

# AUSTRALIAN MASTERS SWIMMING COACHES NEWSLETTER

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## Editorial

Hello again

I'm getting into the swing of things with this being the third issue for the year. Each issue is getting easier with more and more contributions being forwarded to me. We have a great wealth of experience and expertise out there, either swimming around in chlorinated water or walking around the pool deck. This issue is proof of that. Many thanks to Russell Ogden, Dieter Loeliger, John Burns, Ian Dodd, Keith Bower, Peter Nowlan and Gordon Medcalf for their contributions to this issue. In the next issue we'll get some more information from the State Coaching Directors about upcoming courses and seminars.

Congratulations to all those swimmers who competed in Casablanca and Portland. I hope

you had a great time, met some new friends and swam well. By all accounts Casablanca was a real experience.

If you are interested in being one of the coaches we profile, please follow the format as appeared in Volume 10 Number 2. Feel free to add any other information and post to me at PO Box 61, CQU Post Office, Rockhampton, Q 4701.

Remember this newsletter is for you. Let us know if there is a special topic you are interested in and we'll try to find the information. Or if you have something to share with other coaches, just post to the address above. If you can get it on disk that is even better.

Hope everyone is feeling refreshed after a winter break or wind down, and ready for another season full of friendship, fun and fitness.

## Some Freestyle Solutions

by Russell Ogden (Level 1M Coach,  
State Director of Technical Developments, Qld)

**O**ne of the biggest problems in freestyle, especially with masters swimmers, is Body Position. Snaking is the most common problem. You effectively present a larger area to the water and unwittingly make yourself bigger (and you didn't even enjoy the food!!). A body that stays aligned down a centre axis moves through the water faster with no additional effort. Here are some *Causes and Solutions*.

### Overreaching

This is when your hand enters the water and reaches across your body rather than in front of it. A hand that doesn't pull straight back pulls you to the side. The other hand often over compensates and pulls you in the opposite direction. First, you need to isolate the lead violator. If you are a one side breather, watch the hand on that side first. It should reach out directly in front of your shoulder.

### Straight Arm Recovery

What you do with your arms and hands above the water affects your body position. A recovery action that carries the arm straight and the hand wide of the body will cause significant lateral movement of the hips. Your elbows should be well bent and carried high so as your hand is low to the water and close to your side. Thus allowing your hand to enter in front of the respective shoulder. This can be achieved with full reach practice, catch up and chicken wing drills.

### Excessive Head Movement

You don't need to turn your head any further than just enough to get a breath. If you turn too far, you pull your shoulders out of alignment. your eyes should look diagonally down at the pool floor (look where you're going not where you have been). you should be able to feel the water level on your forehead (hairline, if it is not receding!). This prevents the chin being back too far and therefore too low in the water. A low head position is common with swimmers who have a poor kick. Remember that putting your

head down deeper in the water will not elevate your legs. your mouth does not have to completely clear the water to breathe effectively.

Practice swimming without breathing for a few strokes and holding your head as steady as you can; when you turn to breathe, think of yourself as still looking forward.

### Flat Body Position (Not Rolling)

If you roll to each side as you extend your arm, you eliminate the need to turn your head very far when you breathe, reduce your frontal area and eliminate the need to lift your arm very high on the recovery.

Rolling is a good thing. If you don't roll you are working too hard. Get a feeling for an exaggerated roll by kicking on your side for 3 seconds then rolling to the other side for 3 seconds. your hips and shoulders should roll together.

Body roll allows a longer, more relaxed stroke, but be careful not to over roll as this is as bad as not rolling enough.

Remember these two points and you will not over roll:

- The arm entering the water should stay in front of the respective shoulder and just under the water at full arm extension.
- The pull action should allow the hand to pass directly under the mid line of the body. If you cross the mid line you will roll too far.

Single arm drills and catch up with exaggerated body roll are useful in developing a feel for ideal body roll.

### The Trudgeon Kick

The trudgeon kick is a kind of scissor kick that keeps you from sinking. Sometimes it's just a big kick with one foot. the violating leg is usually the opposite side to the breathing side. It buys time to take in more air and to stop your legs from sinking. It unbalances the body, creates drag and slows you down. As you learn to swim faster, your legs will automatically rise to the surface due to the increased speed.

Practice kicking in an up and down motion of no more than 14 inches (5.5 cm for the young ones!).

### Early Breathing

This means that you are turning your head

Continued on page 2

### Some Freestyle Solutions cont'd from page 1

too soon to take a breath. If you are breathing on the right side, your head shouldn't turn until your left hand enters the water. If you turn too early you will have to rush your right arm under water so that it gets out of the way of your head. You have to slip it through the water in an inefficient stroke to do that. Practice just getting a glimpse of the hand entering the water before you take a breath.

#### Pulling Too Wide

This can be a compensation for something happening on the other side. An example might be a right side breather whose

chin is pulled right back on the inhale or is an early breather. This swimmer might pull wide with the left hand to compensate for the upper body bend caused by the excessive head movement.

#### Short Stroke

This is easy to correct. Nearly everyone shortens up their stroke when tired.

A drill to correct this is letting your thumb brush your thigh as you finish each stroke. Practice accelerating your stroke as your thumb approaches your thigh.

#### Bilateral Breathing is not necessary but it offers the following advantages:

- it encourages your head to be positioned in line with your mid line,

- it allows for a symmetrical stroke thus assists streamlining.

I have avoided getting too technical as it is often those simple and concise comments that allow swimmers to focus on some important key points without getting too analytical.

No matter how good or how fast a swimmer you are, it is vital to keep thinking about your style and what changes may improve it. Don't accept your classification as a slow, average or fast swimmer; you can always go faster! A thoughtful swimmer is an improved swimmer.

*Taken from the Gladstone Gropers Newsletter (Jan 95) and reprinted with the permission of Russell Ogden*

## The XIII<sup>th</sup> FINA World Sports Medicine Congress

### *Aquatic Sports Medicine for New Century*

On behalf of the Organising Committee, I have the pleasure to invite you to participate in The XIII<sup>th</sup> FINA World Sports Medicine Congress to be held in Hong Kong from 5 April to 7 April 1999.

The Congress is jointly organised by The Federation Internationale de natation Amateurs (FINA), The Hong Kong Amateur Swimming Association (HKASA), The Hong Kong Association of Sports Medicine and Sports Science (HKASMSS), and The Hong Kong Olympic Academy (HKOA). With its theme of "Aquatic Sports Medicine for New Century", a number of renowned professionals and experts will be invited to make presentations on their latest experience and findings in different disciplines of sports medicine in swimming.

As Chairman of the Organising Committee, I ensure you that the Congress in 1999 will facilitate an excellent forum for all participants to exchange their work and ideas.

I look forward to welcoming you in Hong Kong in April 1999.

Yours Sincerely

Professor Frank h Fu  
Chairman, Organising Committee.



## Directing Traffic in the Pool

by Dieter Loeliger (SA Coaching Director)

After warm-up swims and technique sets, and before cool down and or sprint sets, I usually divide swimmers into a faster and a slower group in each lane for the main set. eg. 50m pool, 2 lanes available, 100m F/s repeats

### Advanced Lane

Fast Group	Slow Group
Start at 0.00min	
3 x on 1.50	2 x on 2.15
Start 6.00min	
3 x on 1.50	2 x on 2.15
Start 12.00min	
3 x on 1.50	2 x on 2.15
Start 18.00min	
3 x on 1.50	2 x on 2.15

### Beginners Lane

Fast Group	Slow Group
Start at 0.00min	
3 x on 2.30	2 x on 4.00
Start 8.00min	
3 x on 2.30	2 x on 4.00
Start 16.00min	
3 x on 2.30	2 x on 4.00

Both lanes (all four groups) finish approximately after 24 minutes. No body has to overtake. (Safety)

Above example to be modified according to whatever stroke and or average speed.

