



# THE MASTERS ATHLETE

ISSUE 12 APR 97

A total fitness guide to optimise training and performance for the older athlete

ISSN: 1322-7831

Guest Editorial - Len Childs

(President of the Australian Association of Veteran Athletics Clubs)  
'Not One Cent'

**V**eterans Athletics was developed as an opportunity to keep fit, mix socially and enjoy a sport. Until relatively recently it received no funding, in contrast to its more well known cousins, Athletics Australia and Masters Games.

'Money makes the world go round', wrote Len Johnson in a January edition of the Monday Sport Forum in *The Age*, commenting on the troubles at Athletics Australia. (AA) now has 24% less money to go round and this has apparently led to the resignation of its Chief Executive - Neil King. King's departure follows closely on the heels of the resignations of AA's Marketing Media Manager and Development Officer.

Despite AA's current problems with funding, and its internal professional relationships, it does have a strategic development plan for 1994-1998. As long as management has the appropriate skills and adequate finance is available - AA's progress should be assured.

This also seems to be the situation with Masters Athletics, one of the Masters Games sports. Its long term development is assured and the organisation is viewed by many as the 'commercial arm' of the sport of athletics.

Masters sport in its present form was developed to work in with existing sporting activities as well as ensuring that social and physical needs of the competitors are met. However, the underlying motive for the establishment of masters sports is not an altruistic one, but is centred on the need to produce a financial return for corporations directors and owners. It has to be stated that highly proficient sports entrepreneurs and professionally qualified individuals have been engaged to ensure the success of the ventures. That these ventures also use the services of local officials who are given some financial recompense, is recognised.

While Athletics Australia events and Masters Competitions can be viewed as great value and provide some social benefit, do they assist athletic organisations in Australia to develop adequate facilities?

The Australian Association of Veterans Athletics (AAVAC) started in 1973 as a small national coordination body for national and international championships. Since 1990 it has developed into a highly organised and centrally controlled organisation, striving to implement athletic policies at the state, national and international level.

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'NOT ONE CENT'."**

At the same time, AAVAC has been attempting to implement government policies and directions. Life for veteran athletes is directed by the social standards of the day, with an avoidance of comparisons between athletes, and an absence of qualitative judgements. Veterans athletics is for everyone over 30 years of age. There are no tests to pass, no performance criteria to achieve. It is there to assist people to enjoy life.

Therein lies the challenge for the individual and the organisation. How do you ensure that participants in all states and territories have the facilities to keep them fit, when little financial resources are available? How do you ensure that the really fit athletes, who want to compete nationally and internationally, have sufficient facilities to challenge them at their level of fitness?

Long before the Australian Sports Commission came into existence, sporting facilities were developed by some local and state organisations. From the earliest part of this

century, most towns and villages had a cricket oval and once a year white lines were put around it for running tracks. Competition - was jolly good fun. But the media paid little attention to such activity.

In the 1950's athletic facilities were updated but there were still very few high jump stands, hammer cages or throwing circles, let alone pole vault stands. In the '90s nothing has changed. Apart from grass running tracks and long jump pits, few facilities are provided. Even in Sydney, pre-Homebush, most veteran athletes could only use a tartan track for four hours a week. Compare that with the facilities for swimming, basketball, tennis and so on.

Outside the main cities, veterans athletics clubs have been slow to develop. Major population centres such as Townsville, Albany, Newcastle, Bordertown, or Darwin do not even have veterans clubs. The question is - Why not?

The answer is really a lack of human and financial resources. Yet, funnily enough if a 'Masters Games' was to descend on any of these places the novelty of such an event would attract numerous athletes.

Such athletes would reminisce about track athletes, such as Landy or De La Hunty, but few would be able to discuss high jumpers, shot putters or pole vaulters. It is doubtful whether the names of Schultz (discuss), Gilmour (track), Brasher (track) or Foley

Guest Editorial continued on Page 2...

## Editorial

Hello from Rock Vegas!

We've made the move and are now all settled in Rockhampton albeit in temporary accommodation. Our new business address is Sports Performance Consultants, PO Box 61, Central Queensland University Post Office, Rockhampton, Q 4701.

This issue we say goodbye to Liz Hepple our popular cycling contributor. Liz is taking some time off to complete her Graduate Diploma in Sports Coaching. Hopefully we'll see her back again next year. In the mean time, Craig Maskeill, a sports scientist and medical student as well as former Australian Triathlon representative will be giving us the benefit of his expertise and experience. Enjoy the read.

Peter and Claire

## THE MASTERS ATHLETE

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(hammer), all Australian World Record holders, would be known. Such veteran athletes have brought home international gold medals and all are citizens of Australia who like many other have paid Australian rates and taxes for many years. In this age of political correctness maybe such persons are being discriminated against!

Athletics Australia and Master Athletics maintain competition at an elite level. They also ensure that the physical and geographical areas chosen for competition are in a pleasant setting either within Australia or overseas.

While AAVAC has a strategic development plan and has upgraded its management structure it does not have adequate financial resources to develop specific facilities for athletes. AAVAC relies on member contributions to fund all of its activities including the training of judges and officials.

It is true that AAVAC is funded by the Australian Sports Commission (ASC) through Athletics Australia but the extent of this funding is misleading. During the last ten years Athletics Australia has received approximately \$30 million dollars in funding from the ASC.

Of that, AAVAC has received \$11,000 which is less than 1% or 'Not One Cent'.

**Len Childs is President of the Australian Association of Veterans Athletics Clubs (AAVAC). He has lived in Canberra for 30 years and for the last few years has travelled widely in Australia and overseas. Len took up the Decathlon in his 60th year and has competed in that event in every Veterans World Championships since 1987. Born in England he served in the Royal Navy before attending London and Loughborough Universities. He attended the British School of Athletics full time for a year. Throughout his professional career Len was a teacher, Education Administrator and Industrial Politician.**

"In the marathon the contest is not so much between runner and runner but, in the tradition of this classic drama, between man and the Gods. The Gods in this instance being represented by distance, heat and time."

John Hopkins -  
sportswriter

## Athlete Profile

Name:

Elizabeth Simpson

Age:

37 years

### Sports/Events:

Triathlon

### Occupation:

Past: Self Employed

Present: Commonwealth Public Servant

### What do you enjoy about masters sport?

Training with and competing against triathletes of all ages - pushing myself just that little bit extra.

### What motivates you to participate?

Winning, keeping my weight under control.

### How do you keep yourself motivated?

Keep winning.

### Favourite training session:

Long runs in the forest with my dog, group rides in the early morning fog in the hills just outside of Canberra.

### How often do you train?

10-12 sessions per week

### Do you train under a coach, with a group of friends, or by yourself? Why?

Coached by my husband, Ken. I usually train by myself because of the specificity of my training.

### Person most admired and why?

My Mother, Joy Bannister, former world veteran champion and world veteran record holder over 400 metres (track). Mum only started competing in track and field at age 53 in an effort to persuade me to return to competition. She has temporarily given up her sport to look after my children, allowing me to devote more time to my training and racing.

