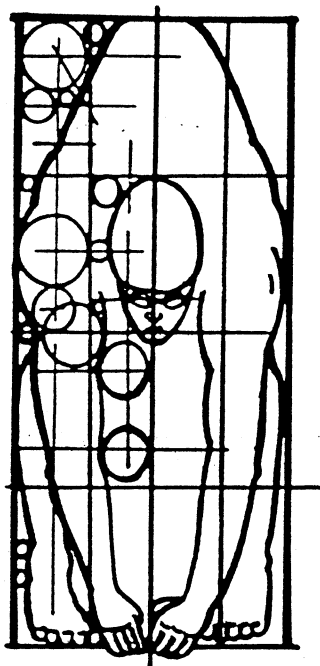




AUSTRALIAN MASTERS COACHES NEWSLETTER

VOLUME 1 NUMBER 6

NOVEMBER 1989

In this issue I had hoped to present a report from the half yearly council meeting, but it seems that no-one has been untouched by the pilot's dispute. The meeting has been rescheduled for Dec. 9th & 10th, so I will present this report in the Feb. issue instead.

The Second Australian Masters Games was hosted by Adelaide in the grip of Grand Prix fever. Unfortunately the highlight of the swimming component, the marathon swim, was halted mid-way due to the inclement weather. Unlike the Grand Prix, big dollars weren't riding on the backs of the competitors and the officials were able to look after the best interests of the swimmers.

While on the subject of marathon swimming, AUSSI'S doyen of the distance (Dick Campion) is featured in an article which appeared in Australia's specialty long distance magazine, Wide Water. You will find this on page 2 with subscription details, and I believe Wide Water's next issue carries a full story on the Adelaide swim.

As the sun is occasionally peeking through the Melbourne clouds reminding me that summer (fingers crossed) is meant to be here, I felt the proliferation of open water swims over summer need careful preparation by coaches and swimmers alike. Kay Cox's article on page 3 will help everyone to understand the nature of such events.

Time also to "Slip, Slop Slap" and an American article by Burwell Jones on page 18 gives skin care tips for the master swimmer.

Lynda Lehmann has kindly sent a transcript (see page 5) from a coaching seminar held in South Australia, and we begin a series of stretching articles on page 9. Of particular relevance to the Master's coach is an article on page 13 detailing the life cycles of adulthood and their implications to coaching.

Other items of interest include "Swimmer's Ear" (page 22), "Favourite Workouts" (page 24), a method of stroke evaluation (page 8), and a delightful tribute to the great Annette Kellerman has been reprinted for your enjoyment.

The newsletter now appears to have reached maturity due to the support of over 100 subscribers. However it has been running at a considerable loss and this, coupled with an increase in printing costs has forced me to increase the subscription fee to \$12.00. I believe this still represents good value and hope your renewed subscriptions reflect the same.

Thanks for all the encouragement and kind words, and may Santa fill your stockings with all the goodies you deserve.

ANITA KILLMIER

Troubled waters KO long-distance swimmers

Masters Games event ends in chaos

By TANYA LEWIS

The Second Australian Masters Games long swim at Port Noarlunga ended in chaos yesterday when several swimmers suffered the early stages of hypothermia.

The race was called off after only one swimmer had completed the 10km course.

After the Sea Rescue Squadron warned organisers of approaching strong northerly winds, race officials decided to abandon the combined 10km and 5km races at 1pm.

Organisers waited 15 minutes after they received the warning so that 48-year-old Victorian Dick Campion — who was less than a kilometre from the finish line — could complete the course.

His time was two hours, 48 minutes and 40 seconds.

Before the race was abandoned, 10 of the 44 veteran entrants in the combined fields either swam to shore or were ferried to the beach on surf rescue boats.

● PAGE 62: Stories, pictures and results

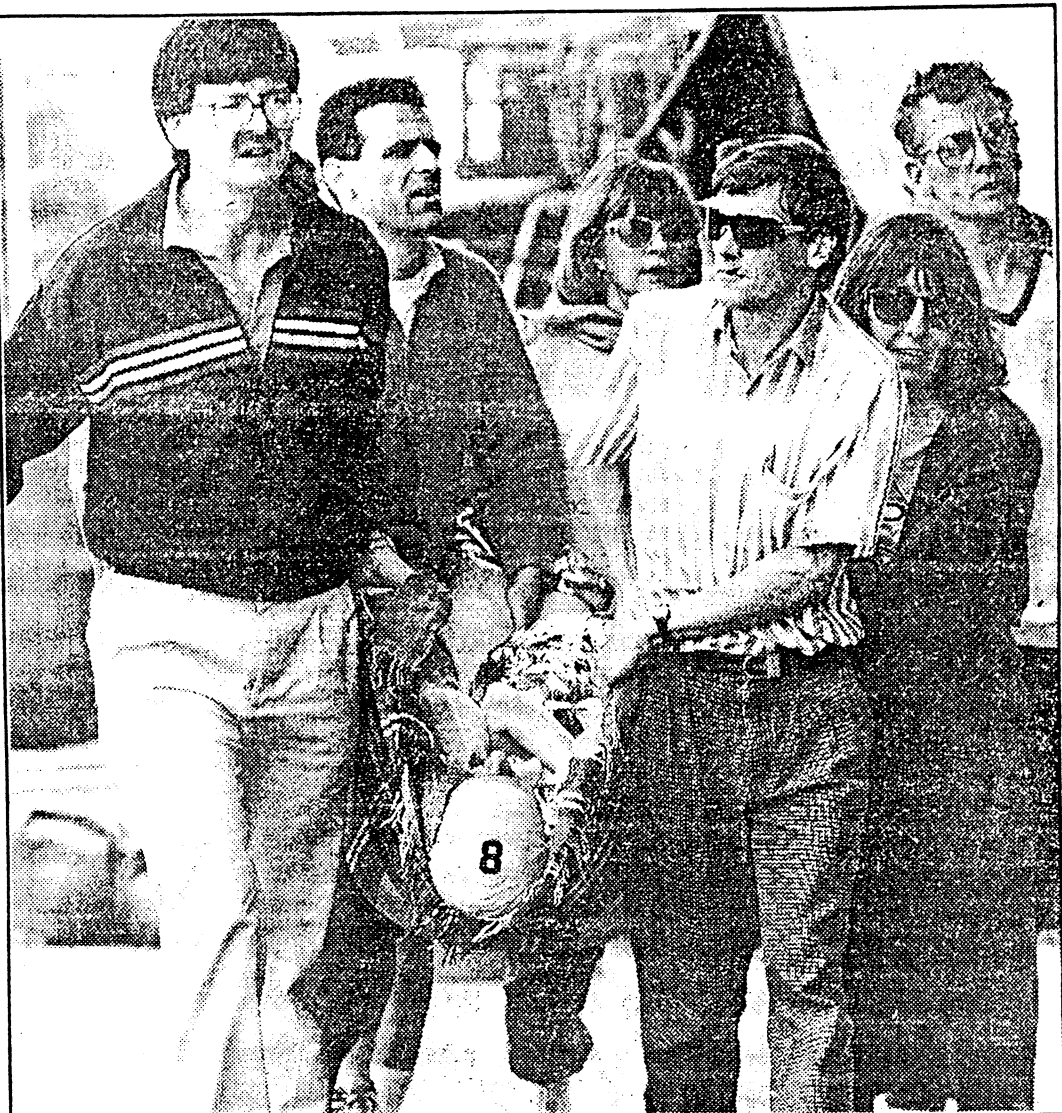
Another swimmer, Jeff Banks, of NSW, was disqualified after swimming just under 1½ hours, when judges said he had missed swimming around a set marker earlier in the race.