But the workout per lane on the basis of 3:2 units works well. 50m swims can be done on the basis of 6:4, but needs clock either end.

In 25m pools, let them swim 3 x 50 reps, 2 x 50, halving the interval times but doubling the repeats of above example

### 1998 ASTEW Active Australia Games

21 - 28 November 1998

The Active Australia Games will be held in Canberra from 21-28 November this year and then again in 2000 and 2002. ACTEW, the ACT Electricity & Water supply authority have agreed to sponsor the Games. About thirty sports will be involved in the Games which are being organised to provide the sports participant who may never reach a national or elite level with the opportunity to participate in a large scale national event. Swimming is open to 20-30 year olds. Contact Heather Jones on 02 62828343 or email [active.aus.games@sportforall.com.au](mailto:active.aus.games@sportforall.com.au)

# The Calculating Coach

## Part 1: A Formula for Faertleks

By John Burns - Level 2 Masters Coach  
Westcoast Masters Aussi Swimming Club

If you use Faertlek Sets in training you might find the following calculation formulae useful. If you have never heard of Faertlek then you might like to consider adding some sets to your programs.

### What is a Faertlek Pyramid?

Faertlek training was originally developed in Sweden for training distance runners and means literally "speed-play". The training involves alternating "fast" and "slow" paced exercise to build up aerobic fitness and endurance. My club has a large number of members who are involved in open-water and endurance swimming, swim-thrus, surf clubs, triathlons etc. We do a fair amount of distance training and I have found Faertlek to be a successful method of building aerobic-endurance. It also acts a motivation break from continuous LSD (long slow distance) training.

I prefer a building and then declining a pyramid of "fast" laps, inter-spaced with a single "slow" lap in-between. A typical set might be *Faertlek 1 to 4 to 1 fast with 1 lap slow between*. I prefer to start and finish with a slow lap as a mini warm-up and recovery in the set. The sequence in this set would be swum as follows without a break between laps:

1S, 1F, 1S, 2F, 1S, 3F, 1S, 4F, 1S, 3F, 1S, 2F, 1S, 1F, 1S

where F = Fast Lap and S = Slow Lap

### How Far Have We Swum?

The total distance for this set would be 600 meters in a 25 meter pool or 1200 meters in a 50 meter pool which brings me to the real purpose of this article. How do you calculate the distance swum in a pyramid set. Well I used to do it by totaling up the number of laps on a sheet of paper (24 in this case) and multiplying by the length of the pool. I assume most other coaches do the same since I have searched in vain through coaching manuals for a formula to calculate the distance swum. It seemed to me that the sequence must be some sort of mathematical progression so one day I threw away the note pad and went looking for my old mathematics text books. After thirty minutes or so brushing up long forgotten skills I set out to tackle the problem and solved it by using the formula for summing an Arithmetic Progression. I won't bore you with the derivation although interested mathematicians may like to check my resultant formulae. Yes there are two, one for even-numbered pyramids and one for odd-numbered pyramids. In the absence of any other formulae, I am going to call them *Burns Formula for Pyramid Sets*.

### Why Are There Two Formulae?

Simple, in an even numbered pyramid (maximum laps 2, 4, 6, 8, etc.) you swim an even number of laps so that the squad ends up back where it started from at the end of the set. In an odd numbered pyramid (maximum laps 3, 5, 7, etc.) you swim an odd number of laps so that the squad ends up grinning at you from the opposite end of the pool. Very embarrassing, especially when they pretend not to notice your frantic waving and shouting.

The cure is to drop one lap from an odd numbered pyramid. I prefer to drop the first slow lap and set the squad off on their first fast lap. This allows for one slow lap to relax them at the end of the pyramid. A typical odd-numbered set might be *Faertlek Pyramid 1 to 5 to 1* which

would be swum as follows:

1F, 1S, 2F, 1S, 3F, 1S, 4F, 1S, 5F, 1S, 4F, 1S, 3F, 1S, 2F, 1S, 1F, 1S

where F = Fast Lap and S = Slow Lap

This requires an adjustment to the original formula for even pyramids. It is quite simple really, you just subtract one lap from the formula used with even pyramids.

"IT SEEMED TO ME THAT THE  
SEQUENCE MUST BE SOME  
SORT OF MATHEMATICAL  
PROGRESSION SO ONE DAY I  
THREW AWAY THE NOTE PAD  
AND WENT LOOKING FOR MY  
OLD MATHEMATICS TEXT  
BOOKS."

### So What is Burns Formula?

Burns formula calculates the *Number of Laps Swum in a Pyramid Set* of the type described above, i.e. Sets where the pyramid expands and then declines with a slow lap interspaced.

#### Number of Laps Swum

For Even-Numbered Pyramids

No of Laps =  $N^2 + 2N$

where N = Maximum Number of Fast Laps Swum

For Odd-Numbered Pyramids

No of Laps =  $N^2 + 2N - 1$

where N = Maximum Number of Fast Laps Swum

Some Worked Examples

1. Pyramid 1 to 4 to 1

This is an even-numbered pyramid and is the set given at the beginning of this article. We use the even formula with the maximum number of fast laps = 4.

$$\begin{aligned}\text{No of Laps} &= N^2 + 2N \\ &= 4^2 + (2 \times 4) \\ &= 16 + 8 \\ &= 24 \text{ laps}\end{aligned}$$

2. Pyramid 1 to 5 to 1

This is an odd-numbered pyramid and is the second set given in this article. We use the odd formula with the maximum number of fast laps = 5.

$$\begin{aligned}\text{No of Laps} &= N^2 + 2N - 1 \\ &= 5^2 + (2 \times 5) - 1 \\ &= 25 + 10 - 1 \\ &= 34 \text{ laps}\end{aligned}$$

3. What is the distance swum in each set.

This can be found by multiplying the number of laps swum by the length of one lap.

Pyramid 1 to 4 to 1

$$\begin{aligned}25\text{M Pool} &= \text{Laps Swum} \times 25 \\ &= 24 \times 25 \\ &= 600 \text{ M}\end{aligned}$$

$$\begin{aligned}50\text{M Pool} &= \text{Laps Swum} \times 50 \\ &= 24 \times 50 \\ &= 1200 \text{ M}\end{aligned}$$

An alternative method for a 25 meter pool is to divide the total laps swum by four and call it hundreds of meters. No calculator needed.

Similarly, for a 50 meter pool you could divide the total laps by two and call that hundreds of meters.

Pyramid 1 to 5 to 1

$$\begin{aligned}25\text{M Pool} &= \text{Laps Swum} / 4 \\ &= 34 / 4 \\ &= 850 \text{ M}\end{aligned}$$

$$\begin{aligned}50\text{M Pool} &= \text{Laps Swum} / 2 \\ &= 34 / 2 \\ &= 1700 \text{ M}\end{aligned}$$

Faertleks are a great way to build up general aerobic fitness as well as endurance. The only nuisance is working out the distances in the sets. Now that you can do this quickly, I hope that you get greater use from them in training.

## 2000 AUSSI National Swim

March/April 2000

At their recent Annular General Meeting, the Queensland Branch confirmed that Gladstone will be the host city for the 2000 National Swim. This modern city, located 550km north of Brisbane is just south of the Tropic of Capricorn. It has wonderful sub-tropical climate and an excellent array of tourist attraction and facilities. Whilst dates for the meet haven't been set, we can be sure that the Gladstone Gropers Club are planning a warm and wonderful welcome.

