



# THE MASTERS ATHLETE

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

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## Guest Editorial - Ivan Wingate National Executive Director of AUSSI Masters Swimming

**T**he joy of winning is a powerful motivator. Winning itself won't always do it, especially if the win is a sub-standard performance against mediocre competition. Conversely, finishing way behind superior opposition can bring an immense amount of joy - if you've just done a PB. This is why we say: **MASTERS SWIMMING IS FOR EVERYONE.**



Wingate

The AUSSI Masters Swimming mission is:

*To encourage adults, regardless of age or ability, to swim regularly in order to promote fitness and improve their general health.*

AUSSI people say: the most important activity is the regular training session. How many times

have you heard it said: It is the journey towards the goal that brings enjoyment and produces the significant and lasting rewards.

This is why the race is important. It is a goal and a convenient measure for comparing fitness levels - everyone can strive to do a P.B.. Adults who swim regularly together for Fitness, Fun and Friendship (the AUSSI motto), soon want to look better in their stroking technique and become more efficient. For those reasons, an AUSSI training session is much like that for the younger set, but the intensity is less, there is more variety and everyone is encouraged to do only what they want to do.

The only pressure applied, is that which they apply to themselves. Everyone is graded according to ability, regardless of age or gender - even in the race. Therefore, if it is a struggle to complete 50 metres non-stop, the race is against others struggling to do the same. Regardless of ability, members are made to feel part of it at an AUSSI event. The Swim Meet is also very important to fitness swimmers, for

camaraderie, social/entertainment, and inspiration.

Goals are important, as they help make your training effective. After all, what is the point of training, if you are not doing it for a reason?

For some years, my office overlooked the main pool at the Adelaide Aquatic Centre. I soon was able to recognise the regulars coming in every day (or three times a week) to religiously do their laps. They would do a half hour of continuous slow freestyle which enabled them to become very good slow freestyle swimmers. It did very little to improve their cardiovascular systems. I approached a number of them from time to time to join Masters and the response would almost always be: No! - I'm not good enough to go in races.

**"I BELIEVE THAT THE  
MAJOR CHALLENGE TO  
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It must be realised how daunting it is for an adult to join a training group - especially if they haven't played that sport in their youth. If they do join and leave after only a few sessions (usually for legitimate social or logistic reasons) it becomes even harder for them to return.

Lap swimmers and squad trainers have been a godsend to pool owners. Their emergence has turned many Council's white elephant community centres into an asset with an operating surplus. The same can be said for a number of other sports, where adult participation has made facilities viable but it doesn't seem to affect the priority rating when trying to book space.

I believe that the major challenge to Masters Sport administrators, is to change the public perspective of "I'm not good enough" and lift the profile of the importance to the community of having groups of adults training on a regular basis.

Unfortunately, the media won't help - it wants to focus on the elite and household names as it has always done. If you are very old or have had a triathlon by-pass, or have a

physical disability - you might get a mention. We have to acknowledge that an adult John Citizen playing sport regularly to enjoy good health, is not news anymore.

We must find ways for Governments at all levels to recognise the millions of dollars being saved from the health budgets, the increases in productivity and well being in the community and the millions being injected into the sports industry by the adult athlete.

The Departments of Tourism have discovered us, hence the proliferation of Masters Games. They, the Games organisers and custodians of the various governments sports budgets however, have done little towards encouragement of regular participation. Our goal must therefore be to change that focus.

*Ivan Wingate is a past National President and current National Executive Director of AUSSI Masters Swimming. He is a FINA Masters Official, a swimming coach of long standing and picks up a few medals at National and International Masters Swims from time to time. At age 56 (two years ago) he took up Triathlons and fun runs - just for fun and fitness.*

## Editorial

We are now one year old. Feedback has been very positive and we've tried to put in place many of your suggestions. As you'll notice, we now feature the leaders of Masters Sport in Australia who have been asked to write on a topic of concern or interest to them. We welcome Ivan Wingate from AUSSI Masters Swimming who looks at the public perception of the Masters movement.

We'd love some names for our Athlete Profile section particularly from rowing and cycling - dob someone in!

It's time to renew for those who subscribed in August 95. Your renewal slip is inside. Peter and I are doing the Byron Bay ocean swim in June - I'll have to adopt some of those strategies he suggests in the swimming article if I'm to finish semi-thawed instead of frozen solid.

Happy reading, see you next issue.

Peter and Claire

## THE MASTERS ATHLETE

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# Cross-Training - What does the research say?

© by Dr Peter Reaburn

**C**ross-training is a new and trendy way of training where an athlete hopes to improve performance in their chosen sport by training using a variety of different other sports.



Peter Reaburn

Does it really improve performance or is it only useful when recovering from an injury or during periods of overtraining or psychological fatigue. What are the facts?

## ■ Specificity of training

Endurance is improved through training. It makes sense that the training should simulate as close as possible the conditions of the specific sport or event - a cyclist should ride, a runner run, rowers row, and a swimmer swim. The changes that occur in our bodies happen in two places. Firstly, the heart and blood, and secondly the specifically trained muscles. The interesting thing is that the heart and blood changes occur regardless of what sport or exercise we do but that the muscle changes only occur in the muscles we train.

In non-athletes starting an exercise program, research suggests that any increase in fitness is due to equal improvements in both the heart/blood and muscle area. However, in experienced athletes who have been at it for years, most improvements in endurance fitness come from the muscles used in the specific sport. That is, the heart side of things is pretty well developed. We should therefore be developing the muscles used in our chosen sport. Thus it appears that cross-training will probably benefit beginner exercisers more than experienced masters athletes.

However, for us old dogs or foxes, cross-training has a role for a number of reasons. Firstly, it can relieve boredom by adding variety to our training programs. Secondly, it's useful during periods of recovery from injury. Thirdly, it's also useful when wanting to prevent an injury (eg. water running when those knees start to ache!). Fourthly, it will also go a long way to helping us maintain the heart and blood side of endurance fitness during the off-season so that when we gear up for the season it's just the muscle side of fitness we need to develop.

All very interesting, but what does the research say about the effects of swimming, cycling or running on each other?

## ■ Running vs Cycling

When training exclusively with either running or cycling, research suggests that the effects of training gained in running are more likely to transfer to cycling than vice versa. However, some transfer does still occur from cycling to running, suggesting that an injured runner can still hold onto some endurance fitness through cycling. Personally I have also found that spinning easy on a windtrainer during hard running weeks not only helps

with recovery, but seems to also develop leg speed for running faster. In support of combining running and cycling training, a 1984 study examined competitive young runners who were trained six days a week for six weeks alternating between 40 minutes of hard running and doing cycling intervals. Both running and cycling endurance capacity ( $VO_{2max}$ ) stayed the same. However, the runners decreased their 10k run time by about 80 seconds! It's possible that using two forms of training may have allowed the athletes to keep up the hard training without tearing down the muscles and joints and/or causing chronic fatigue.

“THE INTERESTING THING IS THAT THE HEART AND BLOOD CHANGES OCCUR REGARDLESS OF WHAT SPORT OR EXERCISE WE DO BUT THAT THE MUSCLE CHANGES ONLY OCCUR IN THE MUSCLES WE TRAIN.”