Race organiser Mr Kit Simons said yesterday the cancellation of the race had been a big disappointment for swimmers in the water.

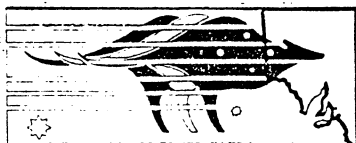
The 5km section had been completed before organisers made their ruling on conditions with nine of the 10 withdrawals in the event coming from that division.

Mr Simons said "about three" swimmers showed the initial signs of hypothermia or sub-normal body temperature.

"In the end there were a few swimmers suffering hypothermia, but fortunately we had the services of a couple of doctors," he said. "They were all treated on the



Canberra swimmer Peter Bell is rushed for treatment for hypothermia at Port Noarlunga yesterday.



The Second Australian Masters Games 1989

beach and it was a matter of just warming them up. They had the typical hypothermia symptom of being incoherent, but there wasn't anyone seriously affected."

Fatigued swimmers, who also suffered cramps, were treated either in a first aid tent on the

beach or inside the Port Noarlunga Life Saving Club rooms.

Mr Simons said no swimmers needed to be admitted to hospital.

Other medals in the 10km event were awarded on placings at the time the race was abandoned.

And at the Masters Mile in King William St yesterday, organisers encountered problems at the starting line when they received a flood of entries shortly before the opening race at 12.30pm. There were also problems at the finish, with no times available for runners because of the staggered starts for the various age divisions.



Entrant Libby Hassall recovers from the swim

REPRINTED FROM THE ADVERTISER

Despite the headlines, the Long Swim at the Second Australian Masters Games was extremely well run and did not end in the chaos suggested here. Swimmers were briefed weeks, days, and even minutes before the swim on conditions and what to expect. Organisers took the only responsible decision possible in ending the race due to poor weather conditions. Medical treatment was prompt and efficient and in events of this nature a small number of competitors will usually succumb to early stages of hypothermia.

Unfortunately sensationalist journalism such as this can only give the sport a bad name.

Hooray to all the organisers.

Dick Champion is President of AUSSI VIC., and past President of the World Marathon Swimmer's Association. He placed first in the 10km. swim in Adelaide. Article reprinted with permission from Wide Water magazine.

CAMPION THE CHAMPION

IF you think it's a grind swimming a 3km, a 5km and a 10km in the space of three weeks try this effort. Do the 32km Capri to Naples on a Sunday, stay around until the wee hours for the presentations, drive for more than a day back to London, fly out to Canada on the Thursday, tackle a 24-hour relay over the weekend, a 16km seven days later and a 40km the following weekend.

That was the gruelling regime Dick Champion completed in the mid 1970s. He is now 48, old enough to be living on memories and poring over his scrapbooks. Instead he is setting himself for his first shot at the English Channel.

In his heyday Dick was one of the world's best pro endurance performers but before that was a 1500m Games contender and before that an international class sprinter in freestyle and butterfly.

For a man of average height he has unusually broad shoulders which, combined with his trimness, poundage and agility suggest a middleweight boxer. But there are no dents in the proud prow of a nose which has steered him through kilometres of training and competition measureless to man in pools, rivers, dams, lakes and oceans throughout the world.

He is bouncy and zestful, laughs heartily, chuckles often and occasionally drops the words "terrific" and "bloody terrific".

Babysitter

For one who enjoys life and swimming so much it was apt that his aquatic activities began as fun. "My parents, who had a shop, started letting me go to the local pool when I was eight. It was in Stoke Newington, London's smallest borough. I used to go to the 30-yard pool every day after school and it became a 'babysitter' for my parents. On Saturdays I'd spend from 9am to evening there."

He joined the swim club, which later became the best in Britain, through a scheme which provided a free pass and membership for anyone who got through tests in resuscitation and time trials in the four strokes.

Dick dived for pennies and generally fooled around for a few years but when aged 16 everything changed: he met John Arnold. "He was a bloody terrific coach and soon had me doing butterfly. Next thing I knew I was off to the Commonwealth

Former Londoner DICK CAMPION knows our waterways better than most Aussies do. Since competing for Britain at the Perth Commonwealth Games in 1962 he has lived in Tasmania, Queensland and Victoria and become a record-breaking stalwart of the distance scene. He has also starred overseas but only now, in middle age, is he planning a crack at the Big One. PAT CONNELLY reports.

Games in Cardiff in 1958." He came fifth in the final of the 200 metre butterfly.

Arnold went to South Africa but another mentor proved equal to the task and Dick competed in the Great Britain titles, the 1960 Olympics in Rome, the 1962 European Games (dominated by the Dutch, coached by Australian Forbes Carlile) and went to Perth for the Commonwealth Games in the same year.

In Rome he made the 1500m freestyle final and boosted the Brits to a fourth in the four by 200m freestyle; in the Europeans at Leipzig, East Germany, he came third in the 1500; and at Perth he was part of the bronze medal winning team in the four by 200m relay.

He married back home and migrated here, settling in Hobart. "For six years I coached the Clarence swim club and started doing different swims, gradually getting into the longer stuff."

He and family moved to Queensland where after some time Dick and others were invited to swim off Egypt against the race which has done so well for so long in Channel and other endurance events. "But the Suez Canal was still a marine minefield so that was not on," he said.

An Ordeal in Canada

"A lot of people can take the cold water but the wind chill factor is the real problem, with the breeze ripping across on your arms when you're already wet and cold.

There was one swim in the Saguenay River in western Canada when I couldn't get a start because it was all organised but I acted as a trainer, a kind of minder, for an Argentinian boy.

I went in the boat to feed and encourage and talk to him but we lasted all of 59 minutes. The race started at six o'clock and at a minute to seven he had gone in the head. He suddenly began swimming in a tight circle.

"Are you all right?" I said. "Yes, Dick, I'm okay, I'm all right," he replied but he kept swimming in tight circles. So I touch-



Dick Champion in his prime. Now he's got his second wind.

"We finally got away on the world circuit, did the Capri to Naples then off to western Canada and the Letouch swim. It's over a one-third mile course and involves a two-person relay. They fire a cannon at 3pm Saturday to start and finish with another cannon exactly a day later. The pair who do the most circuits wins. We came fifth." In the next fortnight he did the 16km Laval and 40km Lake St John swims.

Back in Australia he kept fit, went to Hobart and in 1975 tackled the 34km Derwent River swim, cutting one hour 35 minutes off the time recorded by the great Des Renford. Dick set out on the world beat again, came sixth best pro for that year and next year did it all again.

He still swims five mornings a week, will joust in the second Australian Masters titles in Adelaide on October 15, 16 and 17 and has his sights on the Channel.

ed him to stop him but he kept going. We had to put the boat in his path but he swam into it. Before I could grab him he went under the water and I thought "I'll give him 30 seconds and if he doesn't surface I'll go down for him."