# Exercise Addition - When exercise controls the person

by Dr Stephanie Hanrahan

**R**egular exercise or training can obviously be very beneficial for us - physically, mentally, and emotionally. For some people, however, exercise becomes more than just a positive health habit, it becomes an addiction. Exercise addiction shares fundamental characteristics with addictions to other substances or activities such as drugs, gambling, or alcohol.

## Tolerance

Most of us are probably aware that one of the signs of drug addiction is that addicts require more and more of the drug to get the same effect. The same is true of exercise addiction. Because physical and psychological tolerance to exercise occurs after repeated training, more exercise is needed to feel the same sense of fatigue or achieve the same sense of satisfaction. Tolerance by itself, does not indicate the existence of addiction. Almost all of us have experienced an increase in tolerance to exercise as we become fitter. If, however, tolerance is accompanied by signs of craving and dependence, addiction is probably present.

## Craving

Cravings cause the object of the craving to become of greater importance than other aspects of life. With exercise addiction, going to the gym, getting in the 20 km run or the 9th swimming session of the week may be of greater importance than family, work, or other commitments. The desire to exercise exceeds common sense. Exercise is thought to be necessary even if environmental conditions or personal illness or injury would suggest otherwise. Just as with other addictions, the desire to appease exercise cravings can result in physical harm, the loss of jobs, and the break-up of relationships and families. We all might be very highly motivated to train, but when the desire to train overrides everything else, problems ensue.

## Dependence and Withdrawal

Dependence on an activity or substance often goes unnoticed. If an alcoholic continues to drink, withdrawal will not be experienced and dependence may not be noted. Comparably, if an exercise addict trains on a regular basis without interruption, dependency and withdrawal may not be noticed. If, however, circumstances arise which interrupt the drinking or the exercising, then signs of dependency and withdrawal may become apparent. An exercise addict who is not able to exercise will experience psychological withdrawal which can take the form of guilt, depression, anxiety, or irritability. In some cases even the thought that one might not

be able to exercise brings on these feelings associated with withdrawal. After awhile the addict exercises to avoid the discomforts of withdrawal. Training is no longer a pleasurable activity, but rather something to be done to avoid feeling worse.

Dependence and withdrawal go unnoticed as long as training can be maintained. However, as tolerance and cravings become stronger, the time needed to exercise increases. As the quantity of exercise escalates there is a greater chance that a training session will be missed or cut short, thereby increasing the chances of experiencing withdrawal. This process can continue as a vicious cycle until training becomes the most important facet of life.

"JUST LIKE OTHER  
ADDICTS, EXERCISE ADDICTS  
OFTEN TEND TO DENY THAT  
THEY HAVE A PROBLEM."

## Denial

Just like other addicts, exercise addicts often tend to deny that they have a problem. Making excuses or rationalising become common methods of justifying their behaviour or denying that a problem exists.

## POSSIBLE PROBLEM REASONS FOR EXERCISING

Exercise needs to be kept in the proper perspective. Training should be enjoyable. If it becomes a dreary obligation, it is probably being done for an unhealthy reason. Some of the common reasons underlying exercise dependency are as follows:

**Avoidance Behaviour** - exercising to avoid uncomfortable life situations; with a lot of time required for exercise, individuals don't have time to establish relationships or deal with problems at work and while exercising they can "get away" from thinking about specific issues. Possible solution: Develop other sources of coping with problems; stress management.

**Obsessive-Compulsive Behaviour** - training sessions can often be organised into orderly times, distances, repetitions, or sets; always following the same routine no matter what, can give individuals a sense of control over their lives; if an exercise session is missed or changed, they can feel as if they are losing control. Possible solution: Try to focus on the enjoyment of the activity rather than the number of laps, repetitions, or kilometres; gradually add variety to training, changing the type and duration of activities.

**Relieving Depression and Anxiety** - exercise can have a positive effect on ourselves physically and mentally; possible

problems may exist when the amount of exercise is increased to get the same effect on mood, when moods are positive only when exercising, and when just the idea of missing a training session causes an increase in depression or anxiety. Possible solution: Exercise only at predetermined times rather than in response to changes in mood; change at least one exercise session per week to a form which involves contact with other people; explore other approaches for handling anxiety and depression.

**Body Image Problems** - exercise addiction as a result of poor body image is often accompanied by false beliefs that individuals will be happier, more successful or more popular if only they change their body shape; these individuals often fear that missing one workout will have a noticeable and negative impact on how they look. Possible solutions: Examine thoughts and beliefs about exercise and body shape and what it means to be successful.

**Eating Disorders** - this topic is too complex to cover in this article, but the basic idea is that exercise addiction often coexists with eating disorders.

In summary, while many of us experience some signs of exercise addiction, our training behaviour isn't problematic unless training is no longer enjoyable or we feel we are being controlled by training.

## Scientific Stuff

### Do swimmers sweat?

Ever got out of a hot or heated pool and started to sweat and wondered whether you sweat in the water? Recent research from Queensland strongly suggests swimmers lose fluid through sweating. Five high performance male swimmers (19-39 years) completed a 4700m swim session consisting of a 1300m warm-up, 30 x 100m freestyle on a 1-40 time base, followed by a 400m swim down. No fluids were consumed during training and nude body weight of each swimmer measured before and after the session. The water temperature, air temperature and humidity were 26.5°, 20.5° and 82%. The average weight loss was a statistically significant 0.7 kg or 0.9% of body weight. This would suggest that swimmers do lose fluid during training. While some of the fluid loss may be through breathing (2-5ml per minute of strenuous exercise), the results of this study strongly suggest that swimmers need to replace fluid during training, particularly when training in hot pools.

*Fluid loss in swimmers.* Reaburn, P.R.J., Pearce, S. & Starr-Thomas, G. Journal of Swimming Research 11, 36-39, 1996.

# Observation

by Ian Dodd (Level 2 ASI Coach, Level 1 M Coach,  
NSW Swimming Assoc. Referee)

**W**ell I'm the new boy on the block, so please forgive me if I go over some old ground that perhaps was done in the recent past. They say there is nothing new under the sun, but I don't believe that because you just need to observe how the technique side of swimming has changed over the past few years. Which brings me to the main topic of this article **OBSERVATION**.

Many of the really top coaches are fantastic observers, they might not be able to tell you who swam or what the time recorded was but they would have noticed with fine detail some part of a swim that

stood out from the rest of the competitors in a race. Then having noticed it no doubt they would then pencil in the persons name so next time they will highlight the persons name in the program so they can observe them next time. Observation is not just looking, it is using the brain to filter out all the junk and remembering some or just one minuscule detail and then over time putting it back together in a meaningful context. There are so many items to look when observing a swimmer that the poor old brain cannot take all the information in, much the same type of thing that we see so often nowadays because of computers and storage facilities, in other words information overload.

**How do we work around it so we don't go into information overload.**

Start by using the best swimming examples of say Popov, Hynes, Riley, van Dyken, Perkins, (part of the already done filtering)

add to this some of your best swimmers you see lots of the time in your own coaching environment, because some of these people will also have the occasional top technique in perhaps just one small way. Break up into very small sections what you want to observe, say the dive, the turn or the streamline, then break it up again into finer detail. You might need to study just one small part many times to finally come up with the correct observation. To help you along it would be good to get close to the action or use a video to slow it down but take your time to ensure what you have observed will help in the overall outcome. How do you see what you have observed and how do you adapt it, well I hope to write about that next time.