### Other interests/hobbies:

My husband would tell you it's housework - but that's just not true!

### Your most memorable moment in sport:

My first race at school when I was about 6 years old. I remember turning around when I was about half way to the finish line wondering where everyone else had gotten to - I was that far ahead!

### Your most memorable moment in life so far:

Childbirth

### Favourite movie:

Pretty Woman, Dirty Dancing, Muriel's Wedding - "happy ending" stuff

### Favourite 'bad' foods:

Too numerous to mention, but chocolate will get me every time.

### Favourite 'good' foods:

None that I can think of, except maybe rice

### Philosophy on life:

Quality not quantity.

### Advice to masters athletes wanting to improve:

Be consistent in your training and don't be fooled by others telling you how much training they do.

## From the Research

### Body Fat and Aging

Those hips, thighs, or tummies just seem to get bigger the older we get. Ever wondered whether it's age or the fact that we mightn't be as active as we used to be? A group of American researchers examined 30 female endurance athletes ranging in age from 23 to 56 years old. They were testing the suggestion that age does not influence body fat or where it is distributed on the body. They measured body fat by underwater weighing and body fat distribution by circumference measures and skinfold thicknesses over numerous sites on the bodies of the athletes. The researchers found no age-related trends in body fat or its distribution in the highly active women. This contrasts with previous findings on inactive women who appear to increase total and regional fat levels as they age. Thus, the age-related increases in body fat may be a result of reduced training rather than an inevitable consequence of aging itself. Keep up the exercise guys!

*Adiposity and regional body fat distribution in physically active young and middle-aged women.* Davy, K.P., Evans, S.L., Stevenson, E.T. and Seals, D.R. International Journal of Obesity 20(8), 777-783, 1996.

## The Team

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The Masters Athlete is published every two months by Sports Performance Consultants, PO Box 61, Central Queensland University Post Office, Rockhampton, QLD 4701, Phone (079) 265 269. Information herein is solely for the guidance of our readers, and is not intended to substitute for professional or medical advice. Sports Performance Consultants disclaims responsibility or liability for any loss that may be incurred from the use or application of any information in The Masters Athlete.

### SUBSCRIPTIONS

Individual \$29/yr Assoc/Clubs \$50/yr Overseas \$AUS40/yr (2 copies)

### EDITORIAL CORRESPONDENCE

The Masters Athlete, Sports Performance Consultants, PO Box 61, Central Queensland University Post Office, Rockhampton, QLD 4701.

### DESIGN & PRINTING

PC GRAPHIC ART PTY LTD  
PHONE (07) 3358 4654 FAX (07) 3358 1351

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## ENDURANCE

# Do Endurance Athletes need Strength Training?

© by Dr Peter Reaburn

**W**hen done separately, strength and endurance training lead to diverse and sometimes different training adaptations. Many athletes do both types of training at the same time. Will it lead to improvements or decreases in performance is the question?



Peter Reaburn

## ■ Introduction

Numerous research studies have shown that strength development is impaired when combined with endurance training. However, a number of these studies just strength-trained one muscle group such as the quadriceps for 4-5 days per week on top of cycling training, possibly leading to overtraining and thus no strength gains. Other studies have done "strength" training using 15-30 repetitions of exercises which some might say is endurance and not strength training which normally requires low reps (1-6). So what is the latest on doing strength training as an endurance athlete? More importantly, what are the secrets to a successful strength program as an endurance athlete, particularly one that ain't getting any younger.

## ■ The latest research

A 1995 study from good 'ol US of A examined 30 non-athletes and broke them into three groups - one a strength-only group, one an endurance-only, and one a combined strength and endurance group. They trained three times per week for 10-weeks.

The strength-training group did eight exercises, 4 sets per exercise, and 5-7 repetitions per set. The endurance-only group cycled for 50 minutes at about 75% of max heart rate, and the combined group did both the strength and endurance work in the same session, rotating each day what was done first.

Both the strength and combined group improved squat and bench press strength by 18-23%. The endurance group showed no improvement in strength. Importantly for we endurance athletes, VO2max improved by 18% in the endurance trained group and 16% in the combined group.

This research, although using non-athletes, strongly suggests that doing strength and endurance training in the same session will not significantly harm endurance performance.

## ■ The "why's" for strength training

Older endurance athletes can gain significant benefits from high intensity resistance training in a gym. These include:

- injury prevention, particularly in those prone to injuries;
- greater strength theoretically means fewer muscle fibres are needed to exert the same force, or the same number of fibres exerting more force;
- the above theoretically means less fatigue and more force able to be applied to cranks or blades;

- older athletes lose muscle mass, particularly after 60-70 years of age, strength training has been shown to improve muscle size in both older men and women;
- once a larger muscle mass has been developed through strength training, endurance training can turn that muscle into endurance muscle, theoretically leading to improved performance;


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- for the older athlete that has endurance-trained the same way for years, a new stimulus is needed - strength training can provide that.

## ■ So what are the tips!

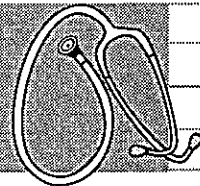
- Strength training, now called resistance training by those in the know, is a science unto itself. I cannot emphasise enough that expertise is needed in programming, particularly for we older athletes. In Australia, contact your state branch of the *Australian Strength and Conditioning Association* for people who may be able to help you.
- Periodise your training by developing strength in the "off-season" while maintaining an endurance base. Increase your specific endurance training while decreasing your strength training load. For example, you might do 3 weights sessions and two endurance sessions in the off season but start switching that to 2 weights and three endurance sessions during preparation phase.
- If you must train strength and endurance at the same session, do your strength work while you're fresh, you'll get better gains.
- Listen to your body - if you're starting to get tired, slow down, take a day or two off or change your training habits.

## ■ Conclusion

Strength training is critical for all older athletes. We lose muscle mass as we age and strength training goes a long way to helping hold that muscle mass. Strength training will also help us prevent injuries and improve performance when strength is required (hills, sprints, finishes). Get sound advice, train with good technique, and try it! 

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# An Elite Triathletes' Reflections on a Mental Skills Training Program

© by Wendy Swift

**F**aye Collins is a successful Masters Triathlete. At age 46, Faye has been competing in triathlon for 15 consecutive years, finishing over 300 races.



Wendy Swift

She has been the Australian Masters Champion three times, the Australian Age Champion in every age group competed, the Queensland Champion in all distances, and has won 6 of the 7 Ironman events entered as an age group competitor. Faye works part time, has two grown sons and has just become a grandmother. She speaks here about her use of mental skills training in preparation for the 1996 Hawaii Ironman where she won her age group.

**WS** - Your preparation for the 1996 Hawaii Ironman was the first time you tried sport psychology. What prompted you to do this and what expectations did you have?

**FC** - I saw it advertised at the University (of Queensland) and I was interested so I put my name down. I really had no idea what it was about, but I am very open-minded and very interested in learning. I thought I had been in the sport long enough to get the physical side right, and that I needed to work more on the mental side.