## ■ Swimming vs running

The transfer of training effects on endurance performance are not likely to occur from swimming to running since the muscle groups used are completely different. However, while many studies have shown no benefits, a number have also shown small benefits, particularly in those not too highly trained. This is most likely due to the improved capacity of the heart and blood that improves regardless of what type of training is being used.

## ■ Cycling vs swimming

We know that the smaller muscle mass used in swimming means lower heart rates than when we cycle or run. It would make sense that a large muscle mass (legs) would stimulate larger changes in the heart and blood than a smaller muscle mass (arms). Thus, research suggests that a transfer of training effects is more likely from legs to arms than arms to legs. That is, cycling or running may benefit swimming but that swimming will have little benefit for the leg sports except as a means of recovery.

## ■ What about those stairclimbers?

Stair-climbing devices have become popular as training tools. A 1993 study examined the effects of stair climbing versus run

training on endurance capacity ( $VO_{2max}$ ) and track running performance. A stair-climbing-only group increased  $VO_{2max}$  by 12% and 2414m run time by 8%. The run-trained group improved  $VO_{2max}$  by 16% and track time by 11%. While the runners may have improved the most, the stairclimbers lost fewer days due to injury, suggesting that stairclimbing in a gym is a viable alternative for injured runners who want to get off their legs.

## ■ Summary

It appears, particularly in the novice masters athlete, that any aerobic training will improve endurance fitness. In athletes, it appears that training effects are more noticeable when specific rather than cross-training is used. However, cross-training does relieve boredom by adding variety and may be useful during periods of injury rehabilitation or when wanting to prevent an injury. Give it a go and find out for yourself!

## Quote

"It's not over till it's over"

Yogi Berra

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# Learning from the Masters: Skill transfer in action!

© by Lisa Mayocchi and Dr Stephanie Hanrahan



Lisa Mayocchi

Few of us have the luxury of being able to train in our sport full-time. Rather, many of us participate in or compete in sport while also engaging in a non-sporting career. The good news is that what we learn when we are swimming those laps or cycling those tracks can actually help us at work.

Last year, we conducted a study at the Australian Masters Games in Melbourne with individuals who had been involved in open level, national or international competitions in sport, and who were involved in a non-athletic career. Some of you may remember the desk we had set up at the Masters Village. Or you may in fact have been one of the individuals who completed a questionnaire for our project! Thanks to the participation of 242 individuals at the event, we are able to present a summary of the results of our research project in this issue of THE MASTERS ATHLETE.

It has been suggested that sport experiences can help athletes develop skills, characteristics and qualities that are not only useful for athletic achievement, but are also important for success outside athletics (such as one's non-sporting career). Examples of these skills are determination, perseverance, the ability to meet challenges and the ability to perform under pressure.

So to what extent are the skills used in sport also useful in one's non-athletic career? The study reported below was conducted to look at this issue more closely.

## ■ Who participated in the project?

Participants in the study were 143 males and 99 females who had been involved in sport in open-level state, national or international competitions, and who were currently engaged in a full-time or part-time occupation. The average age of participants was 42 years. Forty-three different sports were represented in the study, with athletics (52 participants), rowing (24), basketball (23) and swimming (11) having the highest number of respondents.

The most frequently cited reasons for retiring from open level competition in sport were family, study or work commitments, injury or accident, and age. Approximately 23% of the sample were still competing in open level state, national or international competitions. Those participating in the study were managers and administrators (29%), professionals (33%), paraprofessionals (13%), tradespersons (6%), clerks (5%), salespersons and personal service workers (5%), plant and machine operators (3%) and labourers (3%).

## ■ What skills are useful in sport and work?

Each participant in the study rated the extent to which they displayed twenty skills or qualities (e.g., patience, time management, self-confidence) in their sport and in their current occupation. The choice of responses ranged from 1- not at all, to 5 - totally. On average, the five skills that participants indicated they displayed to the greatest extent in their sport were:

*trying your best  
determination  
dedication  
motivation  
ability to concentrate*

In contrast, the following five skills received the highest average rating for individuals' non-sporting occupations:

*trying your best  
communicating with others  
decision-making  
determination  
organisational skills*

You've probably noticed that "trying your best" and "determination" appear in both lists. So in both situations, individuals displayed the will or determination to put in their best effort. The remaining three skills differ for both lists. In terms of one's sport, being dedicated, having motivation and having the ability to concentrate when required were qualities that were displayed to a great extent by the participants when they were competing at an open level. In contrast, the skills displayed to the greatest extent in one's non-sporting career related to working with others (communication), organisation and planning (organisational skills) and decision-making.

## ■ How useful do athletes find these skills at work?

On average, participants in the study thought that the skills they used in sport were somewhat useful in their current occupation, and they reported that they displayed the skills from sport in their current occupation to some extent.

You might be wondering "In what way did the respondents find the skills they use in sport useful in their non-athletic career?" Perhaps an example will help clarify this. One individual summed up how the skills she uses in athletics help her in running her own business in photography: "Being self-employed requires very high levels of motivation, dedication and self-discipline - just as athletics does - so the two complement each other well."

## ■ What factors might affect whether we use these skills at work?

Of course, not everybody used their skills in sport to the same degree that they used these

skills at work. Through examining people's responses to questions about their work, we found that several factors affected how much people used their skills in their sport and in their non-athletic career.

Individuals who reported high enthusiasm for their job used the skills that they had applied in their athletic career in their non-athletic career more than those who reported low levels of job enthusiasm. Four other work-related aspects had an impact on use of skills from sport to work, but only for those individuals who reported that they used their skills in sport to a great extent. Individuals who believed that they had the ability to perform the tasks required of them in their non-athletic career reported significantly higher use of those skills in their non-athletic career, and those who received encouragement from supervisors reported higher use of skills from sport to work than those who reported that they received a low level of encouragement from supervisors.

In cases where quality of management was poor and/or co-worker relations were poor, individuals were found to use the skills from sport in their workplace to a greater extent than if co-worker relations and quality of management were regarded to be good. This might be because individuals draw upon those same skills that assisted them in succeeding in their sport when an aspect of the work environment is in need of improvement.

## ■ So what does this all mean for the Masters athlete?

The implications of this study for the masters athlete are in terms of highlighting the links between sport and work. For although the two may be separate in our lives, this does not mean they have to be separate in our minds. Being aware that the skills, qualities, and characteristics we display in sport can also be used in the workplace may give a new perspective to work. As a final thought, it might also be worthwhile to consider, next time we are at work, that what we learn in the workplace can also be applied in the sport setting. After all, there is nothing to say that the cross-over can't go both ways!

## Quote

"I'd go out on the bike, hail, rain, snow or sunshine, and start pedalling and I'd know if it was there or not....If you feel tired, then you just don't do it....It's either all-out or recovery. There's no in-between."

Graeme Obree  
(former world one-hour cycling record holder).

# Motoring without Meat - tips for balanced vegetarian eating

© by Holly Frail

**M**any masters athletes have probably followed with interest the comparisons of 'meat versus vegetarian' eating plans. You may choose to adopt a vegetarian diet for many reasons - religious, cultural, environmental, financial or simply for health.



Holly Frail

As a masters athlete, one reason may be to enhance your training and recovery potential. It has been shown that vegetarian athletes are more likely to consume adequate carbohydrate. There is also evidence that vegetarian diets confer

other health advantages such as lower incidence of coronary heart disease, obesity and constipation - to name but a few.

