

The Olympics

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Sports Dietitians



Louise Burke

Being selected as Olympic Dietitian for the Medical Headquarters staff of the 1996 Australian Olympic Team was a highlight of my career, and a goal I had set back in the cave days at Deakin University as I slaved over the textbooks.

Working with the Australian Olympic Committee and with the Medical Team under the leadership of Dr Brian Sando was a fantastic experience. There's an unfair (media-led) perception that the Olympic team is stacked full of unnecessary officials and 'hangers-on'. Instead I found a bunch of people whose organisational skills, dedication and efficiency were incredible. I was really touched when I received my Olympic Uniform Kit, and found that everything was not only in my size but had a label with my name sewn on. Plus I received thoughtful accessories such as a plug with 'American' prongs, sunscreen and a Telstra card to ring Australia with \$150 credit. Talk about attention to details and the personal touch!

So what were the Olympics like? Amazing! I wasn't quite prepared for the pressure and media criticism. Or for the sadness of those whose goals weren't achieved. (Remember that their numbers outweigh by far the Winners and Grinners). Living with 15,000 athletes and staff in the Olympic Village was an experience. The upside was the great camaraderie and the access to facilities. The downside was the noise, busy timetables and lack of sleep.

The dining facilities provided both great opportunities and great challenges to our team members. The central Dining Hall was a huge operation, incredibly set up in a temporary tent. Little trams moved around the Village to transport athletes to and from the various venues, and for us involved a five minute journey between our accommodation and the Dining Hall. This dining hall was open 24 hours and faced the task of catering for athletes from over 190 countries with different tastes and different nutritional needs.

Mac Atlantattack!

McDonald's was the official restaurant of the Village, and had five stations set up in various locations. One of these was right outside the

Australian Team's building. This might sound like a dietitian's nightmare. However, the Macca's menu had been carefully modified to include cereal, yoghurt and fruit, and a new burger, the McGrilled Chicken Classic, which provided quick and nutritious fare. Of course, there were the usual McNuggets and Big Macs. And a fridge full of exotic icecreams. Depending on your choices, a visit to Macca's could be quick, convenient and healthy, or just a visit to McDonald's. I ate a lot of my meals there and am now a living testament to 'Good Experiences with Fast Food Chains'.

I spent much time educating our athletes about strategies for eating in a cafeteria-style setting. Experience from the AIS Dining Hall has shown me that this service is great for flexibility and speed of eating. Unfortunately, it leads to problems of overeating in the early days, and later getting bored with the food. Even the most focussed athlete is at risk of what I call the 'Sizzler Syndrome' - going mad at the first sight of the 'all you can eat' opportunities, and then gradually tiring of eating great piles of 'a bit of this and a bit of that'.

Apart from continuing various education programs with teams and athletes that I already knew, and writing a nutrition column in the daily athlete newsletter, I set up a daily clinic in our Medical Headquarters to deal with the 'here and now' nutrition problems of athletes. Making weight, coping with fluid needs, eating in the dining hall, and last minute nutrition checks were common reasons for athletes to make appointments.

We had a special routine for helping athletes rehydrate after strenuous exercise that made sure

they replaced sodium as well as fluid losses to maximise post-exercise fluid retention. Not only did it help athletes to recover quickly between training sessions or multiple competition, it also avoided the problems of getting up in the middle of the night for a pee. Many athletes specially thanked us for this advice.

From the competition side of things, there were so many highlights. My accreditation allowed me to attend many events, and see the best competition in the world. There were more uplifting performances than I can ever hope to describe adequately. For the rest of my life I will cherish the memories of this adventure, and feel proud that sports dietitians were represented at the Olympics.

My appointment was made about a year before the Games, and helped to consolidate a lot of the work that I already do at the AIS, and with my appointments to national teams. Special issues and programs that were tackled in the preparation of our athletes over the four year Olympiad included:

- assisting with research and education about performing in the heat and heat acclimatisation
- teaching athletes about optimal hydration practices before, during and post-exercise
- a dietary survey of Olympic athletes
- assisting team managers and coaches with catering needs for travelling athletes
- teaching athletes about eating while travelling.
- preparing athletes for eating in the Olympic Village

Of course, there were many dietitians involved in the Olympic campaign working with individual athletes and teams at one level or another. I was just the lucky one to get the uniform and march into the Olympic Stadium. My thanks go to all the other dietitians who contributed (particularly to Liz, Gary and Sofie in the AIS Department of Sport Nutrition). It was noticeable that many of our athletes benefited from the input of both good nutrition and great dietitians.