**WS** - What was the most useful strategy or technique that you got from sport psych?

**FC** - The first ones that come to mind, and I still use them in my training and races, are self-talk and list of positive affirmations. I use them all the time. If I start feeling low or slowing down I can use those and they pick me straight up. For example, I've had a bad back and sciatic nerve troubles, so my left leg can be really painful on the bike. I have learned through self talk to relax it - which eases it - and just to make myself be strong. By using positive affirmations I can ignore it and that also eases the pain that I'm going through. Even just for getting out of bed, if I'm tired I use the techniques to control my thoughts and then I'm glad once I'm out.

**WS** - Could you explain some of the other mental skills that you learned?

**FC** - I have learned to snap myself out of a down time or feeling low by slapping my leg as a physical reminder to stop my negative thoughts (thought stopping technique), and by some deep breaths, I do that both in sport and out of sport.

Segmenting was another very useful technique that I still use in my training and my races. We have a hard ride that we do out at Fisherman's Island that has a 20k loop and we do 100kms. I find it really hard, boring and monotonous to count 5 loops so I segment it, I go to the mango tree, then I go to the turnaround. I also have a speedo and I do 25k blocks

and by not counting loops but by segmenting and using my speedo I don't get bored and the time goes and that works for me. It helps me to concentrate and keep training at a high level for a longer time.

**WS** - Can you explain exactly what segmenting is?

**FC** - Well to me - you have to know the course - and pick landmarks on the course not too far apart, and you race to that point. Then when you reach it you might readjust your pace or your body position and assess how you feel, check right through your body - your posture, and if you are breathing correctly. Then, rather than running 42 kms, you are only running landmark to landmark and you can perform much better.

“I HAVE LEARNED TO  
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OF SPORT.”

**WS** - Any other strategies you think would be useful for other athletes?

**FC** - Pre-event planning is very important. I don't know how anyone can go into an event without planning. Planning what you are going to eat on race day, what you are going to have when you get up in the morning and during the race, even if it's a short race. What you are going to wear. If you have got your pre-event plan and you are organised there should be no panic and even though you may be nervous about the race you should have eliminated a lot of worries.

In races I write my self talk phrases on my arms "I'm a lean mean fighting machine" and "take a risk". It really works and I have others all around the house at home on pieces of paper in large type, I find them very motiva-

tional, they are by the phone, by my bed, different places.

**WS** - For someone who has never tried any sport psych or mental training before, how would they start and what advice would you give them?

**FC** - I would say go and see a professional person, a sport psychologist, and get them on the right track straight away. There are books you can read but I feel the one-on-one worked for me. I went once a week for fifteen weeks before Hawaii and I think that was enough. There was a lot to take in, but in the fifteen weeks I was learning every week.

**WS** - Where are you going from here.

**FC** - I've qualified at Goondiwindi to be in the Australian team to race in the world long course championships in Nice on the first of June (4k swim, 130k bike and a 30k run). Depending on finances, I am looking at going there. I am doing Forster Australian Ironman on 14th of April, but should I qualify I am not going to Hawaii this year.

**WS** - For how much longer will you compete in Triathlon?

**FC** - Forever!

Wendy Swift has a BA with a Graduate Diploma in Psychology. She is currently completing her Masters degree in Sport and Exercise Psychology at Queensland University. She worked with Faye in her Hawaii Ironman preparation.

“That is the whole secret  
of successful fighting. Get  
your enemy at a  
disadvantage; and never,  
on any account, fight him  
on equal terms.”

Sergius Arms and the Man  
George Bernard Shaw  
(1856-1950)

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# Energy Bars: The Facts

© by Gary Slater

**E**nergy bars or sports bars have enjoyed popularity since the early 1980's when they were promoted to runners, cyclists & triathletes undertaking heavy training. Today, sports bars are promoted to a far broader range of sports & athletes, from the twice weekly walk-around-the-blocker to the serious athlete.

The variety of bars is ever increasing, as are sales, but the question remains - do these pre-wrapped bundles of energy offer a performance benefit over more traditional carbohydrate foods like bananas and bread?

## ■ When & where to use them?

Sports bars may have a number of applications for athletes depending on the type and duration of training and competition. Sports bars may be used as:

- a compact pre-exercise fuel that may be of particular benefit to athletes who are unable to consume enough food before competition because of "butterflies".
- a carbohydrate source during prolonged exercise sessions (i.e. greater than 60 min.) to help prevent depletion of the body's own carbohydrate stores.
- a compact and portable fuel form which may be advantageous if you are required to carry all of your supplies with you.
- a way to alleviate that empty stomach feeling which may develop during long sessions. If a sports bar is your only carbohydrate source during prolonged exercise, try to eat 1-1.5 bars per hour of exercise (i.e. aim for ~ 40-60g carbohydrate per hour).
- a great recovery snack that is portable and won't perish in your sports bag or locker. Fluid requirements must also be considered for recovery.
- a convenient snack to boost carbohydrate and energy intake in the training diet.
- providing significant amounts of additional nutrients such as protein, iron and calcium.
- particularly useful when travelling overseas if food safety is an issue or if food choices are unfamiliar.

Remember that sports bars have a low moisture content. While they may be used to meet carbohydrate requirements, they will do little in helping to achieve fluid requirements. Sports bars are also more likely to cause intestinal discomfort than fluids when consumed during exercise.

Some bars may also be promoted as meal replacements, especially those recommended to assist with weight loss. It is unlikely they would be of benefit to an athlete attempting to reduce body fat levels as they are energy dense. The kilojoules a sports bar contains may be better spent on more filling traditional meals like sandwiches, fruit or yoghurt when attempting to lose weight.

## ■ Composition

Most commercially available sports bars follow traditional sports nutrition guidelines. That is, they tend to be low in fat and high in carbohydrate. Bars promoted as muscle-

Sports Bar	Energy (kJ)	Carbohydrate (g)	Fat (g)	Protein (g)	Additional Ingredients
Power Bar® 65g	962	45	2	9	Vits & Mins Amino Acids
Edge Bar® 57g	887	40	3	8	Vits & Mins Amino Acids
Purepower Energy Bar® 67g	1004	42	3	12	Vits & Mins Branched Chain Amino Acids
Aussie Bodies Durafuel® 65g	1030	50.6	2.6	4.4	Vits & Mins
Maxium Bar 70g	903	50	1.7	3.1	Maltodextrin
Musashi Amino Red diet slice 95g	1624	42.3	12.25	8.6	Vits & Mins Amino Acids Carnitine
Musashi Slim 95g	1008	45	4.5	8	Vits & Mins Amino Acids Carnitine Herbs
Musashi Amino Gold hi-energy slice 95g	1260	56	9	6.4	Amino Acids
Aussie Bodies Rapid Fire Perfect Protein 100g	1205	43.5	3.4	20.1	Whey Protein Concentrate
Sunbrite Slim n. Trim Muesli Slice 90g	992	51.8	1.2	5.8	
Uncle Toby's Breakfast Bar 36g	596	26.3	3	2.2	8 Vits, Iron Calcium

\*Lower fibre, traditional sports bars

Table 1: Composition of sports bars and cheaper alternatives.

builders tend to have similar carbohydrate levels plus additional protein. The list of ingredients for sports bars varies depending on their consistency. Traditional sports bars have a sticky consistency, generally relying on corn syrup (a high carbohydrate source) as their principle ingredient. Other bars are like a low fat version of muesli slices or cakes. They are primarily made from rolled oats and flour. Such bars have a higher fibre content and are bulky in size, making them less suitable as a fuel source during exercise than more traditional sports bars.