Clothes were being reefed off but he bobbed up face down and we pulled him out. He was gasping for air and I sort of sat there cuddling him. You don't want a vicious heat but we had to keep the breeze off him.

That's how hypothermia can hit you. One minute you're okay; the next minute it's as if someone has given you a lift under the ear."

— Dick Champion

KEEP WIDE WATER GOING

Send annual subscription of \$14 to PO Box 19, Nunawading 3131. Single copies \$3.50, \$14 a year. Stories and photos welcome but mark envelopes with pictures PHOTOS INSIDE.

MARATHON SWIM - PRE EVENT PREPARATION CHECKLIST

When setting out on a long swim the question any competitor asks themselves is "will I make the distance?" What we really should be asking is "how well will we make the distance?" The achievement should not be the fact that you survived the 5 or 10Km swim, but rather the satisfaction should be in knowing that during the preparation and training you have gained many benefits healthwise and performance wise and in self confidence. In fact when doing this, the swim should almost become superfluous. This is the sign of good preparation. However, a more objective checklist is provided below.

PREPARATION CHECKLIST

1. Have a full medical checkup. If possible, one that includes a stress test especially if over 45years.
2. Organise your support crew and make sure they know what their role is under all circumstances.
3. Start training at least three months prior to the event, making sure you gradually increase distance and intensity.
 - . Get out into open water as often as you can and still maintain the quality of your training.
 - . Train with others.
 - . Train the distance you want to swim non-stop.
 - . Include drink and food stops in your training.

Suggested drinks - water

- weak electrolyte replacement
- 'maximum' carbohydrate fluid replacement available health food stores. Have some sugar for energy and small amounts of salt.

. Try the distance (or close to) at least once before the swim.

. The last 48 hours before the event should be to store energy so these should be rest days.

4. Take precaution for cold water

You will always lose heat to the water if it is below body temperature 37 degrees celcius.

To stop hypothermia, a condition where core temperature drops by more than 2 degrees celcius, you must either insulate your body or produce enough heat by swimming to offset the heat loss. Some people have more natural insulation i.e. body fat than others and for once these people are at an advantage. Other ways to improve insulation (i.e. warmth in cold water) are :

- a. bathing cap or two
- b. layer of grease or woolfat
- c. lycra suit
- d. wetsuit

(a) - (c) are within the rules, (d) is not, unless not swimming for a prize.

The other controls you have are to be well trained and at a speed right for you. This takes practice and experience under difficult conditions.

Wind chill is the greatest problem and if a breeze is blowing, the problem will be worse - try to keep under the water as much as possible.

Train in water the same temperature as you will be competing in. About three weeks is needed for the adjustment.

5. DIET

It is not what you eat the day before but the months before that will determine your performance. Make sure you have a balanced and adequate diet and replace nutrients after heavy workouts.

A higher complex carbohydrate diet in the last week will provide a good energy resource, but don't overload or forget other nutrients. Keep up fluid intake.

6. STINGERS

Unfortunately, we do have 'stingers' along our Western coastline. They prove more troublesome to some people than others. Despite the pain of the sting, they may cause an allergy reaction in some people. It is worth finding out before the competition day!

There are four methods of protection:

- (a) petroleum jelly or woolfat
- (b) lycra suit
- (c) wetsuit
- (d) "stinger suit" - made out of two pairs of panty hose with the feet cut out of both pairs. One pair is worn normally under or on top of bathers, and the other pair with a hole cut out of the crotch for the head are worn inverted with the arms through the legs. This applies to the non toxic marine stinger (blue bottle found on the West Coast).

Treatment

Vinegar liberally applied and remove the stinger
Antihistamine treatment may be necessary in extreme cases.

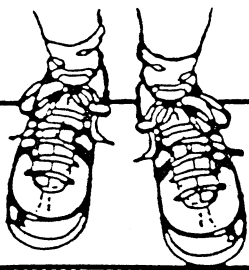
7. Attention to the course and your Race Plan

- (a) find out the exact course
- (b) swim the course or parts of it before the day
- (c) Plan when to take your drinks or rests
- (d) Work out your rate of swimming and landmarks along the way
- (e) Let your support crew know exactly what you want and a system of signals to communicate
- (f) Have all your clothing, food, first aid etc organised well before the event and in the appropriate place

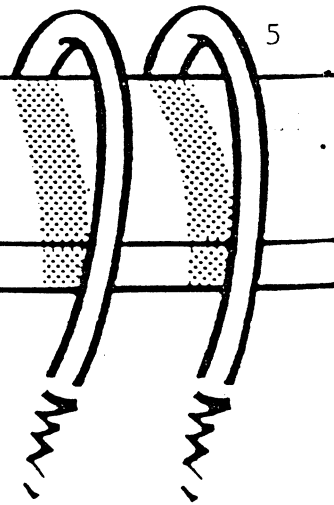
KAY COX

MARCH 1989

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COACHING SEMINAR TRANSCRIPT - S.A..



This is the second article in a series of transcripts from the Coaching Seminar held by the S.A. branch in May 1987.

SPEAKER: Gail Corrin (Sports Scientist, Co-ordinator Adelaide Aquatic Centre Gym and Corporate Fitness Programmes).

Gail was trained in England and has been in Australia for 2 years. Sports Scientists have been produced in England and Europe for the past 15 years, whereas the first graduates here are due out this year (1987).

Sport Science is applying the science of sport to the art of coaching. The Sports scientist qualifies and quantifies what the coach is doing so that nothing is left to chance. Areas such as sports medicine, bio-mechanics, physiology, psychological appraisal, exercise physiology, nutrition and more, are covered by the sport science banner- a kind of Jack-of-all-trades.

Most information available is directed toward training young children. Go to the library to look for information on training adults and you'll be a long time there - there simply is'nt any.

Mechanics of improving fitness and performance are going to be basically the same regardless of age but there will be some limitations when dealing with an older, and aging population.

The Aussie coach has a very difficult task when you think about the range in past experience and ability, the range in health, age and the time available to train.

The problem the Aussie coach has to deal with is much, much harder than the average junior squad coach faces. It is good that this has been recognized and that there is separate accreditation for Aussie coaches.

There are many physiological variables involved in where people when they age and how these affect your training methods need to be looked at. It is widely known that exercise is good for your health: It has also been shown that exercise can slow down the aging process.

Some of these processes that are of interest to us are :-

- 1) body composition - the average male will increase in body weight until they are about 45 (earlier for women), then their body weight will go down but their percentage of body fat will increase. Exercise can slow down this trend.
- 2) muscular strength - starts to decline in the early 40's
- 3) there is evidence to suggest that after about the age of 35 your ability to tolerate lactic acid decreases i.e. you won't be able to sprint and perform anaerobic work as well as when you are younger.
- 4) lung capacity starts to decline from about the age of 30.

It has been reported that an active person can slow down this decline by about 3 times. We can slow down the aging process (whether it is as much as 3 times ?) by taking regular exercise.

Older people can be trained - there is no doubt of that - but they won't adapt to training as readily as a younger person. They won't regain what they had when they were 20, but an older person can improve their fitness with regular exercise.