## Scientific Stuff

### Weight training and age

Sports scientists have recently discovered that masters athletes respond in the weights room just as effectively as younger athletes. However, a recent study in Canada has suggested that the time span of the adaptive changes may be longer in older athletes compared to the younger athlete.

Ten elderly women (average age 81 years) participated in an eight-week program designed to strengthen their quadriceps muscles. The women worked out three times per week using three sets of 10 repetitions of knee extensions (knee straightening).

Studies on younger people have suggested that muscle power improves fairly rapidly during the first few weeks of training due to improved co-ordination of the nervous system. This phase is normally followed by more strength improvements as muscle size increases. However, in the Canadian study, the masters athletes failed to improve strength during the first four weeks of their program but blossomed during the last four weeks of the eight-week program with muscle strength improving a whopping 61 percent.

Thus it appears that older athletes respond well to strength training but that the training response may be slower than that observed in younger athletes. So, if you are taking our strong advice and undertaking strength training, don't be disheartened if you don't see changes in the first few weeks, they will happen. To use a well-known saying from a shampoo advertisement: "It might not happen overnight, but it will happen!"

## Masters Economic Impact Study

Ernst & Young were commissioned by the Confederation of Australian Sport to undertake an independent evaluation of the economic impact of the 6th Australian Masters games (henceforth, AMG) held in Canberra during 1997.

Key findings of the study include:

- the economic impact of the AMG was \$18.3 million comprising \$12.1 million direct which induced a further increase of \$6.2 million;
- the ACT Sport and Recreation Input-Output model indicates that an injection of 12 million is equivalent to 272 new jobs;
- 72% of visitors felt that the AMG registration fee was either reasonable or inexpensive while approximately 90% felt that the sport fees were either reasonable or expensive;
- 44% of visitors (4,400) indicated they were likely to return to Canberra on holiday as a result of visiting the area during the AMG;
- if these people were to come back for a night visit and spend the same amount per night as they did during the AMG, the additional direct impact would be \$2,072,400;
- 84% believed that the AMG represented value for money;
- 89% of visitors rated their overall satisfaction as either good or excellent;
- 4% of participants felt that as a result of the AMG, they were more likely to participate in sports and recreation activities. Only 0.3% indicated they were less likely to continue participating;
- over 95% of participants were aware that the AMG's sponsor was Healthpact - with its message "Be Active for Life".

Taken from the Confederation of Australian Sport - Sport Magazine Vol 18 No 1 Autumn 1998

## Scientific Stuff

### CAFFEINE GIVES THE 1500m SWIM A BUZZ

Caffeine has long been known to be of benefit to runners and cyclists who do low to moderate intensity exercise greater than 40 minutes in length. Two Canadian sports scientists recently set out to find out what effect caffeine had on the 1500m swim time. Eleven sub-25 minute 1500m swimmers who were low caffeine consumers swam 1500m on two occasions - once without caffeine (placebo) and once having consumed 6mg of caffeine per kilogram of body weight 2.5 hours before the timed swim. The caffeine hit had a positive effect on the 1500 time. The placebo (no caffeine) time averaged 21m 21secs while the caffeine-assisted time was 20m 58secs - a 23 second improvement. While the effects may not be as great in stronger swimmers, most of us 'mongrels' would be happy to swim 23 seconds faster in the pool or to get that edge in a triathlon.

From: "Caffeine ingestion and performance of a 1500-metre swim" Canadian Journal of Applied Physiology, Vol 20 (2), 168-177 1995.

Continued on page 12

# Sprinting for Older Swimmers

by Gordon Medcalf (Level 2M Coach)

**W**hen I heard 73 year old AUSSI swimmer Harry, say "Sprinting isn't good for you. I think I'll stop going in these competitions", I knew I had a topic for AMSC newsletter.

I'm sure I'm not the only coach who's heard that sort of talk! Taken at face value his first statement is not correct. All these stalwarts who keep recording top sprint times as they get older are not necessarily doing themselves harm. What he could have said was "Sprinting isn't good for you if you're not sprint fit" - and of course there's a hidden message too: he's saying "Overexertion at my age might trigger a heart attack". So he'd raising some issues that Masters coaches are faced with from time to time.

First of all, all our swimmers should have an annual medical check up and a stress ECG is advisable for those who are going to swim hard. Coaches are quite entitled to insist on this. If the medico advises lighter leisure activities, then Harry's decision is made for him.

But if his test shows that his cardiovascular system can handle hard exercise, he has to decide whether to go on with sprinting or not. We know he's starting to worry about it, so we mustn't push him: Masters sport is supposed to be fun! The coach's message is "If you're going to sprint, make sure you're fit, otherwise just swim it easy and enjoy it". This may sound like an easy choice, but knowing Harry, I wouldn't be surprised if he'd rather opt out of racing altogether and start letting his mates beat him all the time. He'd lacking confidence right now, and he needs advice and support.

If, after discussion, he does decide to enter the sprints at the next Masters games or National Titles or whatever, we need to ensure that he's properly prepared, both mentally and physically. That's a coach's responsibility.

From what I've seen of AUSSI swimmers, many of them exercise at around 60-75% of their maximum heart rate (HR) for about 40

"FROM WHAT I'VE SEEN OF AUSSI SWIMMERS, MANY OF THEM EXERCISE AT AROUND 60-75% OF THEIR MAXIMUM HEART RATE (HR) FOR ABOUT 40 MINUTES ABOUT THREE TIMES A WEEK. THEY REACH A MODERATE LEVEL OF AEROBIC FITNESS, AND THAT'S FINE!"

minutes about three times a week. They reach a moderate level of aerobic fitness, and that's fine! They can handle the weekend swim thrus and the AUSSI aerobic programme, they enjoy being in the group, and they're much "fitter" than that sedentary public out there. Go for it, that's what AUSSI is all about.

But racing is different. When we sprint we're asking the heart to produce maximum revs, and the faithful old pump might object to this if it has not been accustomed to it by training. Our AUSSI sprints are usually 50 metres, and flat out 50s really do put great stress on heart and lungs. Race training needs to be at race pace, so printers need maximum HR work. It's good to see some AUSSI

coaches including a sprint set in their training programmes at least once a week, and it's important not to neglect this, but it doesn't make people "hard fit" for sprints. Our challenge is to build Harry's confidence by making him "sprint fit".

Sprint training is highly specialised. The objective is to have the swimmer hit top speed as soon as he enters the water and then maintain it. In my experience, proper preparation begins with sets of short maximum efforts (not more than 25 metres) for a couple of weeks to get all the body systems operating at top speed, then manipulation of rest intervals to develop speed endurance and lactate tolerance, with progressively longer swims and 50 metre time trials as competition day approaches. Sprint coaches have their own favourite programmes, but the theme is always the same: train at race pace and progressively overload. Assuming that he started with a sound aerobic base, we can expect significant improvement in Harry's 50 metre time in four or five weeks, and with that a more positive attitude to sprinting.

After the competition we put the medals away and enter a maintenance phase with a mixture of aerobic, anaerobic and most importantly, strength work, ready to peak up again for the next big one.

Footnote: AUSSI coaches know that many of their swimmers are more suited to 25 metre races than to 50s. They enjoy the first 25 but the second half of the 50 really does put some of them under stress. I believe we should make a point of offering 25 metre events when Interclub competitions are held in 25 metre pools, as well as the traditional 50s.

## AUSSI Masters Swimming in Australia (Inc) Drug Policy

AUSSI Masters Swimming in Australia Inc. is philosophically strongly opposed to the use of banned performance-enhancing drugs and methods by participants and competitors.