The carbohydrate content of most bars is enhanced by the inclusion of glucose polymers such as maltodextrin. Some bars include additional ingredients ranging from specific amino acids, vitamins and minerals to unproven ergogenic aids like guarana and carnitine. Such an exotic list of ingredients does little else than adding to the cost of a product. Check out Table 1 for a low down on some of the most readily available sports bars.

## ■ Availability

If you plan to use sports bars to help achieve your sports nutrition goals, experi-

ment with a variety of bars to find one which is palatable and works for you. While sports bars were originally available only through running and cycling stores, they are now far more accessible. You are likely to find a variety of sports bars at your local supermarket, health food shop, gym, pool or exercise equipment retail outlet. Not all bars will be available at each outlet.

## ■ Price

Purchase price is an important consideration when looking at sports bars, especially if you plan to use them regularly. Sports bars do not come cheaply with most ranging in price from \$2-3. Supermarkets generally offer the best value for money but carry a limited variety of bars. Cheaper alternatives to traditional sports bars do exist. A six-pack of breakfast bars can usually be purchased for the price of one sports bar and two dollars will buy two low fat muesli slices. Such products may be a better financial option if you plan to use sports bars on each training day. The money saved on alternatives to sports bars could see you well on the way to the new pair of runners or

continued on Page 6...

# Race Day Eating and Drinking

© by Dr Peter Reaburn

**A**ll the work's been done and race day is upon us. Whether you're after a PB or world record, swimming to your best ability on race day is important. You've been eating smart to recover after training sessions, carbo-loaded in the last three days leading up to the meet and now the day is here. Here's some nutrition tips for maximising those race-day hit-outs.

## ■ The taper

When we start to ease up on training leading up to a meet, we need to remember that we aren't chewing up those calories or kilojoules if you can relate to those. Remember to ease up on the food intake or those "love-handles" will increase in size and provide increased resistance in the race. This isn't easy when we travel away to meets with other club members - most of whom enjoy a quiet drink or three and regular snack grazing and "pig-outs" at meal times.

## ■ The night before

The aim of the last supper is to maximise those carbohydrate supplies in the liver and muscles. Remember to *carbo-load* and not *garbo-load* during that last evening meal. Pasta, rice, potatoes or pancakes are great choices here. Sizzlers (man I love going there!), Italian or pasta restaurants are great choices for dining out - just don't overdo it!

## ■ The pre-race meal

The aim of this meal is again to top-up the carbo supplies but not at the risk of making us feel bloated. We'll all have our favourite tucker here, some swimmers may even need to eat something that makes them feel "psyched" to race. I like plain white sliced bread for this reason. A pre-race breakfast might include:

- Fresh or canned fruit
- Fruit juice
- Cereals (porridge)
- Toast / muffins / crumpets
- Spaghetti on toast

The books suggest eating a 'normal' breakfast 2-3 hours before. If you don't have that much time or get nervous before meets, don't eat as large a breakfast as normal or eat a normal meal earlier than normal.

## Drinking at the meet

Indoor pools or summer meets can be very hot and humid affairs. Keep that water bottle handy and if you like or can afford those sports drinks, dilute them slightly and sip all day.

## Sports Nutrition continued from Page 5...

high tech bike frame you have been eyeing off. However, the cheaper alternatives have higher fibre contents and may cause intestinal discomfort if consumed in excess, especially during exercise.

## ■ Conclusion

The decision whether or not to use a sports bar is an individual one and may depend on a number of factors including palatability, economics and practicality. Sport bars should never be considered as a sole source of nutri-

When you go to the toilet, check the colour of your urine. If it's slightly gold or clear, you're looking good. If it's gold, drink fluids with water or sports drinks being the best bet.

## ■ After and between swims

Most masters meets last half to three quarters of a day with 4-6 individual swims and relays. Immediately after a race, start recovering with a sports drink which quickly gets carbo's and fluids back into the system without any feeling of heaviness or an after-food low.

If you get the luxury of a big break between swims (1-2 hours), then eat a low-fat, high carbohydrate snack. Bring your own to play it safe. Here's some good between race snacks:

- Rice cakes
- Muffins
- Sports Bars (see nutrition article)
- Fruit
- Low-fat yoghurt
- Bread / sandwich

Ensure you eat foods that are familiar to you and you know your system can cope with. Eat smart, drink smart, race fast!

"A few hours of mountain climbing turn a rascal and a saint into two pretty similar creatures. Fatigue is the shortest way to Equality and Fraternity - and, in the end, Liberty will surrender to sleep"

Friedrich Nietzsche  
(1844-1900)

tion as they are unlikely to provide the wide variety of nutrients that a well balanced diet can provide. Rather, sports bars should be considered as a convenient and palatable method of helping achieve your overall sports nutrition goals. As with any sports supplement, experiment with these pre-wrapped bundles of energy in training to assess how they may benefit your performance.

Gary Slater is a sport dietician currently on a years scholarship at the Australian Institute of Sport in Canberra

# Get Set!

## Calendar of Events

APRIL 25 - MAY 5 1997

1997 Whitsunday Masters Games  
Contact: (079) 466 673

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# Enhancing Success on Marathon Day

© by Dr Colin Solomon

"Success" in the marathon can be defined as the outcome of the event;

1) by the time it took to cover the distance, or

2) simply by having completed the marathon distance (42.2 km). Achieving the desired outcome is a function of the planning, and completion, of both the training programme, and the performance during the event. The quantity and quality of the training undertaken prior to running a marathon are the primary factors controlling the potential for a successful outcome in the event. However, what happens during the marathon will ultimately determine the success of the event. This article will address the main variables which can influence the events success during the running of the marathon itself. The factors are ones over which the individual athlete has some degree of control, and therefore these can be managed through planning and training.

## ■ First Finish:

Due to the distance, and time-frame of the marathon event most individuals must enter the marathon with a plan that will allow them to first finish the event, irrespective of the time, or the placing in the field. One exception to this approach is for the highly-competitive athlete who is only concerned with running the event in a specific minimum time, or gaining a specific placing. In this situation, the individual will plan to run at a certain pace, or to stay in a specific position in the field. This latter approach has a purpose in Qualifying or Championship events. However, even in this situation, the individual must still complete the event or all training and racing efforts will be of no use.

The two key factors in adopting a "First Finish" approach are:

1) Ensuring that the training programme incorporates at least 6-8 training weeks which incorporate a 30-35 km-plus session.

2) Calculating your running pace for the event and adhering to it during the marathon. If the correct training and tapering is done prior to a marathon, many runners feel "Great", during the initial 30 km and run at too high a pace, only to fail over the final 10-12 km. Make a plan and stick to it.

