
PRACTICAL APPLICATION

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Sports Nutrition and Australian Football

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The Australian Football League (AFL) is preparing to celebrate its 150th birthday in 2008, making it one of the oldest continuously played team competitions in the world. It remains the number 1 code of football in Australia, and although the traditional boundaries of popularity of Rugby League, Rugby Union, and soccer were previously based on geographical area and cultural background, these distinctions are becoming blurred. If you live in the Northern Hemisphere, you might have seen games of AFL on cable television—it's that "crazy" hybrid of soccer and rugby in which players run, kick, pass, and catch ("mark") the ball in a highly flowing game while withstanding full-body contact without any protective padding. So why mention this parochial sport—highly revered on one distant island and little more than a curiosity for the rest of the world? The connection is sports nutrition—reflecting on the history of the AFL reveals a clear story about the development of sports nutrition in Australia. And it probably is a good reflection of the general development of the science and practice of sports nutrition around the world.

The first regular appointment of a sports dietitian on the medical teams of an AFL club occurred in 1980. Melbourne-based Karen Inge was invited to provide regular nutritional input for the Collingwood Football Club, a highly successful team. The interaction was of two-sided interest. Karen needed a project to undertake as part of a degree upgrade, and Collingwood was smarting from its loss in the previous year's Grand Final (the Australian version of the Super Bowl). They had used special fructose tablets before this important game, and some players had overindulged and suffered from gastrointestinal distress. As a result, the medical team at Collingwood thought that it would be good to get some nutrition advice from a reputable source. Collingwood made it into the 1980 Grand Final but lost again.

Coincidentally, the club at the bottom of the premiership ladder, St. Kilda, also invested in sports nutrition in 1980. The Saints had only won one premiership in the history of the competition and sorely tried the patience of their fans. One fan, in the last year of a dietetic degree, wrote to the star player in the team—imagine a David Beckham playing for an otherwise hopeless club—to convince him of the importance of sound eating in achieving optimal performance. The player, Trevor Barker, not only read the letter but also passed it on to the club doctor, who contacted the student. And that was the serendipitous action that started my career!

So what was the environment like working for a professional football club in the 1980s? The preevent meal was the major issue of performance nutrition at the

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time. Many players felt that eating the right foods in the right amount at the right time before the game (with their lucky knife and fork) would overcome a week of poor eating and turn them into champions. Recovery had not been invented yet, and postgame activities mostly revolved around alcohol and partying. At the end of each season, players disappeared for a prolonged period and returned many kilograms overweight. The major reason to see the club dietitian was for weight-loss advice. Although counseling sessions might have been taking place in one part of the club rooms, however, players might have been enjoying a “sausage sizzle” and accompanying beers in the other corner. It would be fair to say that the Saints and I weren’t ready for each other.

The culture and physiology of the game have changed over the past 30 years. In the 1980s, most good players were skilled rather than athletic. Even though AFL was a “professional” code, most players held full-time employment as physical education teachers, bank workers, or salesmen. Training sessions were held late in the afternoon to accommodate work commitments, and all games in the 12-team competition were played at the same time (Saturday afternoons). There were no travel issues to worry about—all teams in the major competition in the country were located within a 100-km radius around Melbourne. Each team played with 20 players—18 who took the field at the start of the match in set positions and 2 reserve players who were brought on to replace players who sustained injury or fatigue. Trainers carried half-filled cups of fluid onto the ground during the breaks between quarters, and doctors administered glucose tablets for energy.

The game of 2008 is much faster and athletic. The differences between positions are blurred, and teams are generally just seen in terms of forwards, defenders, and midfielders. The midfield players who wear GPS units during the match typically log 12–16 km of running during a game of four ~30-min quarters, with exceptional players apparently clocking over 20 km of game running. Because the 18 players on the field can now be constantly rotated on and off by four “interchange” players, however, there is a greater emphasis on sustained higher speeds rather than total match distance. Most of the teams are still based in Melbourne, but with 6 of the 16 teams coming from interstate and matches being located in all states and territories around Australia, the challenges of travel and play in a variety of climates are all part of the game. Thirteen of the teams now have sports dietitians on their fitness or medical-support teams. Typically, each dietitian spends 1 or 2 days at the club each week and can play a variety of roles on match day. Some travel to all interstate games and sit on the team bench during games, monitoring hydration status and other nutrition activities. Strategies that are part of the nutrition preparation of the team include

- Anthropometric assessments of body composition
- Individual counseling of players
- Group lectures and meetings
- Practical activities such as supermarket shopping and label reading
- Cooking classes
- Specialized education and induction programs for young players
- Organization of catering needs during interstate trips

- Management of supplement programs and policies
- Contribution to “innovation” committees
- Attendance at medical-services meetings
- Setting up individualized plans for match-day nutrition
- Organizing match-day nutrition needs and postmatch recovery eating
- Monitoring hydration status during matches and training sessions and from day to day
- Attending next-day recovery sessions for match feedback
- Running a nutrition education/message notice board
- Organizing catering on some training days

This list highlights a number of apparent improvements in the perception and contribution of nutrition to the performance of AFL players. First, it is clear that sound eating practices are integrated across the board in the preparation of players. Second, the club dietitian plays an important role in facilitating or implementing the nutrition program and is recognized with the fitness or medical-support staff. Third, players and coaches now expect a case-management approach with respect to individualized nutrition needs and goals, rather than having a “one size fits all” nutrition plan for all players.

So how did this change occur? Much is a tribute to the sports dietitians who have been involved in AFL clubs over the past 28 years. Many have developed their skills and their reputations in these clubs—and even when they have moved on to other opportunities, they have been selfless in mentoring a new breed of sports dietitian to follow in their footsteps. The current president of Sports Dietitians Australia, Lisa Sutherland, is a long-time AFL dietitian. She chairs an informal but strong alliance of AFL sports dietitians who are always ready to share ideas and information with each other. I asked the dietitians who attended a recent meeting of the group to explain the development of nutrition in the AFL, and many pinpointed the role of players themselves. Many of the current coaches and administrators in the AFL are former players who experienced the initial contribution of dietitians to their team, then helped the movement grow as their own influence increased.

I have had the opportunity to witness this change firsthand, having returned to the Saints in season 2006 to coordinate a nutrition program. (Well, they still haven’t won that elusive premiership, so I felt the need to roll up my sleeves again.) There’s a funny sense of déjà vu at the club because the club rooms and facilities haven’t changed. But the professionalism and sound practices are evident in ways that were lacking on my first time around. I have a lovely reminder of my past whenever I am at the club. My childhood hero, Trevor Barker, succumbed to cancer many years ago at the age of 39, but his father, Jack, still attends all training sessions and matches. During the winter months I organize hot soup and bread rolls for the players after the main training session of the week, and 81-year-old Jack comes in to serve it to them. He often tells me that Trevor listened to my advice about eating vegetables or not eating too many desserts. And I often tell him that without Trevor, who knows what I would be doing today.