A well planned vegetarian diet may be an excellent and economical choice for you. However, simply skipping the meat in your evening meal does not represent a balanced approach to this lifestyle. Many 'nouveau' vegetarians look for the easy way out with meals relying on high fat dairy products and snack options. A poorly thought out plan is associated with a high risk of nutritional deficiencies, and may ultimately hinder rather than enhance your athletic performance. The emphasis should be on exploring a wide variety of grains, fruits, vegetables, legumes (beans and pulses), nuts and seeds to meet all your nutrient requirements.

## ■ Types of vegetarians:

- Vegans - exclude all dairy products, eggs and flesh foods.
- Lacto vegetarians - exclude eggs and flesh foods but include milk and milk products
- Lacto-ovo vegetarians - exclude all flesh foods but include dairy products and eggs
- "Nouveau" or "Quasi" vegetarians - exclude red meat but include other animal products

## ■ Nutritional considerations for the vegetarian athlete:

### *Eat enough for energy*

Due to a high intake of low kilojoule and high fibre foods, vegetarians, especially vegans, reportedly have low kilojoule intakes and more difficulty meeting energy requirements. If you have high energy needs, include more energy dense food choices such as extra starchy vegetables, rice, pastas, nuts and seeds, nut butters, legumes, dried fruits, juices, dairy products, and a small amount of 'good' fats and oils eg. olive oil, avocado. In other words, don't fill up on lettuce and alfalfa! Milk drinks, yoghurts, low fat desserts and healthy snack foods such as muffins are also useful ways of meeting kilojoule needs, and of providing variety.

### *Check your protein quality.*

The protein void left in your diet by removing animal foods must be replaced by careful combinations of vegetable sources. Lacto or lacto-ovo vegetarians usually do not have trouble consuming enough high quality protein. Vegan athletes, on the other hand, must be careful to consume adequate amounts, and to ensure the combinations of non-animal protein sources that will provide the correct balance of amino acids. It is not necessary that you complement precisely and at exactly the same meal, but intakes of different types of protein that complement each other should be eaten over the course of the day. See Table 1 for some examples of complementary proteins.

The major protein sources for the vegetarian athlete are milk and milk products, eggs, legumes, nuts and seeds, soy milk and products such as tofu and soy 'meats' wholegrain cereals, and other manufactured protein substitutes. An interesting point for female masters athletes is that recent research shows soy products contain phytoestrogens which may have special benefits in decreasing menopausal problems and breast cancer.

### *Vitamins are vital*

Vitamin B-12 is of particular concern to the vegan athlete as it is not found in significant amounts in any plant foods apart from mushrooms. Vegans should obtain this vitamin from B-12 fortified foods, mushrooms or take a supplement.

In the strictly vegan diet sources of riboflavin other than dairy products must also be found. This vitamin can be obtained from grains, dark green leafy vegetables and avocados.

### *Iron out deficiencies*

Vegetarian and non-vegetarian athletes alike may have difficulty meeting their iron requirements. As vegetarian athletes avoid all well absorbed (haem) sources of iron, you must be aware of the non-haem sources and also factors that will enhance (Vitamin C) and inhibit (tannins in tea) iron absorption in your meals.

Sources of non-haem iron are eggs, dark green leafy vegetables, legumes, nuts and seeds, and wholegrains - especially products that are fortified as many of our breakfast cereals now are. Supplements may be advised.

### *Count your calcium*

Lacto - vegetarian athletes should have no trouble reaching calcium requirements by following the usual dietary guidelines of three serves from the dairy group per day. Those vegetarian athletes who avoid dairy products

risk inadequate calcium intake unless careful consideration is given to alternate sources. Some natural components of high fibre grains (phytates) and some vegetables (oxalates) may further decrease calcium absorption. Fortified soy milk, tofu, nuts and seeds, and some dark green vegetables may become your sources if you are vegan.

### *Zero in on zinc*

Recent studies have suggested that the vegetarian diet is potentially zinc deficient, due to the avoidance of the best sources, namely meat and seafood. Your best non-meat sources are grains and nuts.

#### **Milk or milk products with any vegetable protein**

cheese sandwich  
breakfast cereal/rice with milk

#### **Cereals and legumes**

bread with baked beans or a lentil burger  
bean taco or burrito

#### **Seeds with legumes or cereals**

humous (chick pea and tahini dip)  
muesli with sunflower seeds and oats

#### **Legumes with vegetables**

soy beans with stir fried vegetables

#### **Cereals with green vegetables**

tabbouli (cracked wheat and parsley salad)

Table 1: Examples of Complementary Proteins

A healthy and adventurous vegetarian diet offers a high carbohydrate and fibre, low fat and low salt eating plan - you could say the 'blueprint' for the optimal masters athlete's diet. On the other hand, a poorly planned meatless diet risks being just as detrimental to performance as a unbalanced carnivorous one. Even if you don't choose to 'go the whole way', a vegetarian meal once or twice a week is a great idea for the serious masters athlete.

PS In the next issue we focus on iron and calcium in more detail.

### **Quote**

"It's said that swimming develops poise and grace, but have you seen how a duck walks?"

Woody Allen



# Is There an Order to Stretching ????

© by Michael Dalglish

**C**ommitted older athletes consistently spend time in stretching both before and after activity for improving performance, minimising recovery time and effective injury prevention.



Michael Dalglish

Research now suggests that there may be an optimal order and content to your stretching routine.

## ■ Flexibility and aging

In 1991, two researchers who work predominantly with masters athletes examined the range of hip and knee motion of 1,892 individuals between the age of 25 and 75 years. Their conclusion was that any loss of joint mobility should be viewed as abnormal and not attributable to aging. Therefore, as with the younger individuals, a stretching programme should be initiated as treatment.

Later work by Misner and co-workers (1992) examined shoulder and hip range of motion in women in the 50 to 71 year age group. They showed that older people can improve and/or maintain range of motion through participation in a regular stretching and exercise programme done three times per week over 5 years. No longer is there validity in the excuse that "I'm not as flexible as I used to be".

## ■ Stretching methods

A number of points concerning stretching are now established:

1. There are three methods of stretching:
  - (a) ballistic or bouncing type stretching,
  - (b) static or holding stretching and
  - (c) the more recently popularised PNF or Proprioceptive Neuromuscular Facilitation.
2. Stretching is still the best method for increasing flexibility/range of motion when compared with passive heating (hot packs/intra-red lamps), massage and exercise (cycling and running).
3. Stretching is specific to each joint or muscle/muscle group and, in a single session, improvement in range of motion is proportional to performing an optimal number of repetitions of each individual stretch.
4. An individual sport-specific programme requires an understanding of the biomechanics and muscle/joint function of each sport.
5. The stretching programme should be included as part of a pre-sport warm-up and completed at least 15-20 minutes prior to exercise and before skill specific warm-up.
6. Slow static stretching without bouncing (ballistic) should be maintained at the end of the range. Do not stretch into pain!!
7. Hold each muscle or joint stretch for at least 15-20 seconds.
8. Three to five repeats of each stretch appears to gain optimal increases in the range of motion within the time constraints of a normal warm-up.

9. Improved flexibility is only achieved through a long term stretching programme.

10. Ensure that structures on both sides of a joint are regularly stretched (e.g. hamstrings and quadriceps) therefore avoiding flexibility imbalances of muscle groups and joints.