AUSSI Masters Swimming endorses the stance taken by Australian athletes and coaches strongly opposing drug use, and supports also the excellent work done by ASDA (Australian Sports Drug Agency).

Notwithstanding this, it is current policy not to drug-test member either in-competition or out-of-competition. More than in other sports (especially those in the elite arena), Masters Swimming relies on the integrity and honesty of its adult members. Our Members prefer to concentrate on fitness and good health, in keeping with our motto: "Fitness, Friendship and Fun".

The issue of prescribed medications in the adult population is a very real one, and

Masters' sportspeople have a responsibility to themselves and to others to have a knowledge of their own prescribed medications, and to ascertain whether or not they are on the permitted list or the banned list, and if the latter, to declare it prior to competition.

"MASTERS SWIMMING RELIES ON THE INTEGRITY AND HONESTY OF ITS ADULT MEMBERS. OUR MEMBERS PREFER TO CONCENTRATE ON FITNESS AND GOOD HEALTH, IN KEEPING WITH OUR MOTTO: "FITNESS, FRIENDSHIP AND FUN"."

No swimmer should feel they should discontinue necessary prescribed medicines. - indeed, that could have dangerous consequences.

The thrust of AUSSI in its Drug Policy is in educating the whole membership regarding the types of drugs and methods currently in use, the strategies in place to detect these illegal practices, the protocol of a urine drug test, the incidence of drug use in different sports and in different countries, and the possible side-effects of drug use.

To this end, we will continue to make available to our members a copy of the current edition of the Drugs in Sport Handbook, produced by ASDA, outlining permitted and banned substances, and to offer seminars and workshops on the subject.

Adopted 16 March 1998



# Workout Habits and Training Principles

by Judy Bonning (Carlisle Swim School, Sydney)

## I. Points to Remember

- a. Perfect practice makes perfect meet.
- b. take into consideration the individual differences (such as bone density, body structure, body fat, etc.). Adapt techniques to these differences.
- c. Good workouts are the key to swimming faster. Technique, endurance, speed and quality training - all build confidence.
- d. Workouts are very individual. Depends on: age, experience, pool space and time, other commitments (such as work, family, school, etc).
- e. Yardage - could be anywhere from 500 to 5,000 yards or meters per day
  - three to six workouts per week
  - doubles are not recommended for the majority of adult swimmers

## II. Good Workout Habits

- a. Two things that have changed swimming the most in the past 25-30 years.
  - i. Goggles: vision is clearer better concentration and stay in water longer
  - ii. Pace clocks for interval training
  - iii. Other factors: swim caps, two suits for workouts (drag suits), lycra, paper suits, and other racing suits for major competitions, pulse rates (swimmers - 205 minus age), lactate testing, weight training, video taping, sports psychology, diet and nutrition, improved facilities

## III. Workout Improvement equals meet improvement

- a. Streamlining
- b. No breathing immediately after pushoff or from flags in, at the end of a set
- c. Work the turns
- d. Finish strong
- e. Know backstroke counts from the flags to the wall
- f. Always touch with two hands on breast and fly
- g. Always complete breaststroke pullouts
- h. Set goals for both workouts and meets
  - i. Variety is important
  - j. Challenge yourself

## IV. Components of good workouts

- a. Stretching
  1. One of the most important com-

ponents, but often the most neglected by adults.

2. Lack of flexibility can cause stroke defects and inefficient stroke mechanics.
3. Prevents injuries.
4. backbone compresses as we get older, stretching helps counteract this effect.
5. If busy (most of us are), even five to fifteen minutes per day is beneficial.
6. Ankle flexibility - extremely important for a strong kick. Fins help stretch out ankles and improve kicking ability.

### b. Warm-up

1. Usually ten to fifteen percent of workout or possibly more when using drills etc. or preparing for a speed set.

"PERFECT  
PRACTICE  
MAKES  
PERFECT  
MEET."

2. Body like care engine - runs more efficiently after warmed up.

3. Alternate breathing - balances stroke, prevents shoulder problems, when racing can see opponents

4. concentrate on something in warm-ups. This can be done by including drills or just concentrating on part of the stroke.

### c. Drills

1. Also usually ten to fifteen percent of workout. can be included as part of warm-up or as separate set.

2. Reasons for doing drills - keeps swimmer in tune with stroke, improves co-ordination, self correction, everyone has a dominant side and a weak side.

3. Starts, turns and finishes - 25% of 50 yards/meters races, turns -fastest part of race, open turns are advantageous for some swimmers (especially distance freestyle events), always work on dives in DEEP water

### d. Kicking

1. Ten to fifteen percent of workout (even triathletes need to kick)

2. Legs are largest muscles in body, so use most of the oxygen. The legs need to be trained aerobically and anaerobically as well as the arms.

3. Freestyle - kick is mostly a stabiliser, especially in distant events. (Some say arms are 85% of the forward momentum and the legs are only 15% in freestyle).

4. Fins - greater surface area to build strength and supply resistance variety in workouts increases ankle flexibility sprint assisted training helps work on technique for butterfly and backstroke and breaststroke pulls

### e. Pulling

1. Strengthens arms
2. Always breathe every third stroke or every fifth stroke for more smooth and even stroke

3. Use of paddles is recommended primarily for improving technique. Be careful of over stressing shoulders by using paddles. Can cause shoulder injuries.

### f. Main Set

1. Can be anywhere from forty to sixty percent of workout and possibly more. (ie. 400 to 2,000 yards or meters)

2. Can be one set or several sets.

3. Set goals to accomplish during the main set. use the pace clock to know if goals are being met.

4. Type of set depends on where you are in the season and if you are working on aerobic or anaerobic type of training.

5. When working the anaerobic system, older Masters swimmers should do fewer all-out sprints then younger swimmers. It takes longer to recover.

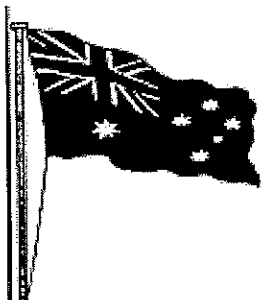
### g. Sprints

1. 12.5's and 25's

2. Should be done at race pace

3. No breathers are not encouraged except for 12.5's and 25's. It is not medically sound to go further distances without oxygen. Be cautious.

4. Sprints should be done in order to develop a good turnover. They do not always need to be done at the end of the workout. It is sometimes good to do them after the warm-up or in the middle of the workout when you are not as tired. masters swimmers tend to neglect sprints, but they are important for developing speed.



## Pan Pacific Masters Swimming Championships 1999 - Perth

At the Pan Pacific Masters Swimming Championship in Maui, Hawaii last year, Australia was invited to host the event in 1999.

After a protracted study of bids from Townsville (Qld) and Perth (WA), the National Board has awarded the meet to AUSSI WA for it to be held in the Challenge Stadium in Perth - home of the recent FINA World Swimming Championships.

Details are still being worked out but it will probably be held in October and the other disciplines (water polo, diving and synchronised swimming) will be invited to be part of it too.

# Swimmer's Shoulder - An Update

by Keith Bower Manipulative Physiotherapist, Level 2 Coach,  
Claremont Masters Swimming Club

**S**houlder pain can occur at all levels of participation from junior to masters competitive swimmers. The term swimmer's shoulder has been used to describe a variety of complaints, involving pain generally to the front or outside of the shoulder without reference to its cause, adding confusion and misunderstanding to management.