Studies in the U.S. (on Master's swimming) have shown that a person's 25 year old best time will have slowed down to about 89% of that time by the time they are 35 (providing training at a suitable level has been maintained), at 45 that time has slowed to 83% and by the late 50's it is unlikely that they would be able to swim at 75% of that time.

We need to set realistic goals. I have often seen AUSSI swimmers get into the water for the first time in a long while and go about it as if they were teenagers in the prime of their swimming careers.

Aging is a fact that we can't really do much about. If sport scientists are to help AUSSI swimmers then i think that the first area would be in fitness testing. Fitness tests can be done here at the Adelaide Aquatic Centre. Basically we'd be looking at areas such as flexibility, strength and power, lung capacity, aerobic capacity, blood pressure, body composition plus some specific swimming skills and heart rate recovery.

There are a couple of reasons why fitness testing should become a part of the AUSSI programme - 1) it can be used as a yardstick for improvement. 2) AUSSI swimmers can be compared with the average population (which could be used as a promotional tool, i.e. AUSSI swimmers show these.....attributes to be above average from the general population). 3) Fitness testing can be used as a screening device where any problems may show up.

Aging process related to training methods:-

- 1) A new member coming along for the first time needs to have had a medical clearance that is fairly recent.
- 2) Flexibility decreases as you get older. You need to pay a lot of attention to warm up exercises. Stretching and warm up mobilisation- e.g. get them to do a couple of laps to warm up, then do some light stretching exercises in the water. Teach them to stretch properly.
- 3) Biomechanics - stroke technique is well documented, however your older swimmer may have lost some of the flexibility and or strength to do stereotyped stroke patterns. Stroke adaptations may need to be made to avoid injury problems.

INJURIES

Breastroker's knee (straining medial ligament), ankle pain (mainly backstroker's over stretching ankle on kick), shoulder pain (the most common - usually caused by inflammation of the tendon particularly when the swimmer has had a break and comes

back into to high a level programme - watch out for AUSSIS'S.

Other problems - muscular imbalance e.g. if the pectoral muscles become stronger and pull the muscles forward (freestylers, butterflyers and breaststrokeers - can play a major part in shoulder problems).

Excessive use of hand paddles have been shown to cause shoulder problems. Hand entry is very important: the inside edge should slide into the water first and the hand should be relatively deep before the catch is made. Never enter the hand flat so the first movement is a push down - this places great stress on the shoulders.

WEIGHT TRAINING

Strength training does have a bad name in swimming as the development of huge muscle bulk has a detrimental effect on swimming performance. Gym work must be used properly if it is to be beneficial to swimmers. The exercises should be very specific to swimming, building up strength in the muscle group used (as well as correcting any posture problems if needed) and moving the limbs at the speed they would be moving through the water. Explosive work (e.g. medicine ball throwing) can be helpful to your programme. There is a lot that can be done in the gym that can be beneficial to performance. (Gail then went on to demonstrate a few simple exercises that can help typical swimmer's posture) Lat Pulldowns, general back work, etc.. Avoid shoulder presses , bicep curls and possibly bench presses if already strong in the chest area.

OVERTRAINING

This area needs to be watched- Look for telltale signs. Training is a progressive adaptation to stress. If you overtrain you fail to adapt. Causes:- Too much training, poor nutrition, lack of sleep, generally trying to pack too much into one life. Symptoms:- Weight loss, soreness in the muscles and joints, nausea, head colds, poor performance, elevated resting heart rate. Adults may be even more likely to suffer from over training than younger athletes because of their zeal to get into their new lifestyle and a higher level of motivation.

HEART RATES IN TRAINING

In theory using your heart rate to train by is a very sensible procedure. The adult maximum heart rate of thumb ($220 - \text{age}$) can be out by as much as 20 - 30 beats per minute. It is important for the coach to educate their swimmers on the use of the heart rate and to get them to learn to listen to their own body. The Karvonen training heart rate chart is a good guide to use as a starting point in understanding the intensity each individual needs to work at to get a training effect. The fitter the person the faster the recovery rate. The heart rate will drop down from exercise level very quickly in a fit person; the older you get the slower this recovery rate. Pool temperature has a very real bearing on heart rates. Warm pools, 29 - 33°C elevate the heart rate and slow down the recovery. If heart rates are being used as a guide in training the coach must take all of these factors into

consideration when setting the programme.

LACTIC ACID TOLERANCE

As you get older your ability to tolerate lactic acid decreases. How much sprint work and anaerobic threshold work you give your swimmers will depend upon their age, background and ability. (The older, the more aerobic in nature the training should be.

Sprinting and sprint training can cause a lot of stress. How much sprinting should an older person do? Maximum effort or maximum heart rate work should be avoided by older people or people with medical conditions. (There was a lot of discussion around the room on this topic, mostly around the main type of race that we do in AUSSI competitions and the wisdom of asking older people to do 50m sprints, or if, as an organization, we should be encouraging more distance swimming for the older members.)

Stroke Evaluation

By John Leonard

One way to simplify stroke analysis is to recognize that a common characteristic of all effective strokes, is that they have changes in all three stroke dimensions: length, width and depth. If we focus on the hand and the foot, it is easy to follow these changes in each stroke. In doing so, we can ensure that we are following basic movement patterns for effective propulsion. When we add acceleration to the movement pattern, we have our basic propulsion mechanism in place.

Let's look at the three dimensions and see how you can evaluate them in the water.

Length. The length of the stroke is defined by the point where the hand enters the water, and the point where it exits the water. If we were looking at the body while swimming freestyle, the length of the stroke would be defined by the hand entering considerably in front of the shoulder and exiting back near the hip. The problem of length in freestyle can then be defined as "short in front, or short in back, or too long an extension in front." If you want to analyze your stroke pattern, you look for good extension in front, and good length in back ("thumb your thigh").

Width. The width dimension in strokes can be seen as how far from the center line of the body the hand or foot travels. Draw an imaginary line down the center of the body. The wider the stroke, the further the hand travels outward from that center line.

Depth. The depth dimension is seen in relation to the surface of water. This can be deep or shallow in each phase of the stroke.

Characteristic of good strokes is a change in each dimension during the kick and pull pattern of the stroke.

This means that the hand constantly is changing length, width and depth during its pull pattern. If any one dimension is not changing, the hand and forearm are not able to properly enact principles of lift and drag and therefore, propulsion. In practical terms, watch what you are doing in the water. Work to move your hand from shallow-to-deep-to-shallow, and have width changes throughout the stroke.

Swimmers will lose either the width or depth dimension to their stroke as they become fatigued. Learning to check the three dimensions of your stroke quickly and efficiently during practice is an ex-

cellent way to modify your stroke during a hard set. One advantage Masters athletes usually have is the ability to be an objective observer of their own needs and capacities. Using the concepts of length, width and depth, you can make instant analyses of your stroke and modify accordingly. And, having a coach perform some of the same functions for you, can be an invaluable aid in suggesting remedies and drills that will assist in the correction of chronic faults.