Tactics

Welcome to the first edition of the SDA newsletter. The newsletter hopes to educate, inform, titillate and amuse you ... but, most importantly, it wants to be, like methionine, credit cards and heroes, indispensable.

I'm the team selector equivalent. It is my duty to choose the best material for the best results. Not everyone is going to agree with my choice. That's why I live in Perth - it reduces the risk of possible physical abuse. Nevertheless, after discussion with my advisers, picking at the pitch with the car keys, looking to the sky for inspiration and adapting to the glare, it is I who has to choose what is going to get the most lift and spin out of the wicket. My tenure as team selector is twelve months. If the players don't like my technique, challenge my authority and ultimately demand that the executive dump me, then I shall go and play somewhere else.

It is customary in the first issue to invite all readers to offer thoughts on the newsletter and submit the written word if they wish. It is also customary that no-one does so. This gives the editor a totally false impression that everyone is happy with his team of material. He then assumes a dictatorial position and refers frequently to 'my newsletter'

Sports Dietitians Australia

I encourage any dietician who has experienced a heart rate of 180, a PB out of the blue and sweat running down your spinal groove to grasp a javelin-like writing object and join a club so strong it will never merge. It will provide you with the opportunity to tell your grandchildren that you were there when the first ball was bowled and the SDA was 310 not out at stumps on the first day in Bradmanesque style. You may have seen a boundary, but you just went over the top!

Glenn 'Silly short legs' Cardwell

Editor
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From the Captain

The birth of Sports Dietitians Australia

by Helen O'Connor (President)

In February 1996, dietician members of the multi-disciplinary Sports Nutrition Group (SNG) of Sports Medicine Australia (SMA) held a one day strategic planning meeting. The focus of the meeting was to discuss forming a professional group of sports dietitians. After these discussions, and with the blessing of both DAA and SMA, Sports Dietitians Australia was born. The name Sports Dietitians Australia was chosen to reflect our professional group status as one of the new discipline groups of SMA.

The objectives and mission of SDA is outlined below. On behalf of the board of SDA, I would like to welcome you and encourage you to join with us and become part of this organisation.

Our Mission

SDA is a dynamic network of dietitians dedicated to advancing the recognition of, and promoting excellence in, sports nutrition practice.

Key Objectives

- To promote excellence in sports nutrition practice.
- Continuing education of dietitians and the community in sports nutrition.
- Recognition of sports dietitians as experts in this rapidly growing area of dietetics.
- Providing support and a dynamic network for sports dietitians to enhance employment and research opportunities.

Our Image

A visual identity for SDA has been created by Cato Designs. This identity incorporates the varied nature of our work with sports, activity and food. The images were created to represent our credibility, but also incorporate our vibrant and energetic personality as practitioners. Our motto, 'Fuelling Fitness for the Future', will be used in a variety of ways in marketing our services to different audiences.

Corporate Support

Gatorade and Uncle Tobys have generously joined us as founding sponsors of SDA.

Membership

Two main categories of membership, full and associate, will be available. Full membership is open to joint DAA/SMA members who have completed a postgraduate Sports Nutrition Course

approved by the board. Associate membership is open to full or student members of DAA, or students participating in a recognised dietetics training course in Australia. Associate membership for dietitians or students practicing or studying in other countries is also available.

Executive of SDA

Helen O'Connor (President)
Liz Broad (Secretary/Treasurer)
Karen Inge (Sponsorship & Public Relations)
Louise Burke (Education & Resources)
Lorna Garden (Membership)
Deborah Kerr (Strategic Planning)
Glenn Cardwell (Newsletter & Communications)
Holly Frail (State Liaison)

Refreshing Gatorade resources

The smart thing to do early in the game is join the Gatorade Sports Science Exchange, a free education service developed by the Gatorade Sports Science Institute. This is a quality service, that comes highly recommended by SDA. As a member of GSSE you will receive six Sports Science Exchange articles and four Sports Science Exchange Roundtable articles each year. GSSE offers other reference material too. Join by contacting the Australian home of GSSE toll-free on 1800 645 640 (fax 1800 629 906).