"...ANY LOSS OF JOINT MOBILITY SHOULD BE VIEWED AS ABNORMAL AND NOT ATTRIBUTABLE TO AGING."

Recent evidence suggests that not enough attention is paid to the content, technique and sequencing of stretches. In the more explosive, short duration sports (such as sprinting) slow sustained stretching has a limited place in the pre-competitive warm-up or prior to training sessions such as starts or maximal velocity work.

Instead, limited static stretching is combined with more ballistic or explosive active stretching. This component is gradually increased in intensity to maximise the nerve response in the body and thus decrease reaction time and the time to peak muscle tension required to move the body or an object quickly.

Static stretching is still utilised in a periodised programme during recovery sessions and prior to lower intensity workouts. The higher the explosive component to your sport the greater the need for optimal muscular balance and symmetrical joint range of motion.

The content of each individual sports stretching programme needs review with your sports physiotherapist to ensure it has sport specific relevance based on new research findings and that it suits your changing physical profile.

## ■ Stretching technique

It has become increasingly of concern that the technique employed by many athletes in assuming a particular stretch is not maximising the possible gains for the time spent. This is partly a problem with the initial instruction given during our education and partly as a result of the lack of anatomical knowledge of what it is we are trying to stretch. For example, in stretching the two joint calf muscle everyone knows to use a straight knee. However, very few athletes realise that maintaining the knee cap over the line of the third toe increases the effectiveness of the stretch. Any deviation from this technique increases the role of the foot and ankle joints (increases subtalar joint pronation) in gaining the perceived range of motion.

Every stretch you have ever attempted

involves a complex interaction of joint, muscle and nerve structures and therefore requires perfect execution to maximise the range gain in proportion to the valuable time spent!!

Finally, most athletes realise that many of our stretches involve movements of muscles and joints. However, few appreciate that the nervous system and its attachments are compromised in many of our stretches. Commonly, hamstring stretching in athlete programmes employs an extended knee position. This unfortunately stretches the sciatic nerve in preference to the hamstring in many individuals. Remember, the golden rule is that if it is a muscle stretch then the stretch should be felt in the belly of the muscle, and not behind the knee as with a straight leg 'hamstring' stretch.

## ■ Sequencing

The correct content of a stretching programme will involve muscle stretches then joint stretches and, finally, nerve stretches.

1) **Muscle stretches** should ideally begin with large muscles and then progress to smaller ones. This allows individual specific or remedial stretches to be carried out more effectively.

2) **Joint stretches** such as lumbar rotation or rollovers follow the muscle stretches. Many athletes feel no effect with this stretch as they have not stretched groups such as the gluteals (bottom) or lumbar (lower back) muscles prior to attempting it. In addition, no stretch may be experienced in those of us who are extremely stiff and thus need increased muscular stretching prior to attempting it.

3) **Nerve stretches** Finally, the nervous system must be free to move under, over and through structures for us to feel genuinely "loose". Thus such stretches as slump and extended knee 'hamstring' stretches are employed to decrease tension in the nervous system. It is suggested that these stretches are done as oscillatory movements but sustained stretching maybe used in athletes who are neurally very tight. Three to five repeats of 15-20 oscillations is a good 'ball park' figure. This type of stretching requires individual prescription, supervision of technique and should not create pain!!

Some of this will be new to many of you. If not, take "a pat on the back". If it is new, speak with your sports medicine professional/sports scientist and get yourself or your athletes up to speed on this highly relevant information. Good luck and let's all use our time effectively and enjoy injury-free competition.

*Michael is one of Australia's leading sports physiotherapists and is currently the physiotherapist to the Australian Women's hockey team, Brisbane Broncos, and the all-conquering Queensland State of Origin team! (Up the mighty maroons!)*

# Ten Tip for Half Marathon Success

© by Dr Colin Solomon

**T**he half-marathon covers a distance of 21.1km and is completed in times ranging from 60.01 min to over two hours. As with every specific running event, it is the distance and time-frame which makes the half-marathon unique with regard to the physiological demands placed on the runner.

Success in the half-marathon is reliant on what is done both: **a) in training and b) during the event.**

To both complete the distance, and to run the anticipated time you must:

1) *train* the specific physiological responses appropriate for the half-marathon. These responses include:

- energy transfer within the active muscles
- heat regulation • technique
- transport of oxygen to the active muscles

2) *perform* during the event. Factors that effect physiological function during the event include:

- pacing • hydration • relaxation

All these physiological functions must come together for the event to be completed successfully. During the event you can only control the physiological response within the limits dictated by your training.

The most important issue for both training and performance is **SPECIFICITY**. Therefore, the following "Tips" for success in the half-marathon are based on the specific physiological responses required for the event, although various factors other than physiological function (nutrition, psychology, individuality) can effect success.

## ■ TRAINING TIPS

### 1. Building an Aerobic Base

Due to the fact that the half-marathon requires 1-3 hours of continuous activity, the aerobic system is used almost exclusively. Therefore, it is imperative that you have an aerobic base from which to build your training. There are no short-cuts in this part of training and the kilometres and hours must be completed. For the half-marathon, these long-slow training sessions should be done 1-2 times per week and should range in duration from 75-120 min. The intensity of the session should be at your slowest established training pace. The rationale for these sessions is to train both the energy utilization mechanisms within the muscle and the oxygen transport to those muscles.

### 2. Intervals

The main purpose of interval training is to increase the pace at which a specific distance can be covered. From this basis the training must be specific to the pace to be run in the event. Utilizing your anticipated event pace, intervals should be run at slightly below, at and slightly above race pace. The number of intervals in a session decreasing as the set pace increases. Due to the almost exclusive use of aerobic energy during the half-marathon, intervals should range from 3-10 minutes in duration. The number of intervals will be governed by the duration, and should be approximately 5-10 per session.

### 3. Hills

Training on hills can be used for two purposes - to train for courses that contain hills, or to improve aerobic power for courses that do, or do not contain hills. Hill training should be designed to mimic both the slope, length and number of hills in the event. Training on hills will also prepare you technically for hill running. The changes from flat-terrain running will include changes in stride length and rate, arm swing, and torso angle. The increase in aerobic and anaerobic (without oxygen) capacities achieved from hill training can be utilized on flat-terrain course to make or respond to changes in pace during the event. The uphill section of a hill training session should be run at race pace and the recovery should range from half to full recovery.

### 4. Racing

Racing during training provides the necessary knowledge of pacing and training progression for a successful half-marathon. The most appropriate distances to race whilst training for a half-marathon would be 5 and 10 km events as these distances can be raced at full effort without inappropriate recovery times. I suggested a 10 km race 5-6 weeks before the half-marathon and a 5 km race 2 weeks before the half-marathon.

### 5. Tapering

This necessitates a decrease in total training volume, mostly through decreasing distance and maintenance of the training intensity and frequency. I suggest training volume be decreased during the three weeks prior to the event to allow full recovery. No long runs should be done in the final two weeks and only low-intensity training should be done in the final 3-4 days.

## ■ EVENT PERFORMANCE

### 6. Warm-up

This requires approximately 15 minutes of low-intensity running, followed by 4-10 intervals at race pace close to race start.

### 7. Relaxation

At the start-line and during the run, relaxing will stop the metabolic rate from increasing due to anticipation and nervousness. During the event, the running motion should be that which has been practiced during training, and to maintain this a conscious effort should be made to relax the arms and shoulders.