Stretching For Speed

By Bob Prichard
Director, Somax Posture and Sports Clinic

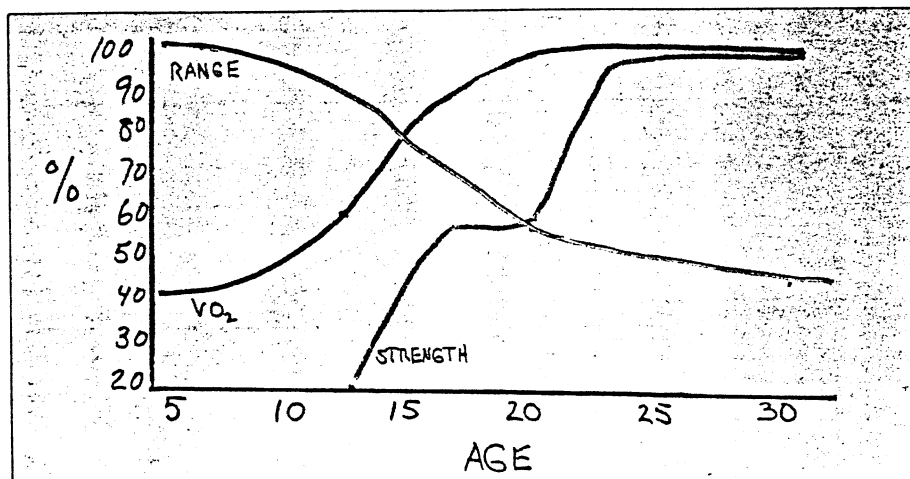


Figure 1

We all have something we'd like to improve in our swimming. For some of us, it's our mechanics. For others, it's endurance. Some would like to develop a 6-beat kick. Others would like to get rid of a nagging injury. And for those of us who compete—we want more speed!

After videotaping and analyzing more than 1,500 swimmers (from age group, to Masters, to gold medal winners) we have come to a surprising conclusion. The cause of nearly all persistent problems in swimming—whether in mechanics, endurance, coordination, injuries or just plain slowness—is poor range-of-motion.

In a series of five articles we will describe the important ranges, how to measure them, what motions they control and how to stretch to increase them. If you follow this series and increase the ranges that are low, you will swim faster. That's why we call this series—Stretching for Speed.

Range of Motion

Range is so important that just by looking at a swimmer's list of ranges, we can tell what problems he/she has and what stroke or distance he/she swims best. Let me give you an example.

While evaluating the Cal swim team

last year, we found that Matt Biondi had 60° more range in shoulder rotation on his right side than any other sprinter on the team. On his left side, his range is 60° less than his right, more like the other swimmers on the team. Matt also did not expand fully in his abdomen while breathing. Therefore, we predicted that Matt would be slower on his left side and slower at long distances. And, in fact, this proved to be true. Matt's velocity was measured on the right side at 2.50 meters/second, but on the left side at only 2.25 meters/second. And he is slower at longer distances, where breathing is more important.

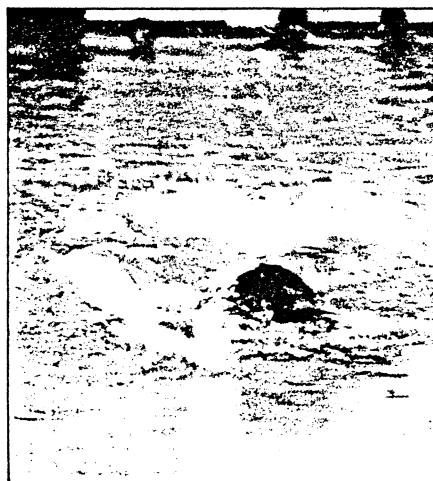


Figure 2

Why is range so crucial to speed in swimming? Simply because swimming speed is dependent on form: good form requires tremendous range. Picture the great swimmers of our time—Spitz, Meagher, Gross—and you see swimmers with tremendous flexibility. In fact, range is so crucial to speed that we had one swimmer at our clinic who dropped her 100 yard freestyle time from 64. seconds to 61.1 seconds just by increasing breathing range alone!

The shame of it is, swimmers lose range just as they are gaining in strength and endurance—as you can see in *Figure 1*. From age 5 to age 24, a swimmer will lose 50% in range. Mind you, this doesn't have to be every range, it only needs to be one that is crucial to swimming.

While some will see this decline in range as a problem, we see it as an opportunity for those who measure and increase their ranges. They will swim faster and reduce the chance of injury.

The Arms—AIR

Abduction with internal rotation (AIR). To abduct means to move away from the body. It's a mouthful, but it is the most critical range in swimming. It determines two of the most important parts of your stroke—the entry and the outswipe. Low AIR is also a major cause of shoul-

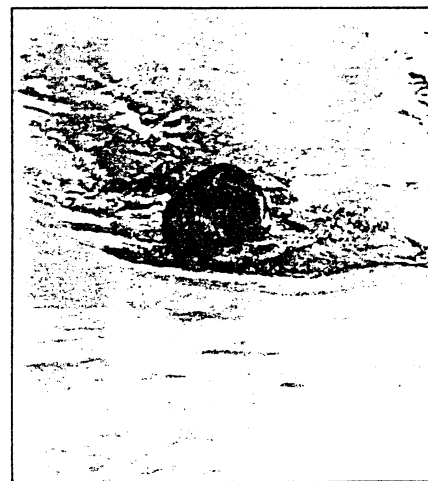


Figure 3

Stretching for Speed



Figure 4

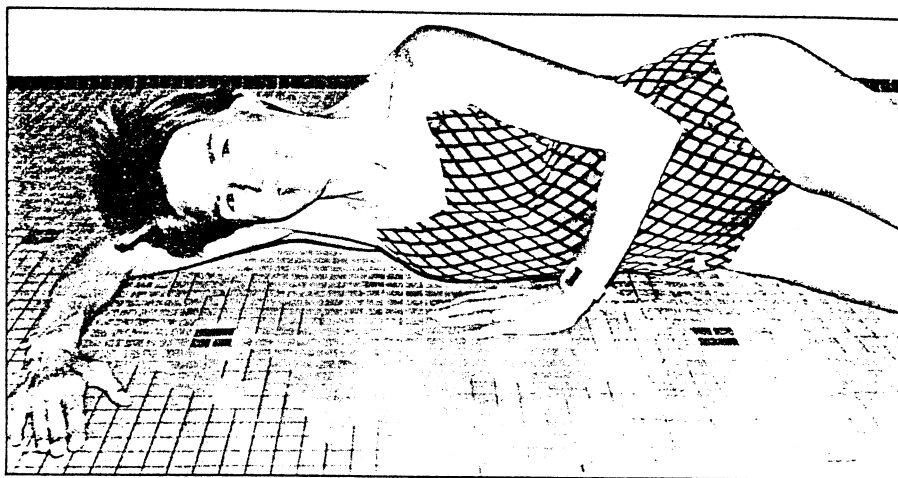


Figure 5

der tendinitis. In fact, if you have problems keeping your elbow high, maintaining a vertical thumb-down entry, or tendinitis in the top of your shoulder, you can bet you have low AIR.

Figure 2 shows a typical problem caused by low AIR—low elbow during recovery and flat hand on entry. Figure 3 shows the same problem on backstroke, this time an entry that is too wide. The same would be true with butterfly—a hand entry that is too wide.

Measuring the Range

Figure 4 shows the swimmer with low AIR—a range of only 135°, compared to the 180° we consider ideal. To measure AIR, we measure the angle between the arm and the shoulder blade—not the body! Often swimmers will overcome tightness between the shoulder blade and arm by abducting the shoulder blade, but this is always less efficient.