For those with the required light-weight aerodynamic technology, we suggest a visit to the Gatorade Sports Science Institute website (<http://www.gsweb.com/>). Remember that it's designed mainly for the US market, so some of their advertised resources may not be available in Australia.

Gatorade is one of the founding sponsors of SDA, along with Uncle Tobys. SDA is grateful for their support, without which, we wouldn't exist.

Louise Burke, Australian Institute of Sport

The Sports Nutrition course for Dietitians was developed as one of the first projects of the Sports Nutrition Interest Group of Sports Medicine Australia (or Australian Sports Medicine Federation as it was known at the time). I took on the role as Course Convenor, and assembled a band of enthusiastic dietitians working in sports nutrition, many of whom are serving on the steering committee of Sports Dietitians Australia. We contributed to the course syllabus, and ran a 'pilot' course for ourselves over a miserable weekend in Canberra in 1991. I remember it well, since our attention occasionally strayed to the TV in the corner where the AFL grand final was being played out (now that's commitment to be working on that 'one day in September'). We were ably assisted by Frank Wallner from ASMF.

The course syllabus and teaching methods were developed, the course notes were edited by Vicki Deakin and myself into 'Clinical Sports Nutrition' textbook, and hey presto we had a fabulous four-day continuing education course for dietitians, presenting state-of-the-art knowledge and practice into the intricacies of working with athletes.

The first official course was held at the AIS in early 1992, and nine courses later 244 dietitians have soaked up the experience. One course was run in Melbourne, but the feedback was that participants preferred the special opportunity to spend a weekend at the AIS in Canberra.



The feedback proved it's also a great opportunity for sharing and updating our knowledge, and developing a network of dietitians with similar interests and goals. Sports nutrition is certainly a groovy area of dietetics, whether you want to work with the best athletes, or be able to appeal to the general community with a hot topic.

We are extremely grateful to SMA for assistance with the course development, but we are pleased it is now a cornerstone of SDA professional development. Unfortunately we had to cancel the course proposed for October 1996 as transferring it from SMA left us with insufficient time to let the many interested dietitians get organised (we had over 70 enquiries!).

However, 1997 will see our first SDA course. The proposed date is Sunday 20 July to Wednesday 22 July 1997 to take advantage of some of the international sports science luminaries who will be visiting Oz to attend the International Biochemistry of Exercise Conference (15-19 July 1997). We will send dates and details to all those who registered interest in the last course.

If you are interested in doing the course, please contact Gary Slater at the AIS on 06 252 1729. If you would like to attend the Biochemistry of Exercise Conference contact Mark Hargreaves (fax 03 9853 7722).

Who is the course for?

Qualified dietitians with at least 1-2 years of clinical experience (We know that many young graduates are champing at the bit to be involved. However, the course is a better experience all around when attendees have consolidated their counselling and clinical skills). We will examine all enquiries to see if there are special circumstances to overturn the 'experience' clause.

What does it offer?

The course is a recognised continuing education option for the APD scheme, and is an entry point for full membership of SDA. It offers four days of the most up-to-date, and practical, overview of clinical sports nutrition. Our aim is to make dietitians the experts in this growing and specialised area of nutrition. Be part of our exciting future!