## Causes

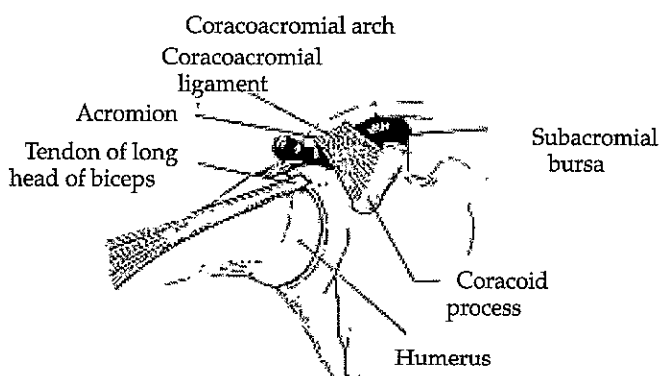
The main factors associated with shoulder pain in swimming are-

1. swimming experience
2. faulty technique
3. training errors

The cause of pain is a combination of overuse (through repetitive microtrauma) and overload (a sudden increase in training load)

The most common problem is subacromial impingement. Impingement occurs when the soft tissues of the subacromial space are compressed between the head of humerus and the coracoacromial arch and anterior acromion. The subacromial tissues include the supraspinatus tendon, the tendon of the long head of biceps and the subacromial bursa. The impingement becomes even worse with inflammation of these tissues (see Figure 1). The shoulder joint laxity, fatigue of the muscles that support the scapula and shoulder joint and/or muscle imbalance can contribute to this impingement.

Figure 1



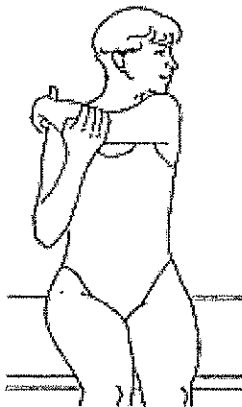
Inflexibility of the front of the shoulders has been implicated as a cause of shoulder pain in swimmers, with butterfly swimmers especially affected.

There are numerous excellent articles on the benefits of stretching exercises to improve performance.

In a simply stiff shoulder all these stretches work well. However, a commonly

advocated stretch of the rotator cuff, shown in Figure 2, may simply stretch the scapula around the chest wall without attending to the stiff shoulder.

Figure 2



The rotator cuff can be influenced better by the following specific stretch.

"Stand with your back against a wall, placing one hand on your hip and holding that elbow with the other hand. Keep the elbow still and pull your shoulder blades together."

Recent studies have demonstrated an association between shoulder problems in swimmers and laxity of the shoulder joint. If instability of the shoulder joint is present, clearly stretching procedures designed to increase the range of motion are inappropriate. Strengthening exercises for the shoulder rotators and scapular stabilisers are advocated to correct this deficit. Exercises for the lateral rotators have been advised to correct muscle imbalance.

The prescription of exercise programmes may not be this simple, however, as recent research has found weakness of the medial rotators of the shoulder rather than the lateral rotators. Therefore, exercise regimes need to be tailor made to the individual's muscle imbalance.

Recent analysis of patterns of scapular rotator muscles in freestyle swimmers with subacromial impingement has found that muscles on the injured side showed increased variability in the timing of activation. There was delayed recruitment of muscles on the non injured side, suggesting that this alteration in activation may be one of the causes rather than the consequence of injury. Therefore rehabili-

tation of both shoulders may be necessary.

## Prevention of Injury

**Paddles** - Overuse of hand paddles can overload the musculo-skeletal system causing further muscle imbalance and pain. Complaints of muscle fatigue or "troublesome" sensations have been reported prior to the onset of shoulder pain. In these situations a coach should be very cautious about incorporating paddles.

**Strength Training** - Weight training, especially overhead, has been reported to be associated with increased incidence of shoulder pain.

Controlled studies demonstrating the value of regular resistance weight training and/or rubber band exercises to prevent shoulder pain are lacking. Shoulder instability or pain has been shown to be associated with fatigue or dysfunction of certain scapular rotators.

Balanced strength training for the scapula and shoulder joint theoretically should prevent or minimise the incidence of shoulder injuries. Comprehensive rational strengthening programmes to prevent shoulder pain have been initiated nationwide in Denmark. The results of this regime will hopefully shed some light on the value of balanced strength training.

## Swimming Technique

1. A lack of body roll in the recovery phase of freestyle will restrict lateral rotation of the shoulder and increase the degree of mechanical stress and impingement. Therefore one should encourage increased body roll.

2. Excessive body roll, however will lead to "crossover" at entry and/or during the mid propulsion phase. This can lead to impingement as the humeral head slides under the coracoacromial arch.

3. A "dropped elbow" during the pull phase can cause impingement of the tendons between the bump on the humerus and the coracoacromial arch.

4. Maintaining a "high elbow" during recovery will also decrease the risk of mechanical impingement.

5. Excessive elbow straightening before commencing the unsweep has also been implicated as causing impingement.

6. Excessive medial rotation on entry can produce impingement and therefore one should encourage a "flattened entry" with the palm surface at approximately 45 degrees to the surface of the water.

7. Over extension of the shoulder on entry can also produce impingement. A high elbow on hand entry will reduce this impingement.

**Training Workouts** - Programmes should not be progressed too far, too fast and/or too soon. Ideally they should include kickboard work, pull buoy and

Continued on page 10



# Tapering for Success

by Dr Peter Reaburn (AUSSI Masters Coaching Panel)

**S**uccessful performance on the "big day" is a culmination of a lot of hard work and commitment. However, it's those last few weeks prior to the major meet that are so important to maximising the hours of training. On the assumption that the work has been put in, the taper is the key to that PB.

In 1990, well-respected sports scientist and masters swimmer, David Costill studied two groups of younger swimmers over a 24-week training period, with the groups doing different training over weeks 5-11. During this period, one group trained twice a day (10,000m), the other group once a day for 5,000m. Both groups demonstrated similar physiological and performance gains. Importantly, the group covering the 10,000m per day declined significantly in sprinting ability. A similar finding has also been observed in distance runners who lost strength when in heavy training. However, a significant improvement in sprint times occurred in both groups with a taper over four weeks.

This improvement is probably due to a 17.7-24.6% improvement in arm power that has been previously seen in swimmers who dropped training volume from 9,000m per day to 2,700m per day for a three-week period. Taken together, these results from scientific studies suggest that periods of intense training reduce muscle power and strength which reduce sprint ability. Conversely, reducing training volume, but maintaining intensity, improves swim performance across all events from 50-1500m.

Most elite swimmers and coaches reduce training volume gradually or suddenly over a period of 2-3 weeks leading up to a major meet. Some swimmers and coaches find a gradual reduction in volume works. Conversely, particularly in overtrained or fatigued swimmers, a sudden drop to a third of training volume may benefit some athletes.

Research in younger swimmers has shown that whether they drop from 10,000m to 3,200m per day or 5,000m to 2000m per day over a 15-day period, there is no loss in aerobic capacity or endurance performance and an improvement in sprint ability.

## Tapering/Peaking

Tapering or peaking is a highly individual matter but usually takes place during the last 7-10 days prior to major competition and involves a gradual (major taper) or dramatic reduction in training volume (kms) and frequency. Training intensity or speed should be maintained. Indeed, a recent study found that young mid-

dle distance runners significantly improved their performance times by sharply reducing their training volume while maintaining or increasing their training intensity seven days before a race. This taper method was superior to both a reduction in training intensity and total rest in the week prior to competition. It is generally accepted that the longer the athlete has been training for, the longer the taper can be. However, if training duration has been short, then a "drop dead" taper of 2-3 days where volume is dropped dramatically might be recommended.

The usual practice is to do one major taper (2-3 weeks) per season although some sports scientists suggest 2-4 may be possible within a training year. Minor tapers (3-7 days) may be done leading up to an important meet or event. These minor tapers allow you to freshen up regularly and if you perform well at a meet, to give yourself that all-important psychological boost for a PB.

