tend to have large energy needs to support growth and lean tissue development. Add the carbohydrate requirements of a heavy training schedule and the extra carbohydrate required for building muscle, and elite volleyball players end up with a large daily requirement for carbohydrate. All volleyball players need to consume suitable amounts of nutrient-dense carbohydrate foods such as pasta, rice, bread, cereal, vegetables, fruit and sweetened dairy products. Players in heavy training need to start recovery nutrition tactics

immediately after each training session. Ideally, players should aim for nutrient dense carbohydrate foods that contain protein to help facilitate muscle tissue growth and repair. Recovery snacks should be combined with fluid to replace any fluid lost during the session.

Bulking Up

Players trying to increase muscle size and strength need a high-energy diet in addition to a quality training program which includes resistance or weights training. The nutritional requirements for increasing muscle bulk and strength include not only the protein needed to form new muscle tissue, but sufficient energy to fuel the training needed to stimulate muscle growth. Other nutrients such as vitamins and minerals may also be needed. In short, increased energy from nutrient-rich foods is required. Achieving a high-energy intake is not as easy as it sounds. It requires organisation and commitment.

The following tips will help:

- Be organised. Have suitable foods available at all times. Make use of portable foods such as cereal bars, fruit, dried fruit, fruit buns, juice and milk in tetra packs etc.
- Increase the number of times you eat rather than the size of meals.
- Add extra kilojoules to meals without adding bulk by using foods such as jam, honey, syrup and sugar.
- Avoid excessive intake of fibre, and make use of foods with less bulk (white bread, Cornflakes, Rice Bubbles, tinned fruit).
- Drink high-energy fluids such as smoothies, milkshakes and liquid meal supplements such as PowerBar Protein Plus powder.
- Include a protein containing food as part of your pre and post-resistance training snack.

Fluids during Training and Games

High-intensity exercise in a controlled atmosphere stadium can lead to large sweat losses - especially in large players. Volleyball players need to make the most of opportunities to hydrate during matches - time outs, time spent on the bench, breaks between sets. During training, frequent breaks should be scheduled to allow players to grab a quick drink. Each player should keep their own drink bottle nearby so they can drink whenever the opportunity arises. Water is a suitable fluid, but a sports drink may promote better performance by topping up fuel stores for both the muscle and brain.

Game Preparation - The Pre-Event Meal

The pre-game meal should fuel and hydrate players, but leave them feeling comfortable for the game. Ideally, the menu calls for a high-carbohydrate choice eaten at least 2-3 hours before a game. Pasta with low-fat sauces, rolls or sandwiches, baked potatoes with low-fat fillings, creamed rice, and fruit salad with yoghurt, are all examples of suitable choices. Each player or team should experiment to find the routines that work best for their situation. Eating

together as a team can be a great way to raise team morale and get focused for the game. It also ensures that all players have their pre-game nutrition needs looked after.

Post-Game Recovery Tactics

Effective recovery focuses on foods that help refuel the muscle, repair and regenerate the muscle tissue, rehydrate the body and revitalize the body. This means foods that contain fluid, carbohydrate, protein and plenty of vitamins and minerals. Left to chance, recovery eating may take a back seat to the post-game meetings, stretching and injury treatment, drug testing, media interviews, or the trip back to home or the team hotel. Many teams organise post-game recovery snacks that can be consumed simultaneously with these activities - sports drinks, liquid meal supplements, fruit, sandwiches and cereal bars are some of the many quick options. Depending on the time of the game and the athlete's appetite, this post-game snack may be supplemented by a later meal.

Tournament Nutrition and Road Trips

As soon as the match schedule is known, plan a meal routine that schedules appropriate pre-event meals and recovery strategies. When several games are played in succession over as many days, pro-active recovery techniques will be important in maintaining performance right through the end of the schedule. If you are playing away from home, plan where you will be eating meals, and organise the menus in advance. It is stress-free when a hungry team arrives at a restaurant to find buffet-style meals waiting, tailor-made to their special needs. Similarly, take control of meals eaten on planes, buses and other travel options. Always carry some high-carbohydrate snacks such as cereal bars, fruit and yoghurt for emergencies. In hotels, empty the mini bars to make room for more nutritious snacks and drinks.

This fact sheet is based on National team athletes and is therefore specific to these athletes. Written by AIS Sports Nutrition, last updated October 2013. © Australian Sports Commission.