Sports Dietitians

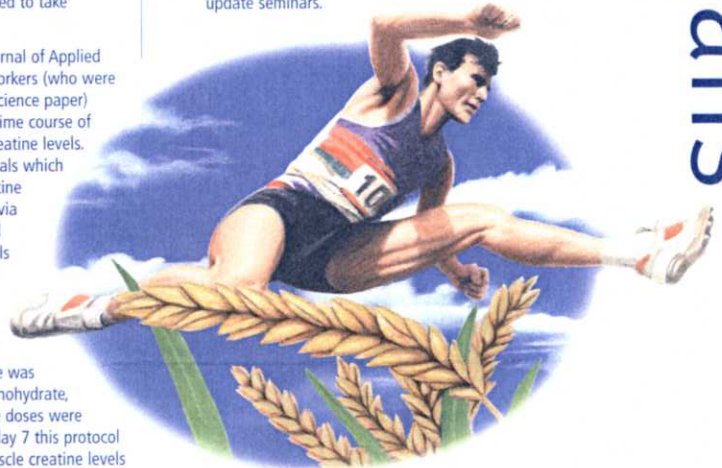
Around the Grounds

Queensland

Sports dietitians in Queensland have been active throughout 1996 assisting major sports teams and individual athletes. Kerry Leech, Holly Frail, and Greg Cox are nutrition consultants to the Australian Institute of Sport in Queensland (diving, squash, kayaking, rugby and women's water polo) and helped a number of athletes prepare for the Atlanta Olympics. Kerry, Holly and Bronwyn Calvert also run nutrition and cooking courses for Queensland Academy of Sport scholarship holders. Football teams are well served with Holly working closely with Queensland and Australian rugby union squads, as well as the Brisbane Broncos (rugby league). Judy Bauer is involved with the South Queensland Crushers, Peta Picton with the North Queensland Cowboys (both league), and Cindy Hamill with the Brisbane Bears (AFL). Peta also helps out with the Townsville Suns (NBL). Kerry is involved with both Queensland and Australian Netball, Queensland swimming and cricket.

There is a good relationship with Sports Medicine Australia (Qld branch) through Sandy Murray, Holly Frail, Lydia Sutakowsky, Greg Cox and many others who lecture in sports trainers and coaching courses as well as being involved in regular public seminars.

We invited all interested sports dietitians to a meeting in November, so that we may coordinate some regular communication and professional update seminars.



Tasmania

After an active involvement in the organisation and hosting of the successful 1995 SMA national conference in Hobart, sports dietitians working in Tasmania have finally been rewarded with a respected role in sports medicine activities within the state.

Participation as guest speakers in state-wide coaching seminars, Sunrice swimming camps and public sports nutrition forums has raised our public profile, while continued involvement with Tasmanian Institute of Sport athletes, their coaches and parents, and other TIS consultants, has given sports dietitians greater professional credibility.

New South Wales

Sports Dietitians in NSW play an active role in the athletic community. The dietitians are involved in a wide range of sports including basketball, swimming, rowing, netball, triathlons, hockey, and of course, the various football codes: the Sydney Roosters, Penrith Panthers and Canterbury Rugby League teams, Sydney Swans (AFL) and NSW Rugby Union (the game they play in heaven!).

Many of our dietitians have been, or continue to be, runners, triathletes, rowers, dancers, giving them a unique insight into the pressure and needs of our elite athletes. We are delighted to see the Sports Dietitians Australia unite in forming a professional group and continue to promote excellence within the field.

The NSW group is holding continuing education sessions every six to eight weeks with invited speakers including sports physicians, sports psychologists and dietitians covering a variety of topical issues. Over a delicious carbohydrate-packed breakfast in early February 1997 an information meeting will be held for all dietitians interested learning more about SDA. Details will be published in the NSW DAA newsletter.

the ability to recovery from repeated short bouts of high intensity exercise interspersed with a short recovery period (less than 2-3 minutes). In sport, this might best translate into interval training sessions (for example, the training typically undertaken by swimmers) or team sports that are based on intermittent high-level activity.

However, to date, research has been limited to laboratory testing and we await confirmation of these results with studies which examine performance of actual sports with elite athletes as subjects. There is still much to be done before we can convincingly tell athletes which sports/activities will benefit from creatine supplementation. Athletes also report a rapid gain of 1-2 kg following creatine supplementation. What this means is uncertain. Reports of a continued 'anabolic' effect of creatine supplementation are unsubstantiated.

The big question that needs to be answered is 'how to take creatine supplements properly?'. The original scientific paper reported that muscle creatine levels were increased by a mean of 20-25% following a 'creatine loading' protocol involving multiple 5g doses (4-6 times a day) over about 5 days. However, a scan of the creatine supplements available on the market will show you that a variety of suggested doses are recommended by manufacturers. Athletes considering creatine are confused by how often, how much and how long they need to take the supplement.

A paper recently published in Journal of Applied Physiology by Hultman and co-workers (who were involved in the original Clinical Science paper) helps to shed some light on the time course of loading and unloading muscle creatine levels. This paper included a series of trials which studied various protocols of creatine supplementation and measured, via muscle biopsies, the increase and depletion of muscle creatine levels in response to supplementation and withdrawal.

Trial 1.

