

NUTRITION FOR AFL

Training

The football year can be divided into three main blocks: pre-season, season and off-season. The length of each section will vary with the level of competition. A typical outline would be:

- Off Season: 6-8 weeks of little or no scheduled training. During this period players usually take a complete break from training. This is the period where most player's body composition changes dramatically with large increases in body fat and reductions in lean muscle tissue. It is common practice that professional clubs give players body composition goals to return at the start of preseason at, in an attempt to reduce losses in lean muscle tissue and gains in fat mass.
- Pre-Season: 2-4 months-Pre-season training may start as early as October with players undertaking up to 14-15 sessions a week. These sessions include skills, sprint training, aerobic conditioning, resistance training, game theory sessions, recovery sessions and attendance at physiotherapy sessions. Individual players are often given specific programs according to the requirements of their position or areas that need improvement. In general, training revolves around an aerobic program, of running and skills sessions, with additional weight training. Weight training is especially for players who need to build up body size and strength.
- Competitive season: 4 game pre-season, 22 game regular seasons, 4 game final series. Teams compete in one game per week, which is usually on the weekend, but can be on a Monday or Friday night also. Weekly training will vary dramatically depending on the individual conditioning needs, injury status, training age of the player, and the number of days between games.

Competition

The AFL Season consists of 22 games preceding four weeks of finals, during March to August, with finals held in September. Most games are played on Saturday or Sunday afternoons with the under-age and reserved matches preceding the main game. The national competition involves interstate travel, with a large majority of the games being played at night under lights. A supplementary pre-season competition start in February and may add another six matches to the year's tally.

An Australian Rules football match lasts about two hours, with the physiological demands varying considerably between field positions. On ball players can run between 12-20 km in a game, which consists of low intensity jogging and walking interspersed with high intensity sprints of less than 60 m. Full backs and full forwards typically perform a higher number of short sprints or leads.

Physical Characteristics

The physical demands of elite AFL football are increasing. As mentioned above elite players have a unique physical makeup being strong, fast, agile, and aerobically well developed. As the game has evolved players are no expected to be able to play a number of positional roles and hence have become more homogenous with regards to physiological

characteristics. Players can range in height from 175cm for a midfield running player up to 210cm for a ruckman. As height is variable so too is weight with players ranging in weight from 80kg-110kg. Body composition is usually assessed by skinfold thickness. Players can encounter significant fluctuations in body fat throughout the season, usually returning from off season at their highest and achieving their lowest at the end of pre-season. Depending on the season most players will aim to maintain body weight achieved during the preseason and minimise losses in lean muscle mass and increases in body fat.

Common Nutrition Issues

Dietary Habits

Professional AFL football players normally do not have other full time jobs. This has changed dramatically over the past ten years and being a professional AFL player is now considered a full time job. Over the years the nutrition intake of AFL players has become more focused as players have become more professional. The intake of carbohydrate and protein has increased as the physical demands of the sport have increased. The daily energy intake has not changed greatly over this period. It is likely that the addition of sports dietitians to most AFL clubs has improved the dietary habits of players and provided the focus on more specific nutrients that will aid performance.

As the speed and pace at which the game is played has changed so too has the ideal body shape required. Players are expected to be powerful and muscular while also being excellent endurance athletes. This provides athletes with a physiological conundrum, as they need to ensure they are building and maintaining large amounts of lean muscle tissue while being light and lean to ensure they are not carrying excess weight as an endurance athlete. Therefore athletes must ensure they are consuming adequate energy intake to support muscle tissue maintenance as well as the large energy requirements of the endurance training they undertake. Those athletes who need to increase lean muscle tissue should identify periods of lighter aerobic training and focus on resistance training and a high energy intake to build muscle tissue. This brief period may only be for 4 weeks during the preseason.

The nutrition focus of an AFL player should be on nutrient dense carbohydrate foods to meet energy requirements. They should also aim to include suitable amounts of protein at all meals and snacks to ensure a constant supply of essential amino acids to aid in the regeneration and repair of muscle tissue.

Pre-Game Nutrition

The pre-game meal has been a great point of tradition and superstition over the years; it is common practice to see high carbohydrate, low fat meals on the pre-game menu. Pasta meals are a popular choice amongst football players of all standards.

In professional football, the current AFL game schedule means that games can be either mid-late afternoon or at night. In these situations many players will have a larger meal 3-4 hours before a game and then a small snack to top up carbohydrate and fluid stores in the

one to two hours prior to the game.

Food choices such as breakfast cereals, sandwiches, white bread, pasta, muffins, fruit and liquid meal supplements are suitable as pre-game snacks. With interstate travel the team hotel will accommodate for players nutritional requirements.

Training and Game Fluid Intake

Fluid losses as high as 3.6L per game have been recorded in AFL matches and players can often struggle to replace these large losses especially in the hot preseason competition. AFL players are unique in team sports as the opportunity to consume fluids far outweighs the volumes required. Players need to be aware of their individual fluid needs and ensure that they consume fluids to minimise dehydration. It can be common for AFL players to over consume fluids during colder in season games due to the number of opportunities available to them during a game to consume fluids and this can lead to gastrointestinal discomfort. Sports drinks are an easy way to ensure adequate carbohydrate is delivered during the game as well as providing a palatable drink to encourage fluid intake.

Recovery

Traditionally, football players have considered carbohydrate only on the eve of the match. Players need to ensure that they consume suitable amounts of nutrient dense carbohydrates to help replenish glycogen stores and high quality protein sources to help repair muscle damage. Muscle damage and injury, caused for example by body contact and tackling, will increase both carbohydrate and protein requirements.

Active recovery should begin as soon as each exercise session finishes. A recovery snack followed with the resumption of the moderate carbohydrate diet will aid the recovery process. AFL clubs have highly developed nutrition recovery strategies focused around carbohydrate replenishment, protein for repair and regeneration of muscle tissue, fluid to reverse dehydration, and other nutrients to help reduce the negative impacts of an AFL game and training.

This fact sheet is based on AIS / National team athletes and is therefore specific to these athletes. Written by AIS Sports Nutrition, last updated June 2009. © Australian Sports Commission.