Swimmers with low AIR will nearly always develop tendinitis on the top of their shoulders, as these muscles must over-work to overcome the tightness between the arm and shoulder blade.

Improving Your Range

To improve AIR you need to stretch the muscles between the arms and shoulder blades. Figure 5 shows you how to increase AIR on your own. Lying on your side, place your arm on the floor as shown, forearm at 90°, palm down. Slowly let your head down, feeling the muscles between your arm and shoulder blade stretch. Figure 6 shows the same stretch from the back.

If you like, you can also stretch with a friend (Figure 7). Have your friend stabilize your shoulder blade with his or her knee. As your partner pushes on your elbow, resist the movement, then relax. The combination of contracting and

relaxing your muscles will help you stretch.

How to Stretch

It is very important that when you stretch, you take it slowly. It seems the tighter people are, the more they rush stretching—and then they get injured. If you have only 135° AIR and your goal is 180°, give yourself a year to achieve it—not one week! Changing muscles takes time, whether it's building strength, endurance or range. *You should not feel pain as you stretch. If you do, stop immediately.* You're pushing too hard. Take your time and go slowly. If you already have problems or questions about your shoulder (such as pain, tendinitis or a past history of dislocation), *consult your doctor before starting any stretching program.*

While stretching to increase your AIR, I recommend stretching one side, then

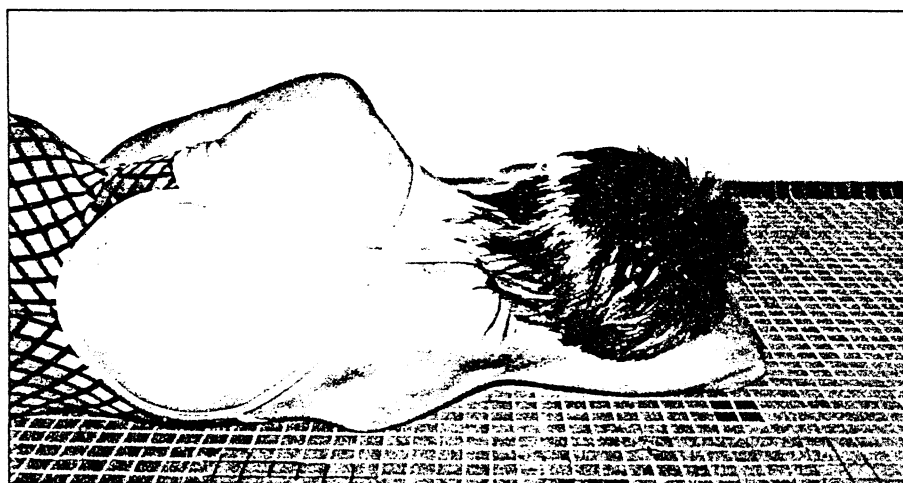


Figure 6



Figure 7

Stretching for Speed

the other. Alternate sides, three times during your stretch workout. Spend at least two minutes on each side—give your muscles a chance to relax and lengthen.

I also recommend that you spend just as much time stretching as you do swimming. To confine your stretching to only a ten or fifteen minute period before you swim doesn't make sense if you want to build range. You wouldn't lift weights or work out on the swim bench just before swimming to build strength, would you? So why treat stretching any differently than strength? After all, range may prove to be more important to speed than strength. ("Little" Janet Evans didn't set two new world records on strength alone—not when she weighed only 93 lbs.!)

So set aside 30 minutes to an hour every day to build your range. For the most part, these stretches can be done while reading, watching television or listening to music.

When you do stretch at the pool, warm up first. Swim a few laps, then stretch to increase your AIR (*Figure 8*). If you're serious about increasing your range, I recommend that you measure and record your range each week. At SOMAX, we publish Stretch Cards to do just that. They are very popular with the swim teams that use them.

Remember that from now on you're *building* range—just like you *build* strength and endurance. Stretching is how you build range, just like distance is how you build endurance. Both take time—but you'll swim faster!

If Stretching Doesn't Work

Now, what if you stretch diligently for several weeks, but don't get *any* looser? Does it mean that you're going to be tight forever? No. It may simply mean that your range problem is due to microfibroses in the connective tissue. Microfibroses are small fibers that bind your muscles together, so they don't lengthen when you stretch. Microfibroses can form as a result of old injuries, over-use, or even chronic tension.

These microfibrils can be released. We did that with our swimmer here and you can see the result in *Figure 9*, where her range on the right side increased from 135° to 145°. Notice again, that



Figure 8



Figure 9

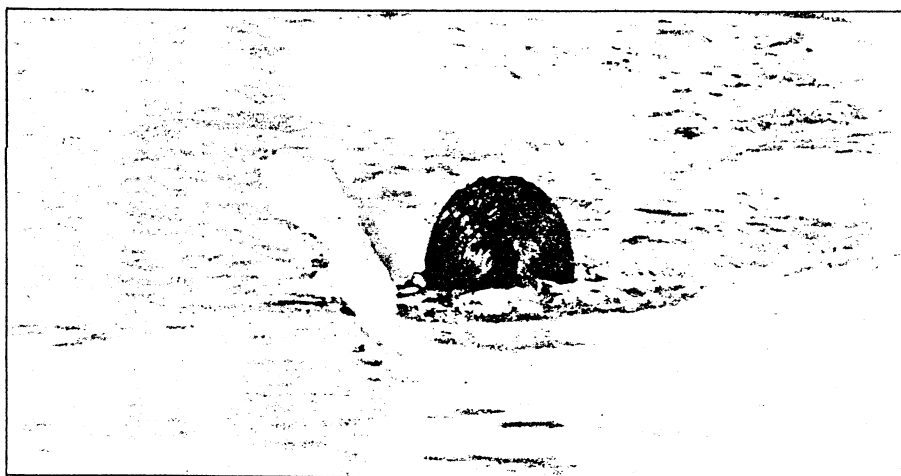


Figure 10

when we measure it's always from the shoulder blade to the arm—not the arm to the trunk. If you compare the arm to the trunk, it appears she has improved more, which is not true.

The Results

In *Figure 10*, you can see the change in our swimmer's entry. Her elbow is high and her hand slices through the water.

This is important because flat hand entry slows you down by creating drag. Because her *arm* is internally rotated at entry—and not just her hand—her arms will outsweep automatically as she pulls down with her latissimus muscles. Outsweep—what it is, why it's important and how to improve it—is the subject of our next article on Stretching for Speed. ∞

12.
STRETCHING, THE VIDEO featuring Bob Anderson, is based on his best selling book **STRETCHING**.

By popular demand, Bob and Jean Anderson bring you **STRETCHING, THE VIDEO**. It features Bob Anderson and is a video that offers people daily stretching with a simple, safe format. The 60 minute video is organized into six comfortably paced sections: a brief introduction, stretches for the neck and back, then legs and hips, followed by feet and then arms and shoulders. The tape concludes with a 14 minute overall series of stretches that can be followed for everyday fitness or for a specific sport or activity. **STRETCHING, THE VIDEO** is appropriate for people of all ages and interests.