### 8. Pacing

The most important issue in half-marathon success is controlling the pace at which you run. If the pace is too fast or slow you will not have utilized your training to the maximum and your time will be slower than anticipated. The pace for the event should have been determined prior to the event and adhered to if possible. However, changes to a slower or faster pace should be made throughout the

event if you are confident that changes can be maintained.

Running in a group can allow you to "draft" which in windy sections of the course can gain some protection. Also, as the lead of the group is shared amongst the runners, the pace can be kept higher than some individuals could keep when running alone. Therefore, the group can be utilized to improve your time.

### 9. Hydration

Irrespective of the environmental conditions it is imperative that the bodies hydration status be maintained as close as possible to normal (resting) levels. This becomes a problem when the output of water is not balanced by the input. It can be both difficult a comfortable to drink during a running event. It is recommended that you consume approximately 150 ml of water every 15-20 mins. As water is what is required for hydration, carbohydrate supplements should be given lower priority in this respect.

### 10. Recovery

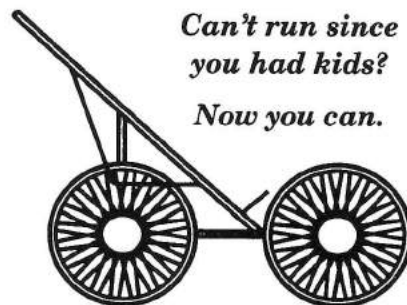
If recovery is inappropriate, both training and subsequent events can be hindered. Immediately following the event, a minimum of 15 minutes of low-intensity running will promote recovery. Two weeks should be allowed for the majority of the recovery from a half-marathon. During this time, low and medium-intensity training should be done, and no racing should be performed. Go for it!

*Colin has his doctorate in exercise physiology and is currently working as a research scientist at the Harvard Medical School. He has 20 years running experience and a sub 70 minute half-marathon.*

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# Athlete Profile

Name:

Rowland Wesley Ferris

Age:

65 yrs

## Sports/Events:

1945/58 Competitive Cycle Racing and Administration (U.K.)

1958/68 Cycle Administration (U.K.)

1970/81 Veteran Athletics and

Administration (Aus)

1981/96 Veteran Cycle Racing and Administration

## Occupation:

**Past:** Apprenticeship as Industrial Chemist

Motor Trade Company

Executive/Administrator

**Present:** Retired at 60 yrs, fulltime voluntary cycling administration

## What do you enjoy about masters sport?

Being able to compete at a level you are capable of and still be accepted by the top masters. Seeing the "oldies" having a go and enjoying it.

## What motivates you to participate?

Involvement in sport and endeavouring to be competitive with your own age group. Keeping fit after retiring from workforce through stress and hypertension.

## How do you keep yourself motivated?

Just by being involved in sport and working to encourage others to join or keep at it.

## Favourite training session:

Two hours in the Country Lanes with the boys.

## How often do you train:

Three or four times per week. Three 2 hour steady sessions per week accompanying my wife. One harder group ride during winter or evening 30k Time Trial during daylight saving.

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

No Coach. Why?, to encourage my wife to enjoy cycling involvement.

## Person most admired and why?:

Christie and Flo Jo (sprinters are pure poetry in motion). On the cycling scene - Marco Pantani (Italian cyclist who climbs like an angel)

- Graeme Obree (English cyclist who has brought a touch of fresh air into cycling)

## Other interests/hobbies:

No time outside cycle administration and promoting races for the Veterans.

## Your most memorable moment in sport:

Competing in the World Veterans Athletic Championships in Christchurch New Zealand in January 1981 and getting to

the semi-finals (100ms) in spite of being out of competition since 1978 with high blood pressure.

## Your most memorable moment in life so far:

Being responsible in 1980 for Australian veteran Athletics going Pro/Am and promoting the first Pro/Am National Veteran Athletic Championships. Also enticing many big names from the past out of retirement even if for some it was a once only effort.

## Favourite movie:

Not a film buff but thoroughly enjoyed 'Braveheart' with Mel Gibson

## Favourite book:

Not a book reader so must list a magazine 'Cycling Weekly' U.K. publication. Read it front to back and back again many times over.

## Favourite 'bad' foods:

Dumplings with gravy, ice-cream and Mars Bars.

## Favourite 'good' foods:

Salmon Trout and most fruits.

## Philosophy on life:

Keep active and an active interest in sport right to the end - never give it up.

## Advice to masters athletes wanting to improve:

Make sure you enjoy what you are doing and train accordingly. Train with someone only slightly better than yourself. When you cease to enjoy you don't improve, if you train with someone far superior you will get disheartened.

## Other Comments:

Couldn't find above space for 'dislikes' so herewith: The existence in most sports of a "Blazer Brigade". Veterans are a different breed and need different rules. The Blazer Brigade should be prepared to accept this.

## From the Research

### A cool dip may beat the heat

Researchers from Florida State University recently examined the effect of cooling the whole body before a treadmill run to exhaustion at very high intensity in a 24 degree lab. They tested 14 fit young (27±7 yrs) runners twice - once after sitting in 24 degrees for 30 minutes before the run and then after sitting for the same amount of time in a chilly 5 degrees. At the start of the run, body temperature was 0.4 degrees lower in the previously-cooled condition. After pre-cooling, the runners ran about 4 minutes longer (26min 14 sec vs 22min 25 sec) and maintained lower body and skin temperatures throughout the test than when not cooled. The pre-cooled run also saw the athletes lose less sweat and store more heat. This research strongly suggests pre-cooling (cool room or cool bath) may be of benefit to those athletes having to race in a hot and/or humid environment.

From: "Exercise duration and thermoregulatory responses after whole body pre-cooling" *Medicine and Science in Sports and Exercise*, Vol 27(5), S107 1995.

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# Putting A Crew Together

© by Jeff Sykes

**W**e live in a constantly changing world as rowers of the 90's, where the methods or restraints we place on ourselves to succeed cannot necessarily be the same today as they were yesterday.

One thing; however, hasn't changed. At the risk of repeating myself I make the same statement I made 23 years ago in the *Rowing My Way Book* "Rowing - a simple sport made complicated by experts."

In this article on putting a crew together, let's ask ourselves "why do I wish to row at my age." I list perhaps some of the aims:-

1. Regular training is good for my health.
2. Social atmosphere and being involved in a high profile physical sport is great and greater because you do it on the water.
3. It gives me a renewed or new aspect to my life with the opportunity to travel either near or far for a reason.
4. The competition at the end gives my training a purpose to get me out in the boat or gym on days when I have other things to do.
5. I like to win OR compete to my fullest, knowing that my end result is dependant on my time, effort and ability both natural and developed and in a crew situation the time, effort and ability also of the people around me in the boat.

You may have other aims or the same aims with different priorities. Readers may be surprised to know the priorities listed are my own.

Masters sport is still structured on a casual basis and many rowing veterans have great knowledge on technique training. However, it amazes me how many of them place themselves in the wrong crews to reach their personal goals.

To be good rowers over thirty years of age you need:-

- **Time** - the better time management skills the better rower you will be.

- **Skill requirement** - natural and developed.

- **Physical ability** - natural and developed.

- **A good club** - to provide good equipment and coaching for veterans, or purchase your own equipment and pay for a high profile rowing coach.