## ■ Be Prepared For The Discomfort:

The major issue that concerns marathon runners is physiological exhaustion, resulting in discomfort, which can lead to running a slower than anticipated time, or not completing the event at all.

Physiological dysfunction can include:

- 1) Depletion of carbohydrate energy stores.
- 2) Decreased hydration.
- 3) Skeletal muscle and joint, pain and/or injury.

Each of these factors can result in severe discomfort. Although correct preparation (carbo-loading, re-hydration, appropriate equipment and training), will reduce the severity, physical discomfort will still be present to some degree. Even Elite athletes, and non-competitive individuals who run well below their capability, both still experience some degree of physiological discomfort, hence all marathoners need to have strategies to deal with this discomfort. These strategies will deal only with the physiological aspects of marathon-induced discomfort, relevant during the running of the event.

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1) Carbohydrates can be ingested during the event, usually in the form of fluids, and less frequently as gel compounds. It appears safer to use fluids with a carbohydrate concentration of only 2-5%, as this concentration will decrease the inhibition of water absorption, and possible gastro-intestinal problems (avoid fructose as this can lead to gastro-intestinal problems). The amount of carbohydrate ingested during the event will be much less than the amount utilised, but will still off-set some of the energy-related decrement in speed, and the associated pain.

2) Basic rehydration requires approximately, 150 ml of water to be ingested every 15 min of running. This is often difficult in practice, due to the problem of drinking on the run (try squeezing the top of the cups to form a small spout), and the gastro-intestinal problems which many runners experience during a marathon. However, the extra effort is worth it as physiological function (heart-rate, ventilation, running speed), are all advan-

tageously influenced by water ingestion during distance running.

3) For strategies to reduce the mechanical discomfort of the marathon refer to the "Nothing New", "Equipment", and "Lubricate" sections in this article. The key issue regarding the physical discomfort inherent in running the marathon is to simply be aware that it will occur, and to be prepared, as it is more difficult to deal with the unexpected or unknown.

## ■ Course and Climate:

Success in a marathon can be almost totally controlled by the compatibility of both the course, and the environmental conditions, with the individual athletes physiology. Through training and previous competition athletes will know their strong/weaker points, and likes/dislikes regarding the type of terrain they run on, these include: up-hills, down-hills, flats, corners, straights. Athletes must choose a course which has terrain that suits their known strengths and minimises the weaknesses. For example: if you know that you are relatively faster on down-hills, and like long straights, select a course with an over-all fall in altitude and with straight roads. Although to some degree the specific terrain of a course can be trained for (specific up/down hill sessions, cornering), it would appear best to utilise your "natural" abilities as training typically does not produce the same degree of skill in a specific area as does inherent ability.

Another issue regarding the course is knowing what the terrain is like, and importantly where aid stations are. Some athletes prefer not to know the course lay-out as the unknown can decrease the boredom of the event. However, to be successful in the marathon it is important to incorporate factors such as hills, straights, and aid stations into the race plan with regard to both pacing and re-hydration.

The choice of climatic conditions is equally as important as the choice of course in determining success in a marathon. Although the climatic conditions on marathon day can not be controlled, athletes should select an event where the conditions best suited to themselves are usually present. The climatic conditions of concern include: temperature, humidity, wind, air-pollution. Athletes will typically know the conditions under which they perform better. An athlete who does not function well in high temperature or humidity, and does not run well into the wind must choose an event where the temperature, humidity, and wind are low. Athletes who train in areas with no or only low levels of air-pollution (ozone, particles), may have larger decrements in pulmonary function, larger changes in breathing pattern, and more severe respiratory symptoms than an athlete who is constantly exposed

Continued on Page 8...

## Running continued from Page 7...

to this pollution. Therefore, athletes may be advised not to come from a more rural area to race in a large city. As is the case for the course terrain, the climatic conditions of the event, if known, can also be trained for. However, this is somewhat difficult as it would typically require being in an area with the required climatic conditions for weeks to months prior to the event. Often it is not possible for the competitor to choose the marathon course that suits them the best, as the athlete may need to compete at a specific time, or location, or in a championship event. In these situations specific training is the only option.

## ■ Equipment:

Although the equipment required for running is simple, not using the correct gear for a marathon can cause major problems. Primarily, for any equipment always adhere to the "Nothing New" rule (as detailed in this article). Shorts, tops, and socks must be non-chafing as a little rub goes a long way in a marathon (Refer the "Lubricate" section). The choice of which shoes to wear for competing in a marathon can be more difficult than for the 5/10 km. The highly competitive athlete will typically use a racing "flat". However given the distance of the event, a light-weight training shoe is often a better alternative. The extra support and cushioning of a training shoe can feel better for the tired legs of a marathoner in the latter stages of the event. If the running time is not an issue, for the heavier athlete, or for those with support/impact related injuries, a more supportive and cushioned shoe can be used. A regular training shoe will not produce the muscle soreness, specific to the thin soled racing shoes, and therefore will also enhance recovery.

Up to approximately 60-80% of the body's total heat loss can occur from the neck up, depending on the clothing worn. So wearing a close-fitting, thick hat which covers the ears, will largely increase heat retention. This is an advantage when the temperature is extremely low, but would be a distinct disadvantage in high temperature conditions. Therefore, for a hot marathon, if you need head wear for shade, use a visor (even a well ventilated cap may still hold in heat). As the peripheral regions have a decrease in circulation during running, cold conditions may require gloves, and more insulative socks. Long-sleeved tops and leggings can be used in extremely cold or windy conditions, but beware of chafing, and underestimating water loss (the extra clothing will create an environment in which you will sweat even though the outside conditions are cold/windy).

## ■ Nothing New:

Given the notability and excitement surrounding each individuals running of a marathon, athletes might be tempted to try new things on the day of the event. Resist! Regarding equipment always wear shorts, tops, underwear, socks, shoes, and head wear that you have run in comfortably before. Ill-fitting, or new garments can result in painful chafing, and using incorrect shoes can result in non-completion of the event. For carbony-

hydrate intake, and re-hydration, only use fluids you have used before, in races or training.

## ■ Lubricate:

As marathoners body's come in all shapes and sizes, some runners do not have rubbing or chafing problems, and others need to protect every surface that contacts any other surface during the running action. Protection against chafing becomes much more important for the marathon as compared with shorter events, as an accumulation of dry salty sweat can initiate chafing, and subsequent bleeding, in areas where it has not previously occurred. The main regions that typically require lubrication are:

- 1) Between the thighs
- 2) Arm Pits; between the upper arm and the side of the chest
- 3) Nipples (actually, the better alternative here is to cover the nipples with tape, however, beware that the tape can come unstuck)
- 4) Eyebrows; this will stop sweat draining into your eyes, therefore avoiding the stinging.
- 5) Feet; runners who experience chronic blistering on the feet can add lubricant to the area (heels, toes, ankle).