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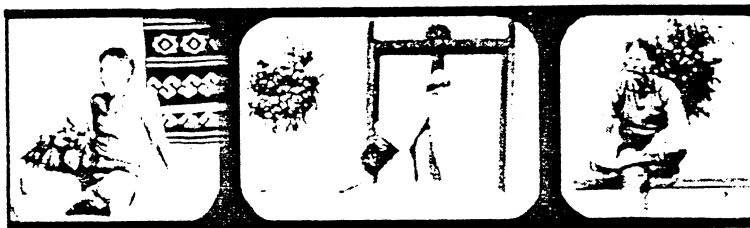
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LIFE CYCLES OF ADULTHOOD

Article by Ron Chlasta who coaches Peninsula Covenant Aquatic Masters in Redwood City, Ca. Ron has an M.A. in Student Personnel Administration and is currently finishing his Master of Divinity Degree at Fuller Theological Seminary - Pasadena, Ca.

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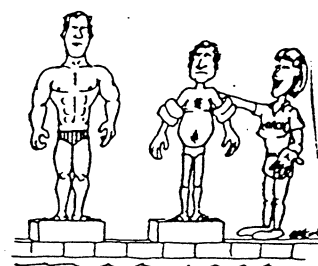
As masters coaches we are given the unique opportunity of being involved with adult athletes on various stages of the life cycle. Coaches are not only involved in designing programs that enhance the fitness level of the athlete but they get involved in the athletes daily lives. In essence our masters program is a small community of individuals that we work with in on-going relationships. Adult athletes talk to their coaches about marriage and divorces, health and illness, longevity, occupation, and family. We celebrate and agonize with our athletes as they disclose information to us about the adventures and routines of their daily lives.

It is helpful as a coach to have an understanding of the adult life cycle. This helps us understand the issues our swimmers are dealing with as they participate in the program. Immediately we observe that every life is idiosyncratic, disorderly and variegated. The differences are far more marked than the similarities. Yet even the most disparate lives are governed by the same underlying order - a sequence of eras and development periods. By understanding these eras we will be enabled to find shape and meaning in any individual life course. This can be done without reducing the raw material (the wonderfully various details of each single individual's existence) to a simple set of categories or prescriptions for normality.

The life cycle evolves through a sequence of eras each lasting roughly 25 years. The eras are partially overlapping, so a new one is getting under way as the previous one is being terminated.

The sequence follows:-

1. Childhood and adolescence: 0-22
2. Early Adulthood: 17-25
3. Middle Adulthood: 40-65
4. Late Adulthood: 60-onward



EARLY ADULthood

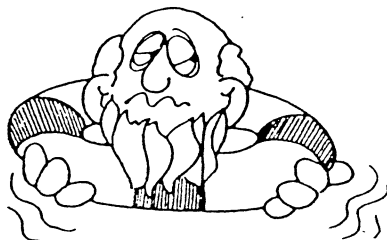
During the twenties an individual usually forms a preliminary adult identity. (S)he makes the first major choices such as marriage, occupations, residence, and style of living that define the places in the adult world. At this time the individual pays his/her dues - begetting and raising children, maintaining a marriage and providing for the family which (s)he is most fully involved with. This area is characterized by fullness of energy, capability and potential, as well as external pressure. Personal drives and societal requirements are intermeshed, and at some times in stark contradiction. A year ago I became extremely frustrated because swimmers in my 25-29 age group were very inconsistent in their participation. By understanding the demands placed on them as a coach I am now able to try to create a training environment that is more welcoming, and less draining by not placing inappropriate and stressful demands on their complicated lifestyle.

MIDDLE ADULthood

This is the most controversial because there is not a single event that occurs universally as around 40 with enough impact to shake the foundations of life. This era cannot really be given the attention it deserves in such a short article. Most people undergo a mid-life change in style of work and living. Early adulthood produces qualities of strength, quickness, endurance, and output. Middle adulthood is a season when other qualities ripen: wisdom, breadth of perspective, unsentimental compassion. At their best, new roles have great personal and social value. At worst, they are means of saving face and keeping busy. The Mid-Life transition may be rather mild, but when it involves considerable turmoil and disruption we speak of a mid-life crisis.

The individual at mid-life is suffering some loss of youthful vitality. Although, not close to death or undergoing severe bodily decline, (s)he typically experiences these changes as a fundamental threat. The main tasks are to make crucial choices which give these meaning and commitment, and build a life structure around them.

For an athlete this has implications. Consider the professional athlete who gives up playing ball at 30 has another ten years of early adulthood in which to establish him/herself in a new occupation or elsewhere in the sport. But the one who lingers until the late thirties must go through a difficult occupational change even as (s)he is entering the stressful period of mid-life transition. Those who, for a variety of internal and external reasons, cannot alter their mode of work, burn out and live a highly marginal existence.



LATE ADULTHOOD

Late adulthood is an era of decline as well as an opportunity for development. Erickson's final ego stage occurs in this era. It begins at about 60 and the key polarity is integrity vs. despair. The individual entering this era feels that (s)he has completed the major part - perhaps all - of his/her life's work. (S)he must arrive at some appraisal of life. The task is to gain a sense of integrity - not simply of achievement - but of life as a whole. If (s)he succeeds in this, (s)he can live without bitterness or despair during late adulthood. Finding meaning and value in life, however imperfect, (s)he can come to terms with death.

In late adulthood, the individual no longer occupies the centre stage of the world. The heavy responsibilities of middle adulthood are reduced and (s)he must live in a changed relationship with society and him/herself. This can be traumatic as the individual moves out of centre stage. The individual receives less recognition and less authority and power. This generation is no longer the dominate one and at best can be modestly helpful to the grown children.

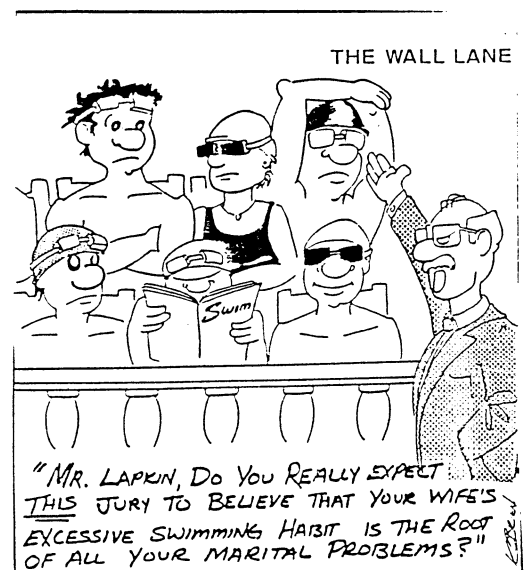
For our senior swimmers we provide a context for affirmation, recognition, and social interaction. The true champions in our sport of masters swimming are those who participate well into late adulthood. One of the greatest challenges we face as coaches is designing a program for our seniors that is challenging and that helps them understand themselves better as they deal with the tasks of this development level.

It is clear! As coaches of adult programs, we must do a great deal to support individual development in adulthood. As coaches we enable our swimmers to achieve goals and accomplish satisfying performances. At the same time if we begin to have an understanding their daily struggle through these cycles and perhaps help motivate them more successfully and smoothly.