I predict there will be professional coaches in masters ranks within the next 12 months because I know there are high profile coaches prepared to coach and veterans who wish to succeed at a high level and have the financial means to pay. Where else in sport is professional coaching not a fact of life.

So when putting your crew together look for people with *similar aims as yourself*. The reason why most cities can boat five novice veteran mixed mens and womens 8", appears as number two of my aims. Unfortunately, novice veterans disappear as the groups aims, objectives and abilities begin to head in different directions. Then look for people with *similar time, skills and physical abilities*.

## ■ Time

Oarspersons over thirty have a whole lot of different time requirements to younger people if they are normal. So look at small boats, single sculls, pairs or doubles to do 80% of your training. If you are to train in an 8 most veterans need to work on a "10 person 8" - the first 8 down get the seats. Fours are similar (not the ideal way to develop a good 8).

## ■ Skill Requirement

Today we take talent identification youth and win World Championship medals in two years. There is no reason why an older athlete

cannot develop high skills in a sport later in life given time and good coaching.

## ■ Physical Requirement

You can only improve what you already have, although I make this statement unqualified, a veteran with a good physical make up can improve this dramatically with a structured training program.

**So to choose the right crew think:-**  
Equal aims and objectives.

Time to progress as a team for all team members.

Physical and skill attributes that are already there. If not can they be developed in the time frame.

If you are not fortunate enough to be able to choose the right crew remember, "Compromise in your aims and objective may be far better than Frustration!"

*Jeff is current World Masters Championship holder - Mens Coxless pairs both 50-55 and over 43-50. Current World F.I.S.A Masters holder in Coxless pairs D division coxless pair and C & D coxless 4.*

## Did You Know?

- The surface area of one human lung is equal to that of a tennis court.
- The perilous journey undertaken by the human sperm prior to conception, could be compared to someone swimming in treacle the distance across the Atlantic Ocean.
- Whatever its size or thickness, no piece of paper can be folded in half more than seven times. (Go on try it if you don't believe me.)
- Every square inch of human skin contains 625 sweat glands.
- Most people have lost fifty per cent of their taste buds, by the time they reach the age of sixty.
- The human body contains about 60,000 miles of blood vessels.
- There are more nutrients in the cornflake packet itself than there are in the actual cornflakes.
- Someone suffering from coprolalia has an uncontrollable desire to be foul-mouthed.

From *Not Many People Know That!*  
by Michael Caine

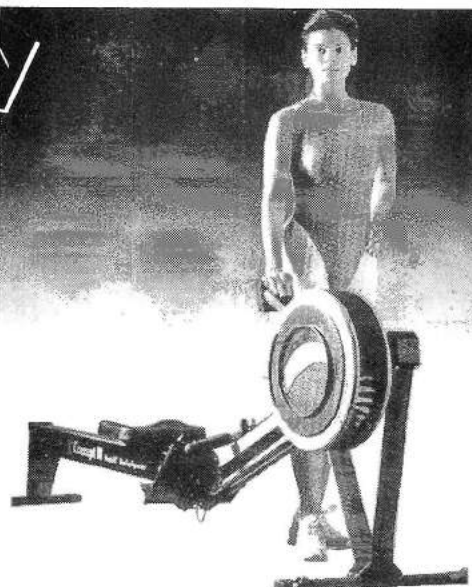
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# Braving the Cold

© by Dr Peter Reaburn

**S**wimming in cold water ain't fun! Just ask the competitors at the recent Forster Ironman who had to brave 16 degree water for 3.8k's or any masters swimmer who's decided to hit the local unheated pool at the beginning of the summer season. In those conditions, the mind is willing us on, but the muscles just don't respond. Why?



Peter Reaburn

More importantly, what can we do to prevent ourselves from getting so cold that we shiver for 90 minutes on the bike leg of the Ironman or get headaches after that pool swim.

## ■ The Physiology

Normally, heat that we generate in our bodies is transferred to the air or water. However, in cold conditions such as water below 20 degrees, excessive heat loss can occur. Because water is an excellent conductor of heat, body heat is lost two to four times faster than in air of the same temperature. The problem in swimming is that not only do we lose heat through conduction into the water, but we also lose it via convection with the cold water passing relatively warmer skin.

To prevent a fall in temperature, our bodies adjust in a number of ways:

- The blood vessels in the skin constrict to reduce blood flow to those cold surfaces and redirect the warm blood to the body's core. That's why we go pale or "blue" in cold water.

- Even during exercise, if we're too cold, we'll shiver to promote more heat production. The problem for an athlete is that shivering produces excess muscle activity on top of that needed to swim or ride or run and that excess muscle activity chews up about 15-20% more valuable oxygen than we need to hold speed.

- Exposure to the cold also causes excessive release of the hormones adrenalin and thyroxine. These hormones elevate heart rate and adrenaline and muscle carbohydrate meta-

bolism which in turn warms us up. Problem is that both these processes use up excessive oxygen and our limited carbohydrate supplies.

## ■ Factors affecting heat loss in water

How much heat we lose in the water depends on:

- body surface area - tall, skinny people have a higher surface area per kilo and are more at risk.

- body fat - the more body fat, the better the insulation (ask Des Renford the Channel swimmer). This is why women may be at an advantage in cold water.

- water temperature - the colder the water, the more heat is lost.

- air temperature - our arms, upper back and face are exposed to the air and the colder the air, the more heat is lost.

**"...WE HAVE A DECREASED ABILITY TO PRESERVE HEAT IN THE COLD, THUS MAKING US MORE SUSCEPTIBLE TO COLD INJURIES THAN YOUNGER ATHLETES."**

- wind - the wind chill factor can be enormous. Again, our arms etc are exposed to the wind which can pick up the warm air around our skin and take it away.

- age - recent research in Canada compared exercise responses to the cold air (5°C) in eight 'youngsters' (26.5±2.6yr), eight well-trained older athletes (59.5±3.4yr), and 11 untrained seniors (63.5±4.0yr). They observed a greater rate of decrease in body temperature in the older groups compared to the youngsters. It was suggested that the older groups had a lower resting metabolic rate (heat production) and a decreased ability to constrict their blood vessels compared to the younger group. It thus appears that we have a decreased ability to preserve heat in the cold, thus making us more susceptible to cold injuries than younger athletes.

- fitness level - the fitter we are, the more heat we can produce.

- swimming pace - swimming faster produces more heat.

- the amount of insulation - this helps hold in heat. Hence cap(s), grease or wetsuit.

- exposure time - the longer you're in the cold, the more heat is lost.

From the above, we can see that an older, lean swimmer in togs doing a long, slow swim in cold, windy conditions, is in trouble. This is the very reason why FINA (the world governing body of swimming) has 16 degrees as the minimum temperature to hold long distance swims. It is also the reason why 20 degrees is seen as the minimum temperature for use of wetsuits.

For older swimmers with high blood pressure or heart problems, cold water presents a greater risk. As noted earlier, in cold water the blood vessels constrict which in turn raises blood pressure which then makes the heart have to beat harder and faster, thus using up more valuable oxygen that should be getting to the swimming muscles. It is also a fact that arm work elevates blood pressure more than leg work. Thus the combination of cold, swimming, and an at-risk older athlete can be dangerous.