## Did You Know?

- Every time you step forward, you use fifty-four muscles.
- Because of its gravitational pull, you weigh slightly less when the moon is directly overhead.
- The Amazon River basin, with its prodigious plant life, provides the world with about forty per cent of its oxygen.
- Pepsi-Cola was originally designed as a hangover cure.
- Heart attack, stroke and related diseases in Australia claim a life every 10 minutes
- Heart and blood vessel disease was estimated to cost close to \$3.5 billion in 1989 - 90
- Overweight and obesity are becoming more and more common: nearly half of men and one in three women are overweight or obese.
- A third to a half of Australian under 70 years have cholesterol levels which are too high.

## From the Research

## Those Nose Strips?

Football players, elite swimmers and some triathletes are now appearing on our TV screens with white strips across their noses. The "Breathe Right" strips are marketed as external nasal dilators supposed to get more air and oxygen into those hard working muscles and thus improve performance. Performance enhancers or gimmicky? Research from the USA suggests the latter. Five subjects were tested on a bike to exhaustion on three occasions - once with the strips, once without, and once with a placebo (false) strip across the nose. The researchers examined each subjects  $VO_{2max}$ , number of breaths per minute (RR), volume of air per breath ( $V_E$ ), and the maximal amount of air each person could take into their lungs in a minute at exhaustion ( $V_{Emax}$ ). Here are the results:

	Strip	Placebo	Nothing
$VO_{2max}$	37.0	37.8	38.8
$V_E$ (L)	126.3	127.1	135.1
$V_B$ (L)	2.3	2.2	2.4
RR	55.6	58.0	57.6

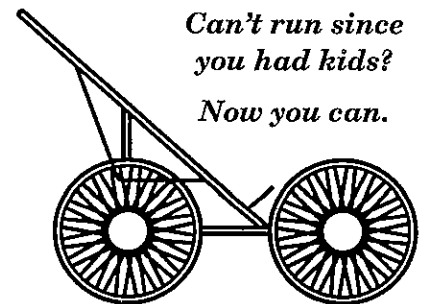
The results suggest absolutely no performance advantage to wearing the strips. The subjects were also asked to select which of three conditions above they preferred. Two chose the placebo, two didn't feel any difference, and only one chose the strips. Why are the athletes wearing them, I ask?!

Exercise responses using the breathe right external nasal dilator. Huffman, M.S., Huffman, M.T., Brown, D.D., Quindry, J.C. and Thomas, D.Q. Medicine and Science in Sports and Exercise 28(5): S70, 1996.

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# Training for 1000m

© by Tim Kerrison

**L**ast issue I talked briefly about the physiological differences between racing over 1000m and 2000m, and how we should adjust our training accordingly. Since then I have had a number of inquiries from some of my masters rowing friends and club-mates, so this issue's article will be devoted to answering some of your questions regarding training for 1000m.



Tim Kerrison

Most masters rowing events are held over 1000m, yet many structured training programs are designed with 2000m races in mind. Most vets blindly follow training programs that were designed for younger athletes who compete over 2000m. Many aspects of the training program, including the volume, intensity, recovery, taper (see issue 11 of TMA) and resistance training should be considered with respect to the racing distance.

Obviously, the shorter a race is, the harder we can row. However, this means that we must train our bodies to be able to row harder, but for a shorter time than a 2000m rower.

As exercise intensity increases, the contribution of the anaerobic energy systems increases and the aerobic energy system's contribution becomes less important. During a 2000m rowing race the aerobic energy system contributes about 70% to the energy required, while the anaerobic systems contribute the remaining 30%. But these relative contributions are closer to 50/50 in a 1000m race. It is therefore necessary for the masters rower to spend more time developing the anaerobic energy systems than a 2000m rower.

## ■ So what does this mean?

In a nutshell this means that masters rowers don't have to spend the same amount of time that younger rowers spend developing the aerobic system - that is, doing very long slow paddles. Sure these are still important, as the aerobic system still plays a major role in the 1000m race, but not as important as for 2000m rowers. To develop the anaerobic systems we must do more high intensity training. But increasing the training intensity necessitates changes in training volume, frequency and recovery.

## ■ Intensity

Rowers training for a 2000m race should devote 80-90% of their total training time to long slow work - U1 and U2 for those familiar with the lingo - to develop the aerobic energy system. There has not been a great deal of research that suggests how this should be changed for 1000m races, but I would suggest about 60-70% of your total training time should be spent doing this type of work.

This figure will shift depending on the time of season, with less of this type of work being done as the competition approaches. The remainder of your time should be spent do-

ing higher intensity work (discounting technical exercises, warm-up/down etc...). The exact nature and structure of this work is beyond the scope of this article, but should be made up of a mix of moderately intense work ('threshold' work), race pace work ('transport' work), and over-speed work and starts ('anaerobic' work). Remember that the start is twice as important in a 1000m race compared with a 2000m race!!

## ■ Volume

With all this extra intensity in our programs we will have to reduce the total volume; that is, the total number of minutes or kilometres. This isn't usually a concern with masters rowers, as training time tends to be limited by work and family commitments.

## ■ Recovery & Frequency

As the intensity of our training increases we will require longer to recover from each session. Failure to recover fully from stressful training sessions can lead to staleness or overtraining. So for this reason, masters athletes probably don't need to be training every morning and evening (which is just as well!!). *It is much more important to get the quality work done and then recover fully from this work before the next session is undertaken.*

## ■ Resistance Training

Very few of the masters rowers I know spend any time developing their strength and power. If we think about it, though, because

masters rowers work at a relatively higher intensity than 2000m rowers, greater muscle strength and power is required and therefore more time should be devoted to developing these qualities. Furthermore, without specific training, strength has been shown to decrease rather rapidly in older athletes - more rapidly than other components of fitness. It may, therefore, be worth including some form of resistance training in your programs. This does not necessarily mean 'pumping iron' in the gym - resistance training can take on many forms. In a future issue I will discuss various methods available for developing strength and power in rowing.

## ■ Conclusion

Having said all this, I do not expect all masters rowers to go out and start doing more higher intensity work than they are already doing. From my personal observations, most masters athletes are already doing a lot of higher intensity work and may actually need to reduce the volume of this type of work and increase the aerobic component of their training. Always remember to think about what you are doing and why you are doing it. If you are using someone else's program as a guide, then make sure you make any appropriate adjustments to that program to suit your individual needs.

Don't worry that you can't train like the younger rowers at your club. Fortunately,

Continued on Page 12...

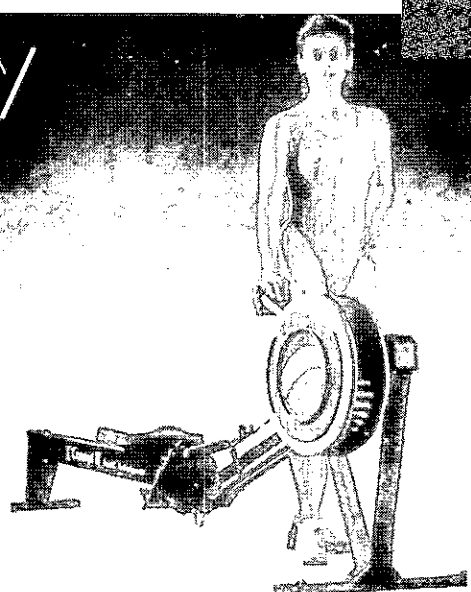
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# Warm-up for Track and Road

© by Liz Heppie

**M**any cyclists do not treat warm-ups as seriously as they should. Some may roll around for a few minutes before they start their race, but often don't understand that a proper warm-up may make the difference between a great result and a poor one.