Supplementation with 6 days of 4 x 5g doses of creatine. Creatine was taken in the form of creatine monohydrate, dissolved in warm water, and the doses were equally spread over the day. By day 7 this protocol produced a mean increase in muscle creatine levels of approximately 20%. The percentage uptake of creatine is believed to drop sharply after the first couple of days, and reach a threshold after which no further increase in muscle creatine is seen. Repeat biopsies at days 21 and 35 showed that by day 35, muscle creatine levels had returned to baseline.

Trial 2.

Following a 'loading' protocol as described in Trial 1, subjects continued to take 2g/day of creatine for a further 28 days. This time, muscle creatine levels were elevated at day 7, and remained elevated at the end of the period.

Trial 3.

Subjects consumed a low-dose protocol of 3g/d of creatine as a single dose for 28 days, and were biopsied at day 15 and 29. This is similar to the protocols recommended by the manufacturers of many of the commercially available creatine supplements. The results showed a much slower increase in muscle creatine levels, but by day 29 the elevations were similar to that achieved by the larger-dose protocols.

Trial 4.

Urine volumes were tracked in subjects following a creatine loading protocol. Interestingly, urine volumes dropped sharply during the loading phase, returning to typical levels thereafter. This would suggest that the immediate weight change seen with creatine loading may be due to water retention.

Conclusion: The most effective way to elevate and maintain muscle creatine levels is to undertake a creatine loading protocol of 20g/day for 5-6 days (4 x 5g doses) followed by a maintenance dose of about 2g/day (0.03 g/kg body mass/day). Now all we need to know is what sort of performance benefits it offers!

Louise Burke

Gold Medal Nutrition by Glenn Cardwell
Reviewed by Helen O'Connor

Book Review

This is a most informative and entertaining book on sports nutrition. By all counts, it certainly achieves its mission to provide up-to-date sports nutrition information in an easy-to-understand and interesting manner. The wealth of practical information, diet tips and helpful hints about nutrition in general is an additional strength, making this book applicable to a wide audience, not those just interested in gold medals as the title implies.

The sections on the body's processing of food and energy metabolism ('ignition') at the beginning of the book simplify complicated concepts without diluting relevant information. The sections set the scene for the chapter on 'super hero .. carbs' which includes an excellent explanation of the role of carbohydrate and the application of the Glycaemic Index in the context of sports performance. Sections to follow centre around competition, fluid replacement ('liquid assets'), bulking up, fat loss, supplements and common dietary deficiencies in active people. The sections on bulking up and protein help to clarify and demystify what has always been a controversial and confusing area. The chapter on nutritional ergogenic aids is comprehensive and supported by scientific references. The last chapter includes practical information on travelling and jet lag.

Illustrations are cleverly used to minimise words and improve the readers ability to understand conceptually difficult areas. The imagination and creativity used in translating nutrition messages incorporating cartoons, quotes and stories is another major strength of this book. Other features include a glossary of terms, an extensive bibliography, recipes, menu plans and comprehensive counters for relevant nutrients (carbohydrate, protein, iron, calcium etc). The overall layout of the book with point form, diagrams, cartoons and boxed text fits with the easy-to-read style.

I thoroughly enjoyed this book and found myself constantly entertained by the author's uniquely witty style. It is highly recommended to a wide audience, including dietitians, other health professionals, athletes (of any level), coaches and the general public. It is a must for school libraries. At \$19 (including postage and handling) it is value for money. The book is self-published and available on mail order from the author (PO Box 1035, Bentley Delivery Centre 6983).

What's new in the literature?

There's always something new in sports nutrition and exercise science. Keeping up to date can be hard, especially if you want to keep one step ahead of the questions that athletes ask. Our goal is to make sports dietitians the experts that people turn to for answers. To this end we will provide reviews of important new research, and tips for keeping up with the latest sports science.

Review

Muscle creatine loading in men
E Hultman, K Soderlund, JA Timmons,
G Cederblad and PL Greenhaff
Journal of Applied Physiology 81: 232-237, 1996

Background

Creatine has enjoyed 'supplement of the month' status for just on four years now, since reports from the Barcelona Olympic Games attributed the success of British track and field athletes to creatine supplementation. More intriguing was the timely release of a paper in Clinical Sciences journal in 1992 that reported that supplementation with large doses of creatine produced an increase in muscle creatine levels. The important role of creatine-phosphate in energy metabolism made it tempting to hypothesise that increased muscle creatine levels might improve exercise performance.