## Strategies for cold water swimming

Here's a list of tips for cold water swimming:

1. If the rules allow it, wear a wetsuit that has long sleeves. Heat is lost from the areas of high blood flow that are close to the surface - the head, armpits, neck and groin - cover them up.
2. Wear a wetsuit hood or a couple of caps with grease between them - 30-40% of body heat is lost via the head.
3. Use grease or lanolin as an insulator, particularly around the groin (pleasant thought!), armpits, and neck.
4. Stay warm and out of the wind up to the start of the swim.
5. Ensure carbohydrate stores are maximised before the swim. If it's a long swim, take warm fluids or sports drinks.
6. Be aware of the signs of cold injury - numbness, shivering, headaches.
7. Get warm as quickly as possible after the swim.

See you at the next open water swim!

## Quote

*"They thought lacrosse was what you found in la church."*

Robin Williams

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# Cornering, Turning And Descending

© by Liz Hepple

Is it time your bike skills took a 'turn' for the better?



Liz Hepple

Many valuable seconds are lost when cyclists take the wrong line around a bend, or use the wrong gear in a turnaround. Some cyclists know that awful feeling of being dropped in a Criterium from failing to negotiate the corners fast enough, or watching the bunch ride away after a difficult descent. Worse still, many bad accidents can occur if riders don't corner properly. There are three main problem areas when it comes to turning your bike - Corners, Turnarounds and Descents.

## ■ CORNERS

### Finding the best line

The way to get around corners quickly is to 'Take the corner out of the corner'. Look at Figure 1, and you can see that if you are turn-

## CORNERING

TAKING THE PROPER LINE!

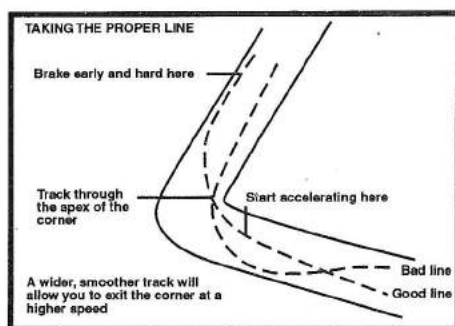


Figure 1

ing left, you swing out to the right first, then cut in as close as possible to the inside curb. By riding this line you will maintain as much momentum through the corner as possible.

### Bike and body position

• For basic cornering, both the body and bike should lean at the same angle. (More advanced riders may actually lean the bike more than their body, but this can be dangerous for less experienced riders.)

• Your inside knee is bent (inside pedal is at the top of the stroke), and some riders like to point the knee away from the bike, but this makes little difference to your cornering. Most importantly, push down with your outside leg and keep downwards pressure on your outside pedal. This will prevent the bike swinging out too wide, and keep you in control.

• Always look about 10 meters ahead - to where you are going to travel. Never look straight down at the ground in front of your bike.

• If you are a bit nervous cornering, think about how your body and bike should be positioned - never think about falling. Keep positive and relaxed.

### Braking and gear selection

Ease both your brakes on evenly to slow you down before the corner. If you want to crash - jam your brakes on at the apex of the corner - it works every time!

You can also use your body to slow you down before a corner. Just straighten your arms slightly and lift your trunk up - the extra wind resistance will slow you down gently.

Before you get to the corner, also remember to change into the correct gear so that you can accelerate out easily. If in doubt, choose a smaller rather than larger gear, as it helps you accelerate more quickly.

Criteriums often require a speedy 'jump' out of the corner to stay with the field, but if you are in a time trial or triathlon, build the speed up more gradually, to reduce the lactic acid caused by the hard acceleration.

### Countersteering

Mastering the art of 'countersteering' can help you corner faster and have better control of your bike in tight situations. By pushing one hand down on the handlebars while you are 'on the drops', you will turn the bike towards that side. Practise corners by putting pressure on your inside handlebar, and then gradually release the pressure as you accelerate out of the apex. This will produce the fastest and most efficient cornering.

## ■ TURNAROUNDS

### Steering the bike

While corners require 'leaning' the bike, turnarounds require the cyclist to 'steer' the bike around them. If the turnarounds are tight, the cyclist and bike don't both lean at the same angle. The bike is leaned slightly towards the turn, while the body is actually leaned away from the turn and the bike. This counterbalancing action causes the least amount of sideways force, and the most traction directed downwards, and is especially good for turns that are covered with water or gravel.

## ■ DESCENTS

The corners in descents are usually ridden in a manner similar to most corners, except the line of travel and skilful braking are even more crucial if you wish to avoid crashing. However, sometimes you will come across a 'hairpin' bend which requires a different line. Here you will slow down as usual, but rather than cutting across the apex of the corner, let your bike 'float' around the outside of the bend, so that you follow its curve. Remember to stay on the left hand side of the white line to give yourself a chance of survival if a car is coming from the opposite direction.

## Practice

A great way to improve your corners and turns is to go to some quiet or closed roads (maybe a car park) and practise these skills at speed - just like in a race. It is dangerous to practise these skills on the open roads where the traffic is busy.

One of the best ways to corner or descend better is to follow an experienced rider. Learn the best line of travel, and the change of speed through the corners.

So to become a better bike handler, remain relaxed and focused on using the ideal technique, but keep alert for unexpected dangers, such as potholes, rocks and traffic.

## Question and Answer

*Is running of much value in improving aerobic fitness for swimming and what sort of programme should you use to do so? If beneficial, is running quicker to get improvement than swimming?*

The quickest way to get fit for any sport is to do the sport itself. As the article on cross-training suggests, endurance fitness is developed in two areas - firstly the heart and blood and secondly, the trained muscles. A swimmer that runs might develop the heart more quickly or start the swim season with the heart stronger and more blood, but it will only be through swimming that the swimmer's muscles will truly be able to cope with the rigours of a swim race. Running in the swim off-season will also keep those "love handles" from developing around the waist or the inches on the butt.

I'd suggest three runs per week at an easy pace for a minimum of 30 minutes will achieve the results on heart and blood fitness. If the goal is to lose fat weight, then longer runs at an easy pace (60-70% maximum heart rate) are the way to go.

*What are the basic flexibility exercises for swimming?*

Space prevents an answer to this question. However, two books with excellent diagrams and instructions are strongly recommended. Firstly, *Stretching* by Bob Anderson and secondly *Sports Stretch* by Stephen Alter. Both are available from Bob McVey at Multi Sports Skills Clinics (Ph 07-3847-2869).



## TRIATHLON

# The Benefits of Triathlon - What's in it for me?

© by Greg Reddan

**V**ery few of the latest texts on triathlon comment on the benefits of the sport, but are more concerned with the practicalities of the sport. I believe we need to create a greater awareness from two perspectives - firstly, the novice needs to see value in becoming involved in the sport, and secondly the experienced triathlete sometimes needs to be reminded of the benefits to reinforce higher commitment.



Greg Reddan

Probably the best summary has been provided by Katherine Vaz in "Cross- Training" written in 1984. In this article I will focus on the points made in her text and add a few others following my 15 years of involvement in the sport.

Triathlon reduces your chances of injury and can maintain fitness if you are injured. Many triathletes come from a running background with its high potential for injury and begin swimming and cycling to maintain fitness before realising that the sport may be a better long-term prospect than simply running. Some runners have found they actually run better because they are able to maintain regular training, rather than being injured regularly. Also, by doing less running, their recovery rate is hastened as we know that the eccentric nature of running tends to cause more muscular damage than cycling or swimming.