So what does a proper warm-up achieve? The most obvious effect is the physical change made to the body. Warming up increases circulation of blood and hence oxygen to the specific muscles, prepares the cardiovascular system for extra stress, enables connective tissue to become more elastic for a smooth execution of the pedalling movement and sets the neuromuscular patterns to be followed.

Just as crucial as the physical warm-up is the psychological warm-up. The mind becomes focused on the imminent event, and pre-race nerves are settled by positively directing energy into specific preparation.

## Physical Preparation

1. Most of this involves riding your bike and gradually increasing the intensity in small 'bouts' usually interspersed with recovery time. The 'bouts' simulate the power output and pedalling speed to be achieved during the race, yet for a far shorter period.

2. Some flexibility exercises should be performed to stretch the specific joints and muscles to enhance fluid pedalling.

3. Some riders find a pre-event massage to be beneficial, however, this is not nearly as crucial as riding and stretching.

## Psychological Preparation

1. Mental rehearsal of the event can take place prior to the physical warm-up, but is most effective when performed in conjunction with the cycling action. This is a time when cyclists can practise focusing on perfect technique with moderately intense efforts in the warm-up. It can also prepare for the feeling of pushing the body to its limits, and psyching up to 'drive' it as hard as possible. Rehearsing the race in your mind will also help you calmly focus on what you need to do in the race, rather than get stressed over irrelevant matters (including other competitors, performance expectations etc.).

2. Any cue words (eg: "smooth", "power", "rhythm", "relax" etc.) can be practised during the warm-up, as a reminder for the coming event.

3. Stretching and massage help the cyclist relax prior to the race.

Effects of differing levels of fitness

Warm-ups are very individual, and the ideal pre-race routine is very dependant on the cyclists level of fitness. Many masters athletes may not have the fitness of elite cyclists, and would be unable to perform the same warm-ups or they would burn up all their energy prior to the

race. Generally speaking, the less fit you are, the shorter your warm-up will be. However, if you are in the middle of a hard training phase, it will take a much longer time to warm-up.

Warm-ups should be practised at local races, and modified until the ideal individual warm-up is discovered prior to participating in a target event.

## WARM-UP FOR SPECIFIC EVENTS

The following suggestions for warm-ups are designed for a moderately fit masters cyclist. If you are in super condition - increase all the different phases of the warm-up proportionately by up to 50%. Conversely, if your fitness is wanting, decrease all phases by up to 50%.

### Road Events

Warm-ups for road events should include testing of all your gears under pressure, to prevent mechanical mishaps. A windtrainer can also be invaluable, especially for time trials or shorter races (that are likely to start very fast), so that you can keep your legs warm right up to just before the start without having to leaving the starting area.

### Road Race

Even though this is a long race, it is important to be ready to race hard from the gun as some riders (maybe you!) may try and 'blow the field away' from the start. It is best to warm-up with one to three other riders on terrain that is similar to that in the first few kilometres of the race (ie: some of it on a hill if there is one).

Duration	Type
20 mins	Easy roll
10 mins	Stretch
5 mins	Easy
10-12 mins	Paceline - Build from 70% - 95% effort If you don't have others to warm up with Do 2 mins at 70%, then 2 mins easy then 2 mins at 80%, then 2 mins easy then 2 mins at 90%
5 mins	Easy
3 x 10 secs	Sprints
(1 min easy between)	
5 mins	Easy
	Stretch, focus, relax
	Line up for race
Total - 60 mins	

Table 1 - Warm-up for Road Race.

### Criterion

The warm-up for this is similar to the road race, however, it is vital to have a ride around the circuit before you race it. Practise the line

to be taken around the corners at tempo. Decide how the 'finishing sprint' will most likely be contested, then practise a few 'winning' sprints at 85% effort to the finish line. If other events precede yours, you may not have access to the course for more than an hour before you race, so the main warm-up will be done on the adjacent roads. The warm-up is the same as for a road race, deducting any time you have spent riding around the circuit from the first 20 mins easy.

### Road Time Trial

It is crucial to practise perfect technique during time trial warm-ups, and keep your legs warm right up to start time.

Duration	Type
20 mins	Easy
10 mins	Stretch
5 mins	Easy
4 mins	70% effort - Time trial position
2 mins	Easy
3 mins	80% effort - Time trial position
2 mins	Easy
2 mins	90% effort - Time trial position
5 mins	Easy
7 mins	Roll on wind trainer easy prior to start
Total - 60 mins	

Table 2 - Warm-up for Criterion & Road Time Trial

### Track Endurance

Events such as the individual or teams pursuit, the scratch race and point score require the rider to be thoroughly warmed up. Generally a warm-up time is provided at the start of a track meet - use this more as a psychological warm-up - practising the components of the race at a moderately low intensity. For example, pursuists would practise a 'simulated start' - rolling up to the start line very slowly then taking off at the race speed for 150 metres, as well as riding right on the 'pursuists line' at tempo. Points riders would practise a few 'attacks' and 'sprints' at 80% effort to get themselves focused for their race.

If there is a long wait until your event, it is worthwhile having a road bike handy and timing your warm up as table 3.

### Track 1km or 500m Time Trial

Warming up for this short event would be similar to the other track events listed above, however, a recovery period of 1-2 minutes should be taken between each of the harder (70% to 95% efforts). This will help you increase the power output in your warm-up efforts to that required in such an intense event. Some cyclists can be seen 'over-revving' (ie: 140-160 rpm) prior to such an event, however,

Continued on Page 12...

# Ten Transition Tips for Triathlon

© by Greg Reddan

**O**ver the last fifteen years I have experienced, witnessed and heard of classic errors in transitions which have certainly affected overall performances both in time and place, let alone frustration!

Some of these include:- inability to remove wet-suit, donning running shoes at the end of the swim, putting cycling shoes on the wrong feet, performing a front somersault when finishing the cycle leg (to the applause of the crowd), demolishing several bike racks when removing/racking bike, failure to find running shoes (another competitor took them by mistake), and crashing when dismounting when cycle shoe slipped off pedal! I am sure you can add to this list. The purpose of this article is to give you ten tips that will make transitions an orderly and fluent process so that you can enjoy the race and achieve your full potential rather than talk about what could have been!

## 1. Practise transitions regularly.

Don't just leave it till race day or the day before! Mini-races of 5-10 minutes total are excellent for this purpose, when performed under race conditions and rules and against opposition (or the clock). You will be surprised how much time you can eliminate by practising all the little things until they become automatic.