The available research and anecdotal evidence suggests that athletes are able to hold peak performance over 7-10 days without additional training. Masters swimmers that maintain all-year round training appear to be better able to hold performance over

**"TAPERING OR PEAKING IS A  
HIGHLY INDIVIDUAL MATTER  
BUT USUALLY TAKES PLACE  
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AND INVOLVES A  
GRADUAL (MAJOR TAPER) OR  
DRAMATIC REDUCTION IN  
TRAINING VOLUME (KMS)  
AND FREQUENCY."**

this period compared to swimmers who only train in summer or part of the year.

The available research strongly suggests the need to reduce training volume (kms per week). So what should we do in terms of reducing training volume? Do we drop the number of days per week, the speed, or the distance covered per session? A 1989 study studied these variables in young American swimmers. Groups who maintained frequency of six days per week and swam 10-15% of their work at high intensity maintained their best performances. This was maintained even when the duration of training was reduced by two-thirds. However, the groups that dropped training frequency by two-thirds from six to three days per week decreased performances, even though they maintained training duration and intensities. In summary, these results sug-

gest maintaining training frequency and intensity, but dropping volume (kms) per session.

During the taper period, for both endurance and speed swimmers, more recovery sessions should be programmed and nutritional procedures such as carbohydrate loading emphasised. For those of us who compete regularly (open water swims, triathlon teams, surf carnivals), recovery and lower intensity training sessions should be programmed early in the next week to allow sufficient recovery from the race(s). The main training session is performed midweek (moderate to high intensity and volume), with a brief, quality workout occurring two or three days prior to the next race. Recovery and nutritional procedures (carbohydrate loading) should also be emphasised at this stage of the week. Minor tapers of this nature are designed to allow a "mini peak" for each race throughout the competition season, but it is no easy matter to achieve this every week. Too many of these minor tapers will take time away from quality training. I'd thus suggest pick the important events (once a month) you want to target and do a minor taper for those while simply training through the other events that you can use as quality training sessions. A major taper should be done prior to a major event (State/Nationals/Worlds).

On the assumption of a major three-week taper, the following peaking guidelines can be used:

### Week 1:

- maintain normal training frequency
- endurance swimmers shorten the distance of the main endurance set by 10-20%
- reduce weights workouts to once per week
- include a small amount of sprint work (25-50m) with long rests
- maintain swim intensity

### Week 2:

- maintain normal training frequency
- endurance swimmers shorten the distance of the main endurance set by a further 10-20%
- sprinters reduce the number and distance (dramatically) of the endurance sets
- include one-two sprint short sprint sets as per week one
- drop weights work - the sprinting will maintain strength and power
- maintain swim intensity

### The Last week:

- maintain normal training frequency
- Practice your race warm-ups (longer, easy swim or set and some quality efforts).
- Reduce total distance and length of sets dramatically.
- Swim broken swims (eg. 200m swimmers swim 4x50m at race pace with 5-10 seconds between 50's).
- Fine tune starts and turns.

# STOP

*Ballad by Peter Nowlan (Mackay Masters)*

## Verse 1.

You just walked onto the Pool Deck  
and shout orders at the Members of the Squad  
as they warm up  
This makes us have a bad feeling  
about the Approaching Training Session  
You give an Order and I swim a Kilometre  
Can't slow down you're always following me  
along the Pool Deck  
as I swim to the Shallow End and Back  
Fast and Slow sets down on demand  
and we know that you could go and find  
a Squad of Superstars to Coach  
Capable of making the Olympics  
instead you want to coach a  
group of AUSSI MASTER SWIMMERS  
Caught in a Craze, its just a faze  
or will you be our Coach forever?  
Don't you know VO2 Max Sessions are hard?  
Swimming so fast, don't you know  
you will soon burn us out this  
group of AUSSI MASTER SWIMMERS  
Don't you know, can't you see  
the effects of your training sets?  
Slow it down, read the signs  
change your training sets  
and the Squad may stay.

**CHORUS:** Stop right now, Thank you very much  
I need a Coach with a Human Touch  
Gotta slow down Coach, gotta have some fun  
Because AUSSI MASTER SWIMMERS only  
swim for FUN FITNESS AND FRIENDSHIP

## Verse 2.

The Squad is doing 20 x 100m freestyle sets on 1.30  
We know that you could go  
and find some squad of Superstars to coach capable of  
making the Olympics  
instead you want to Coach  
a group of AUSSI MASTER SWIMMERS  
You know why you are a Coach  
but unless you change your training sets, there  
will be no Master Swimmers left.  
Don't you know, its going too fast?  
Racing so hard doing Sprint sets on demand  
The Squad won't last.  
Slow it down, read the Signs  
so you know just where you are going  
and perhaps the Squad will handle  
the training sets and stay

## CHORUS

Stop right now, Thank you very much.  
I need a coach with Human Touch  
Gotta Slow it down Coach, gotta have some fun.  
Because AUSSI MASTER SWIMMERS  
only swim for FUN FITNESS AND FRIENDSHIP

## Verse 3.

We want to stay fit Swimming  
We're not interested in winning Medals  
at the National or State championships  
We need to do less Sprint sets Coach  
You've gotta slow down the sets, before its too late,  
otherwise you'll burn us out,  
so get off our backs,  
we only swim for  
FUN, FITNESS AND FRIENDSHIP

## CHORUS

Stop right now, Thank you very much  
I need a coach with a Human Touch  
Gotta Slow it down Coach, gotta have some fun  
Because AUSSI MASTER SWIMMERS  
only swim for FUN FITNESS AND FRIENDSHIP

### Swimmer's Shoulder continued from page 8

stroke variation to minimise shoulder fatigue and consequent injury. Using fins with "closed fist" swimming on the injured side will ease the load on the affected soft tissues.

Should a swimmer complain of muscle fatigue or pain, attention should be paid to the adequacy of their warm-up, cool down and swimming technique. Their workout may require some modification in distance and stroke variation, local treatment and/or rehabilitation may be necessary. Fitness can be maintained with activities that do not stress the injured area as a break from training can quickly lead to considerable detraining.

If this conservative approach is ineffectual the impingement may require subacromial cortisone injections. Should the problem be that of instability and the exercise regime is not providing easing of their pain, prolotherapy (injection therapy to "stiffen" up the joint) or surgical stabilisation may be appropriate.

*Keith has used many references when writing this article. If you wish to read some of these articles please contact Claire on 07 49265269 for more information.*

### Tapering for Success continued from page 9

#### Other important issues

- Because we start to feel fresh during the taper phase, there may be a tendency to do too much speed work to the detriment of our endurance. Remember to be aware that the aim of taper is to reduce training distances - don't do too much quality work!
- As a result of our training volume dropping, we must reduce our calorie intake, otherwise we'll gain fat weight. However, be aware that total body weight may increase slightly. This is due to the increased glycogen we're storing in those previously depleted muscles needing water to store those carbo's.
- The taper is the time to feel good. Our heads must be confident that we are swimming strongly during taper and when we do our confidence lifts.
- Distance swimmers (200m plus) need to maintain a greater training volume during taper than sprinters - this is due to the need to maintain aerobic capacity which is harder to maintain than speed.
- Sprinters can have longer tapers than distance swimmers for above reason.
- The longer you have been training in a season, the longer the taper can be.
- Plan in your head for what you will do on race day. Also plan for any problems that may arise by visualising how you will cope.
- Finally, the taper is a very individual matter and years of trial and error will enable you to find a taper method that works for you. Try the methods outlined above - they are guidelines only, and do not allow for the wide range of masters swimmers' physiologies, training histories, and events that exist for us. See you on deck - tapered and ready to go!