2. Your endurance capacity can be improved beyond a single-sport level. By using different muscle groups, you can reduce muscular fatigue and bring inactive muscles into play, thus prolonging the quantity of training that can be handled without exhaustion. The marathon runners can probably only run 10-15 hours per week without breaking down, whereas the elite triathletes can easily handle 20-30 hours per week without any problems. This provides for the long-term de-

velopment of very high aerobic capacity with less stress on the body.

3. Triathlon builds both upper and lower body strength uniformly. Swimmers develop strong upper bodies, cyclists build powerful quadriceps, whilst distance runners tend to be lean and have great muscular endurance in the hamstrings and calves. Many runners

**"HIPPOCRATES STATED  
AROUND 400 B.C. THAT  
"PRESERVATION OF  
HEALTH IS A DUTY. FEW  
PEOPLE SEEM TO BE  
CONSCIOUS OF SUCH A  
THING AS PHYSICAL  
MORALITY"."**

tend to be very weak in the upper body, particularly those training for marathons. It is important to maintain the strength of muscles as we grow older, but also the strength of the bones, which can only be done by activity. Perhaps triathlon will reduce osteoporosis considerably in older athletes. Triathletes have an appearance of overall fitness and strength that is lacking in some single sport athletes.

4. Triathlon avoids the boredom of single-sports specificity by providing variety in training. How many athletes have given up a sport because of the continual repetition of the activity? By integrating different skills, a

triathlete can keep in touch with their initial motivations for training more easily. To train twice per day in a single sport for a number of years can be very difficult from a psychological viewpoint, but quite easy and interesting for a multi-sport athlete. Having alternate sports is also handy in poor weather or unfavourable seasons. e.g. Ingrid Kristensen was a top cross-country skier before taking up marathons and used the alternate sport regularly in winter to maintain her aerobic fitness. Her world record of 2:21 in 1985 still stands.

5. Triathlon provides a new challenge beyond the marathon (or half). I am still amazed how many people feel compelled to complete an Ironman triathlon (3.8k swim, 180km cycle, 42km run). I did the Hawaiian race twice in 1982 - in February and again in October when the date was changed to fit in with the northern hemisphere summer. The only reason I competed initially was that I won a trip as a prize for winning my second triathlon. It certainly was a phenomenal experience racing those distances in the Hawaiian heat and lava deserts.

Next year you will have to qualify in half Ironman races for the Australian Ironman Championship at Forster to qualify for Hawaii. Obviously, we have a huge number of masochists out there thriving on this challenge! The time recorded by Dave Scott who finished second to Greg Welch in Hawaii in 1994 at the age of 40 was unbelievable. Scott has won Hawaii six times, as has Mark Allen and Paula Newby-Fraser - what memorable performances! It seems that masters' athletes can

continued on Page 12...

## Get Set!

### Calendar of Events

JULY 6 - 13 1996

**Veterans Oceanic Games**

Tahiti  
Contact: 08 231 5399

JULY 13 1996

**Australian Masters Rowing Championships**

Penrith Lakes, NSW  
Contact: (03) 9802 1457 (Bob Hemery)

SEPTEMBER 1 1996

**Australian Short Course Rowing Championships**

Qld  
Contact: (07) 3846 7944

SEPTEMBER 13-15 1996

**FISA - Masters Rowing Regatta**

Hungary  
Contact: (03) 9802 1457 (Bob Hemery)

OCTOBER 3 - 10, 1996

**Maryborough Masters Games**

Maryborough, Q'ld  
Contact: (071) - 237710

OCTOBER 19 - 27 1996

**Honda Masters Games**

Alice Springs, N.T.  
Contact: 1800 658951

OCTOBER 26 - NOV 3 1996

**The Malanda Queensland Masters Games**

Gold Coast, Qld.  
Contact: (07) 5581 6052

NOVEMBER 10-15 1996

**Australian Veteran Cycling Championships**

Wagga Wagga, NSW  
Contact: (02) 7642 555

FEBRUARY 1 - 9 1997

**New Zealand Masters Games**

Wanganue, N.Z.  
Contact: +64 6 345 4555

MARCH 27-29 1997

**AUSSI National Swim**

Homebush, NSW  
Contact: (08) 344 1217



## Triathlon... continued from Page 11...

perform very well in these longer races that require considerable training, self-discipline and sense of pacing.

6. Triathlon develops high quality training whereby fewer hours are spent training for maximum results. I can remember back ten years ago when Dave Scott was doing 40 hours + per week in preparation for Hawaii. Today, elite triathletes probably train 20-30 hours per week with much greater emphasis on quality with the use of heart rate monitors. Training is more specific and oriented towards the particular event rather than just being long miles which tended to be rather boring and non-productive. Once a strong aerobic and muscular base has been established, athletes can concentrate on quality without wasting time logging huge volumes and hoping that this will relate to a great performance on race day.

7. One obvious benefit of triathlon training is the improvement in health (provided we don't overtrain). Hippocrates stated around 400 B.C. that "preservation of health is a duty. Few people seem to be conscious of such a thing as physical morality". Things haven't changed much over the years! Triathlon builds very strong cardiovascular and muscular systems which is great insurance against the prob-

lems of sedentary living. Look at the health of many of your non-athletic peers and the comparison is obvious. Triathletes look after their bodies, eat well, drink little alcohol and sleep well. They need to do so in order to cope with their workload, but they gain superior health as long as they keep other factors in balance (work, family, domestic duties).

8. Triathlon allows us to experience greater social interaction. By training with swimmers, surf lifesavers, cyclists and runners we get to widen our circle of friends and meet people with whom we might not normally have communicated. This makes life and training more interesting, enjoyable and quite often develops life-long contacts which makes master's sport such a great experience.

9. Finally, triathlon caters for all ages and abilities, as well as offering equal opportunities for females. There are races for primary school students, now National high school championships and a plethora of distances from which to choose. Even if you're not interested in competing, you can officiate, coach or help out in a club. We have over 40 clubs in Queensland alone, so there is probably one near you if you want to meet some like-minded people. I hope I have convinced you of the benefits - now go for it!

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### From the Research

#### Too Much Water May Slow Us Down

Eight young endurance trained cyclists rode as far as possible in one hour in a lab at 20 degrees and 60% humidity. They rode on two occasions - once with no fluid and once trying to drink water at the rate of 1.7 litres per hour, the amount of fluid they lost in a previous one hour test. During the one hour ride when allowed to drink, they got in 1.5 litres. However, 0.3 litre remained in the stomach and 0.2 litre was urinated after the test. Thus only about a litre of the 1.5 litres of water drunk was absorbed. While the water decreased heart rate from 166 to 157, it did not alter blood volumes, ratings of perceived exertion, body temperatures or sweat losses any differently to the no-water ride. Drinking the 1.5 litres did produce an uncomfortable feeling of stomach fullness and importantly, reduced the distance covered from 43.1 to 42.3 kilometres. Thus, it appears that trying to replace more than one litre per hour of fluid during a short, sharp race in moderate environmental conditions may not benefit performance and in fact may impair it. (Eds note: In hot and/or humid conditions where a lot of sweat is lost, it is a must to drink fluids.)

From: "Water ingestion does not improve 1-h cycling performance in moderate ambient temperatures" *European Journal of Applied Physiology* Vol 71(2-3), 153-160 1995.

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