Unlike the majority of other supplements which have swept through the athletic community, creatine has been subjected to scientific testing. The consensus of present research supports a beneficial effect on certain types of exercise following creatine supplementation. Specifically, elevated muscle creatine levels appears to improve

Umpire's Verdict

Western Australia

WA has five sports dietitians working in the metropolitan area and one in the south west of the state. We consult to a numbers of elite athletes including West Coast Eagles, Fremantle Dockers (AFL), Perth Wildcats (NBL), WAIS Breakers (WNBL), AIS hockey, Perth Heat (Baseball), WA Women's Softball, WA Cycling Federation and the WA Marathon Club.

We also consult to the WA Institute of Sport teams and individual athletes including swimmers, Talent Identification Program rowers, canoeing, netball and baseball. We are currently working with the WAIS exercise physiologists putting together a nutrition syllabus for educating athletes and coaches.

Seminars are regularly presented to the public, athletes and health professionals and often run in conjunction with SMA and Womensport West. For the fourth consecutive year, a sports nutrition update public seminar was conducted by SMA in November.

We run sports nutrition lectures as a component of a number of courses including Sports Trainers courses, ACHPER Fitness Leaders courses, TAFE, and the GPs Sports Medicine Course.

For all interested dietitians, we will be having a meeting in mid-January 1997 to provide an update on SDA and discuss any state matters. Membership packages will be available at the meeting. Notice of the meeting will be in the DAA (WA) newsletter. For more details please contact Andrea Paganin. We look forward to seeing you there!

Victoria

In true Olympic Spirit, the Vic branch of SDA have been going for gold! We've been thriving on the new-found direction of the group by having monthly education sessions with invited speakers. The speakers have included Dr Ian Gillam who presented an update on antioxidants with a focus on vitamin E.

Dr Glen McConell, just back from the USA, summarised relevant papers presented at the American College of Sports Medicine's 43rd Annual meeting in June. Dr Shona Bass ran a fabulous tutorial on bone density and DEXA scans. Now we can make some sense of the multi-coloured graphs, the columns of numbers and the all important Z scores that appear on DEXA reports. To finish the year, Dr Sue White shed some light on the female athlete.

On behalf of SDA we would like to thank Kylie Andrew, Karen Inge, Cathy McConell and Janet Pritchard for their 'sporting' efforts at the recent DAA PES seminar. They discussed their sports nutrition encounters with 'Food, Sex & Politics' - it could only have been an entertaining workshop!

The Victorian branch of SDA invites all dietitians interested in sports nutrition to our state launch on Tuesday 11 February 1997, from 6-7 pm. This will be a great opportunity to collect a membership package and discover how you can be involved in the always exciting area of sports nutrition. The launch will be held at the SDA secretariat Victorian Institute of Sport (Level 8) 20-22 Albert Road South Melbourne. RSVP Prue Jackson.

South Australia

There continues to be a core group of enthusiastic dietitians who are promoting the sports nutrition cause in SA. We meet as a group over coffee on a six weekly basis, and have just formalised our group with various members having specific tasks.

Our activities have focussed around either continuing education (for ourselves, health professionals, sports trainers) or promotion and publicity of sports nutrition and hence sports dietitians.

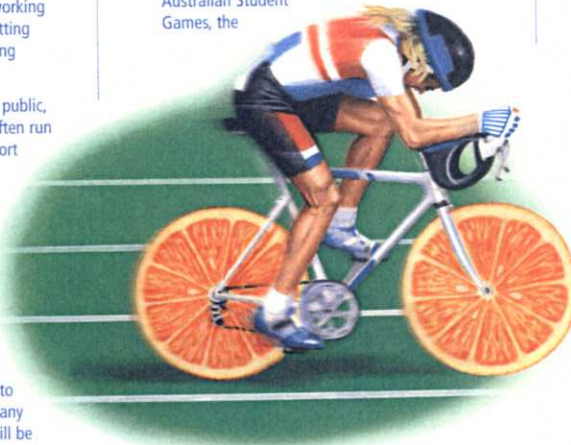
A snippet of our activities includes:

- Presenting a paper at the SMA (SA) Conference on sports drinks
- Coordinating a display at the Sports Trainers Conference on fluid replacement
- Participating in SMA's display at the Royal Adelaide Show where we had a Sports Dietitian available for questions while a Home Economist prepared examples of pre- and post-event meals and snacks
- Facilitating the nutrition component of Sports Trainers Levels 1 and 2 courses

Plans are in the pipeline for continuing education sessions for the group. Proposed are a session on body image and an accredited anthropometry course. Our plan for the remainder of 1996 and 1997, after the launch of SDA nationally, is to consolidate our promotion of Sports Dietitians in SA to various groups.