*Reprinted from THE MASTERS ATHLETE Issue 5 Feb 96 (07) 49265269 AH*

# AUSSI RESOURCE CENTRE

A great way to get your club together for a social night/fundraiser is to have a video night. Clubs who may not be able to swim all year round could use this to keep some continuity in their lay off period.

Items are available for the following hiring charges:

1 Video	1 Week \$ 5.00	2 Weeks \$8.00
2 Videos	1 Week \$ 8.00	2 Weeks \$12.00
3 Video	1 Week \$10.00	2 Weeks \$15.00

A bill will be forwarded to you with the goods (plus postage) and payment must be sent with the items, on their return.

## Videos

- **Mark Tonelli Gold Medal Series** - Best for novices in that it is simplistic, non-the-less it is very well put together with good camera work and footage.
- **AUSSI Coaching Seminar** - with Kirk Marks - 40 minutes of theory and practical showing real AUSSI swimmers of all shapes and abilities.
- **Swim Easy with John Konrads**. 45 minutes. An in-depth analysis of freestyle the John Konrads way. Excellent visual images.
- **Swimming Breaststroke**. 19 minutes. Superb analysis of the strokes of Adrian Morehouse and Nick Gillingham, plus 5 minutes of Sam Riley.
- **The Athletic Institute Swimming Series** - Covers all strokes, starts and turns with progressive skills. A bit dated but excellent under water shots of good basic techniques. Well worth a look.
- **AUSSI Workshop - Tailoring a programme** - plus booklet. This workshop held in Tasmania features Anita Killmier.
- **Swimming Fastest III - John Trembley**. A video and book combination. A *must* for all coaches, teachers and swimmers.
- **"Swim Smarter, Swim Faster." I & II**. Richard Quick and Skip Kenny of the Stanford University take you through nearly two hours of stroke drills, techniques plus Starts, Turns and Finishes.
- **ASCA Conference - Masters Stream** - Adelaide 1992.
- **Masters Stroke Techniques**. A biomechanical analysis of the four strokes by John Leonard of ASCA, with demonstrations of drills by US Masters swimmers. 50 minutes.
- **Your backyard swimming pool is your home fitness centre** - as the name suggests, gives ideas to utilise your pool to full advantage.
- **Strength Training** - This 30 minutes video provides a comprehensive update on the methods and principles of strength training, i.e. Body Building, Isometrics, Maximal Weights, Eccentric exercises. Excellent for swimmers and coaches about to embark on a strength programme.
- **Stretching - Bob Anderson**. A really great selection of exercises demonstrating correct technique.
- **Food for Sport** - featuring Karen Inge. Very good!
- **Sunrice High Performance Eating Strategies**, - plus booklet. A good video made better by the booklet.
- **Every Second Counts** - Effective Time Management in Sports Training. Whilst this video is not specific to swimming it gives many good examples of how time is wasted in coaching. A good tool for staff workshops or self evaluation.

- **Visualisation** - Focusing Techniques and mental rehearsals are used extensively by all top athletes to enhance performance. This video gives a comprehensive look at the use of visualisation in sport through various case studies.
- **Media Matters** plus booklet - this is hired to you as a kit and is designed for individuals and voluntary groups involved in promoting fitness and healthy lifestyles in the community. It can be used to publicise and attract members, hence is ideal for AUSSI Clubs.
- **Exercise beats Arthritis** - A unique series of exercises set to music, designed to keep joints mobile.
- **Give it a Go!** - Coaching Athletes with disabilities

## AUSSI RESOURCE CENTRE

### ORDER FORM

NAME \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 STATE \_\_\_\_\_ POSTCODE \_\_\_\_\_  
 PHONE \_\_\_\_\_  
 AUSSI CLUB \_\_\_\_\_

### I REQUEST THE FOLLOWING ITEMS

1 \_\_\_\_\_  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_

I would like to hire them for a total of \_\_\_\_\_ wks commencing \_\_\_\_\_

I agree to return them in good order complete with my cheque for hire and postage.

Signed \_\_\_\_\_  
 Date \_\_\_\_\_

### ORDER FORM AND CHEQUES PAYABLE TO:

AUSSI Masters Swimming  
 P.O. Box 207  
 MARLESTON SA 5033  
 Phone/Fax 08 8344 1217



**Caffeine continued from page 5**

For your interest, coffee contains 50-100mg of caffeine per cup, tea 40-80 per cup, cola drinks about 40mg per cup, and chocolate bars about 150mg per family block. So if you're looking to consume 6mg caffeine per kilogram of weight and you weigh 70kg, you need 420mg of caffeine - that's 4-6 cups of coffee, 10 cups of coke, or 3 Cadbury's chocolate bars - that's a lot of chocolate or drink sitting in your gut before a race. The International Olympic Committee has banned the use of large amounts of caffeine. A urine content of 12micrograms per millilitre is a positive test. An athlete would need to consume about 500mg caffeine over a short time period to get to that limit. Ethical issues considered, it's food for thought!

### Some Useless Information You'll Never Need

- No word in the English language rhymes with month.
- The average ear of corn has 800 kernels arranged in 16 rows.
- Barbie's measurements if she were life size: 39:23:33
- Charlie Brown's father was a barber.
- Ingrown toenails are hereditary.
- The longest place-name still in use is Taumatawhakatangihangakoauauotamateaturipukakapikimaunghoronukupokaiwenuakitanatahu, a New Zealand hill.
- A cat has 32 muscles in each ear.

- An ostrich's eye is bigger than its brain.
- A pregnant goldfish is called a twit.
- In England, the Speaker of the House is not allowed to speak.
- The microwave was invented after a researcher walked by a radar tube and a chocolate bar melted in his pocket.
- The longest one-syllable word in the English language is "screeched."
- The Beatles song "Dear Prudence" was written about Mia Farrow's sister, Prudence, when she wouldn't come out and play with Mia and the Beatles at a religious retreat in India.
- Spot, Data's cat on Star Trek: The Next Generation, was played by six different cats.
- No words in the English language rhyme with orange, silver or purple.
- It's impossible to sneeze with your eyes open.
- Cranberries are sorted for ripeness by bouncing them, a fully ripened cranberry can be dribbled like a basketball.
- The dot over the letter "i" is called a tittle.
- "Dreamt" is the only English word that ends in the letters "mt".
- Almonds are members of the peach family.
- There are only four words in the English language which end in "dous": tremendous, horrendous, stupendous and hazardous.

*Taken from Going Places Aug 1998*

**Dates to Remember**

**18 - 23 October 1998**  
Honda Masters Games Swim.  
Alice Springs, N.T.

**6 - 14 February 1999**  
New Zealand Masters Games  
Wanganui, New Zealand

**11 - 15 May 1999**  
AUSSI National Swim  
Darwin, N.T.

**16 - 24 October 1999**  
Pan Pacific Masters Swim Champ.  
Perth, Western Australia

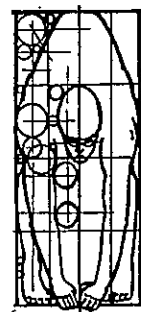
**25 Sept - 3 Oct 1999**  
Australian Masters Games  
Adelaide, S.A.

**March/April 2000**  
AUSSI National Swim  
Gladstone, Queensland

**27 July - 8 August 2000**  
FINA World Masters Swimming  
Championships  
Munich, Germany

**6-19 October 2002**  
World Masters Games  
Melbourne, Australia

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