## 2. Wet-suit removal.

Put olive oil over your knees and ankles and also on the outside of your suit so that it will roll off easily when inside-out. Check to see that you fix the velcro across the top of the zip before the race and unfix it as soon as you are out of the water. Ensure you have a short tape attached to the zipper and pull it down quickly and remove the wet-suit to your waist while you are running. This is faster than removing completely and then carrying it to your bike - remember you cannot throw it to a friend or leave it where you like as you will be disqualified! It is also useful to have zippers in the legs of your wet-suit up to mid-calf as this makes it much faster to remove. Once you have one foot out, stand on the wet-suit to remove the other quickly. This whole process should only take 10-20 seconds once you have arrived at your bike.

## 3. Bike placement.

Some races allow you to rack your bike where you like - if this is the case, try to find a rack closest to the bike exit as it makes it much easier to locate and get under way. If you have an allocated rack, then check out exactly where it is located by looking for labels, signs or physical features (nearby tree). Have a practice in the transition area running up the swim chute to your bike so you know exactly where it is - there is nothing more frustrating than searching for your

trusty steed amongst a thousand bikes that suddenly all look the same! Some point-to-point races may even have two transitions (e.g. World titles in Manchester) and you may have to place some of your gear in position the day before so you need to be very exact and maybe take notes on where your gear has been placed.

## 4. Choice of clothing.

Try to have one set of clothing for the whole race - wear your race singlet and number under your wet-suit. It can be very difficult donning clothing when you are wet. If the cycle leg is likely to be very cold, have your extra clothing laid out so that you can put it on easily. Watch you don't over or underdress as both can affect your performance. Be prepared to adapt if conditions change. I remember one race in Melbourne when it turned very cold and windy during the swim leg, so I decided to ride in my wetsuit and remove it if I overheated. However, I rode the whole distance in it and many of the other competitors suffered hypothermia!

## 5. Bike gear selection.

Ensure you set your bike in an appropriate gear so that you can spin at a fairly high cadence for the first kilometre or so to allow redistribution of blood from your arms to your legs. It also ensures you don't accumulate excessive lactic acid at the outset which will affect your performance later. Place your sunglasses inside your helmet and set the helmet either between your aerobars or in a safe spot where it is not likely to be knocked. Check the safety straps and clip so that they function smoothly. When donning your helmet, relax and concentrate - many triathletes become very anxious if they cannot clip the helmet straps, particularly if they are cold.

## 6. Shoes on pedals.

Have your bike shoes attached to your bike with clip-on pedals. These have been the greatest invention for fast transitions. Ensure the shoes are securely locked in and the velcro strap is opened fully. Ride with your feet on top until you get up to at least 25-30 km/hour and then carefully slide your foot in the shoe while watching the road ahead - you have to be able to do this by feel as it is very easy to crash if you start looking down! If there is any downhill early in the race, this is the perfect time to slide your feet in as you won't lose speed. Remember to do this again in the last 500 metres of the ride (note where this is on the course beforehand) so that you can run your bike to the rack once you have dismounted. At both stages be very careful that

the shoe is kept horizontal. When you start, you will have only one foot on top so keep it on the downstroke until you have the other foot firmly on top of the shoe as well. If the shoe starts spinning and it is on the downstroke, it can easily jam on the ground and catapult you off the bike! Again, you must practise this action until you can do it automatically with other competitors nearby. Try to give yourself some space at this time because other athletes do make errors and you want to avoid being affected by their mistakes!

## 7. Pedal adaptors.

Some duathletes and triathletes use pedal adaptors to reduce the transition time as they do the bike and the run in running shoes. I feel they are excellent for duathlon but I would prefer the stiffness of the cycling shoe which provides more power than a running shoe as it flexes considerably, although the adaptor may counter this to some degree.

## 8. Stretch laces

Are essential for the bike to run transition - you cannot afford to sit down and tie up laces. Try to have them tight enough so that your foot doesn't slide around when running, yet you can still slip them on quickly. If you watch the pros, they can do this in a matter of seconds. For the much older athlete, you may want to have a seat nearby to sit down and make this action easier. When you have been cycling in the one position for an hour or more, it may be difficult to bend down sufficiently to get your shoes on easily - of course stretching can reduce this problem, but it can still occur.

## 9. Bike finish.

When you are finishing the bike leg, try to consume any remaining fluid in your water bottle as there are rarely water stations early in the run. Make sure you rack your bike correctly. The last thing you do is remove your helmet and place it safely with the rest of your gear. Many triathletes get disqualified by carelessness at this stage of the race which can be very frustrating but you must abide by the rules.

## 10. Be prepared.

Finally, if it is likely to rain during the event, try to keep your running shoes dry by placing them in a clear plastic bag next to your bike. Wet shoes are much heavier and can chafe your feet. Be prepared to wear thin socks in a longer run (20k) or if you have problems with blisters. Have a small drink bottle (250ml) that you can carry with you at the start of the run to reduce the chances of dehydration.

Good luck in your future races and impress the crowd with the speed and fluency of your transitions!

## Cycling continued from Page 10...

this is counterproductive, and results in a loss of power.

Duration	Type
25 mins	Road bike
	Easy
10 mins	Stretch
5 mins	Rollers/wind trainer
	60% of Max
4 mins	70% of Max
3 mins	80% of Max*
2 mins	90% of Max*
1 min	95% of Max*
5 mins prior	Proceed to start line
Total - 60 mins	
*Cadence should simulate that to be used in race	

Table 3 - Warm-up for Track Endurance

## Track Sprint/200m Qualifying Time Trial

The following warm-up should be performed on the track if possible - if so, do the accelerations off the bank, preferably from the '200m line'. The cadence should simulate that to be used in the race.

Duration	Type
20 mins	Easy - build to 85% effort in last 2 minutes
10 mins	Stretching
5 mins	Easy
5-7 secs	90% of Max. acceleration smaller than race gear
2 minutes	Easy
5-7 secs	90% of Max acceleration smaller than race gear
Total - 55 mins	

Table 4 - Warm-up for Track Sprints

## Triathlon

As you are already extremely 'warm' when you start the bike leg of a triathlon, there is little need to do a comprehensive cycling warm-up. All you need is 15-20 minutes easy cycling prior to the start, including 5 minutes of tempo riding, starting at 70% and building to 90%. You would also do a short run (5-10 minutes), however, swimming is definitely the most important warm-up for this event.

## Conclusion

Finally, don't waste that warm-up time. Use it constructively and ensure that you have practised and modified the procedure in minor races, before you try it in the 'big event'. There is no doubt that a proper warm-up will help you achieve your best performance. ■

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## Rowing continued from Page 9...

physiologically you don't have to train like them. It is actually better for you to do less volume and have more time off between sessions (i.e., train less frequently) but the trade off is that intensity should be increased. Don't be afraid to experiment with resistance training either - you may be pleasantly surprised with the results. Above all, enjoy yourselves! See you on the water!! ■

**"I let my feet spend  
as little time on the  
ground as possible.  
From the air,  
fast down, and from  
the ground,  
fast up."**

Jesse Owens  
(1913-1980)  
multi-Olympic champion

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