ACT

Sports Dietitians have been advisers to many local sporting events. The most frequent request has been for help regarding meals, snacks and fluids for events such as the Australian Student Games, the



Johnny Walker cup (soccer), and Swim for Heart, a 48 hour, night and day, swimming marathon in which swimming teams try and accumulate as many laps as possible in the two days.

A novel experiment has been to conduct cooking classes in the home of the players in the Canberra Raiders Reserve Team (Rugby League). The players provide the recipes and the dietitian selects the best choices and helps them to prepare the dish. In this way a portfolio of simple recipes has been produced exclusively for the team.

Nutrition information was produced for the kits sent to participants in the Canberra Fun Run. We have recently been asked to help with the Tour de Femme (cycling) and the Novice Triathlon Series, both great opportunities to promote smart nutrition habits in young athletes.

State Representatives

Qld: Holly Frail
telephone 07 3309 8808 facsimile 07 3309 8809
ACT: Mareeta Grundy
telephone 06 282 2144 facsimile 06 282 5147
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Short Passes

Inventor develops a way to quench thirst under water

An inventor in Taiwan has found a way to keep SCUBA divers hydrated when their throats become parched from breathing the dry air from their tanks. A bag filled with liquid is connected to a cylinder with a pipe and a pump. A piston in the cylinder forces liquid out of the bag and through the pipe and into a mouthpiece when a diver bites on an on-button. The mouth piece is connected to the diver's regulator, so he does not have to remove the regulator from his mouth to drink. The same inventor also patented a diver's drinking device with a pump operated by a hand switch. (New York Times 15.7.96).



How to prevent thermal injuries

by Dr Carl V Gisolfi, Dept of Exercise Science, University of Iowa

- In preparing for outdoor competition under hot, humid conditions, warm up in the shade to avoid raising body temperature too high, too soon.
- Rest in shade between events. Exposure to the sun can cause blood to accumulate in the skin. This makes less blood available to muscles during subsequent exercise.
- Wear minimal, loose fitting clothing to help promote heat loss.
- During prolonged exercise in the heat, body fluids lost as sweat must be replaced as frequently as possible to avoid dehydration and subsequent thermal injury. Drinking 350-600 mL of fluid 10-20 minutes prior to competition is a good idea, but cannot substitute for ingesting fluids during exercise. Running through a shower or being hosed with water also will not prevent the rise in body temperature during exercise.
- Fluids (e.g. sports drinks) ingested during exercise should contain 5-8% carbohydrate and a small amount of electrolytes. Such beverages will provide a source of fuel for the working muscles, encourage drinking by enhancing taste, promote fluid retention, and will facilitate the absorption of water and glucose from the intestines.
- Throughout heavy work or prolonged exercise, at least 240 mL of fluid should be consumed every 15-20 minutes.

These summary points are an extract from the Gatorade website (<http://www.gssiweb.com/>).

Cooking for Champions

Louise Burke and Sofie Modulon
Department of Sports Nutrition
Australian Institute of Sport

Are you ever faced with the task of organising food for athletes? Do you spend hours writing information for caterers and designing menus? At the AIS we do, so we decided to put our hard work and expertise into one convenient resource - a book. We have created just what you need - a comprehensive but simple guide to nutrition and catering for athletes. Our book contains the following information:

- The principles of eating for sport
- How we do things in the athlete's dining hall at the AIS
- Tips on large quantity cooking for athletes
- Menu planning - a step by step guide with sample menus
- Healthy recipes for 25 and 100 serves

While the book contains information specifically for athletes, most sections are equally applicable to large groups of active people e.g. caterers serving food in school canteens, university colleges or boarding schools.

The book was launched at the Australian Conference of Science and Medicine in Sport. It is available for sale from November 1996. For further information contact the AIS Dept of Sports Nutrition on (06) 252 1109.

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