TIT BITS

When driving home from those AUSSI 'Stubby Stakes' or the Social events of the National Swim, remember that drinking and driving don't mix. We don't want to have to print your comments to your insurance company like those listed below.

1. "I collided with a stationary truck coming the other way".
2. "The guy was all over the road, I had to swerve a number of times before I hit him".
3. "I told the police that I was not injured, but on removing my hat I found that I had a fractured skull".
4. "I knocked over a man. He admitted that it was his fault as he had been run over before".



A TRIBUTE TO ANNETTE KELLERMAN

16



Marilyn Dooley,
Education Coordinator,
National Film and
Sound Archive.

Hollywood has never shirked from presenting its own view of history. So it was not surprising; that when Esther Williams made a spectacular splash as the MILLION DOLLAR MERMAID (1952), popular belief had it that this was the beginning of synchronized swimming. The film is, in fact, Hollywood's homage to Australia's aquatic wonder woman — Annette Kellerman. Throughout her long life of 89 years, Annette was celebrated as a swimming champion, pioneer of physical culture, vaudeville artiste, and film star.

Annette Kellerman was born to musical parents on 6th July 1886 at Marrickville, Sydney, the second of four children. As a child of six she wore leg braces which she was able to abandon after she began swimming at the Cavill Baths. Her enthusiasm for the water and her persistence in learning the trudgen and single overarm strokes had her winning races and giving diving displays by the time she was 15. Her coaches included stunt man Percy Cavill, film star Snowy Baker, and Olympic swimmer Freddy Lane.

By 1902 Annette held the New South Wales records for the ladies 100 yards swim at 1 minute 22 seconds, and the mile at 33 minutes 41 seconds. (Some reports say 33 minutes 49 seconds.) The Australian Dictionary of Biography states that by 1905, Annette was the "holder of all the world's 'records' for ladies' swimming".

She was a swimming sensation and a born show-woman. When her family moved to Melbourne, and while still a school girl, she gave swimming and diving demonstrations at the Main Melbourne Baths, appeared at the Aquarium Exhibition in a glass tank full of fish, and performed a mermaid act at the amusement park Princes Court, on the site of the present Victorian Arts Centre. While still in Melbourne she began seriously training in the Yarra River for a long distance swim that would bring her international recognition.

Accompanied by her father, Annette journeyed to England, where on 30th June, 1905 she swam the Thames from Putney Bridge to Blackwell Pier; a distance of over 13 miles (21 kilometres) in 3 hours 54 minutes. Then, in August, sponsored by the *London Daily Mirror*, Annette made the first of three assaults on the English Channel (about 22 miles across — 36 kilometres). She is credited with being the first woman ever to attempt such a feat.

Although unsuccessful, Annette seems to have been philosophical: "I had the endurance" she said, "but not the brute

strength". On her third attempt, she had swum more than three-quarters of the distance after having been in the water for nearly 11 hours. Annette undertook the channel swims covered in dugong oil and wearing a one-piece racing suit with big armholes, of the type usually worn by men and boys in Australian swimming. She drank beef tea before she started, and during the race she drank from a child's feeding bottle.

In other long-distance events, she swam third as the only woman competitor in a seven-mile race down the Seine in France on 10th September, 1905. The following year she beat Baroness Isa Cescu in a 22 mile (36 kilometre) challenge swim down the Danube.

Annette Kellerman's epic and often risky swims, together with her effervescent personality, made her a favourite with both the public and the press. So it is little wonder that she made headlines in 1907 when, just as she was about to embark on a long distance swim from Charleston Bridge to Boston Light in the United States, she was arrested for wearing a one-piece bathing suit which revealed her legs. She made a compromise of stitching stockings onto her suit, but certainly did not resort to the more "acceptable" neck-to-knee costumes of the day. She argued that such suits were both ridiculous and dangerous in the water and wittily remarked: "The bathing girl of our popular beaches . . . (wears) shoes, stockings and bloomers, skirts and corsets and a dinky little cap: all she (needs is) a pair of rubbers, and an umbrella, and she could (go) anywhere in any weather".

It was also not surprising, given her previous theatrical performances in Australia and the popularity of vaudeville, that Annette would go onto the stage when she retired from long-distance swimming. Or rather, she went onto the stage into a glass water tank with her vaudeville acts showcasing spectacular aquatic sequences and underwater ballets. Her many talents lent themselves to a varied repertoire which included swimming, diving and underwater ballets, wire walking, aerobatics, ballet dancing in front of mirrors, male impersonations and songs. By her sister's telling, the finest and most colourful of all Annette's vaudeville tank performances saw her wearing a spangled mermaid tail, and miming a fairy story. The act required her to hold her breath for 3 minutes 27 seconds at a time.

Hollywood beckoned and Annette Kellerman became the first Australian to have a lead role in an American film. She played the title role in a biblical tragedy *JEPHTHAH'S DAUGHTER* (1909). But it was her exotic fantasy adventure films which made her a popular film star. They included *NEPTUNE'S DAUGHTER* (1914,



Annette Kellerman — swimming sensation and born show woman.
Photo from the National Film and Sound Archive.



A DAUGHTER OF THE GODS (1916), QUEEN OF THE SEA (1918), THE ART OF DIVING (1920) and VENUS OF THE SOUTH SEAS (1923).

A DAUGHTER OF THE GODS achieved more notoriety for Annette. Billed as "Australia's Diving Venus" and "the most beautifully formed Woman in the World", Annette is credited with the first on-screen nude appearance in a feature film. However, she should be remembered more for the fact that she courageously performed all her own stunts in these films.

On one occasion she dived from as high as 92 feet (28 metres) into the sea, and on another, she took to a pool containing five live crocodiles. Her sister recounts that for this stunt she was in and out of the water almost before her back was wet, but that she had nightmares for months afterwards.

The physical fitness that enabled Annette to perform her movie stunts was part of her life-long interest in physical culture. She lectured on fitness, health and beauty, and diet during her extensive travels. Her stage act even had a 'comedy lecturette' showing exercises that could be done with housework.

A life-long vegetarian and tee-totaller, Annette ran a health food store in California for some years, and studied dietetics with Dr Kellogg at the University of California in the 1950s. Her diverse interests included playing golf, tennis and horse riding. She wrote several books, including *PHYSICAL BEAUTY AND HOW TO KEEP IT* (1919) and *HOW TO SWIM* (1918), and a book of childrens stories *FAIRY TALES OF THE SOUTH SEAS* (1926). During World War II she assisted Sister Elizabeth Kenny and worked for the Australian Red Cross Society. She even has a geranium named after her.

Annette returned to Australia in 1970 to live in Queensland. She swam regularly and continued trying to do her daily physical exercises despite a debilitating fall, which prevented her from attending her induction into the International Swimming Hall of Fame at Fort Lauderdale,

Florida. Her energetic and tenacious life ended on 6 November, 1975.

Wit and an indomitable spirit, together with imagination and an iron will, helped forge Annette Kellerman's superb physical fitness into an adventurous and successful career. She deserves to be remembered for what she did in making women's swimming both popular and socially acceptable; and particularly for the part she played in emancipating women from constraints such as neck-to-knee bathing costumes. These triumphs, and her efforts pioneering physical culture, diet and health mark Annette Kellerman as a very "modern" woman.

Annette Kellerman — a pioneer of physical culture. Photo from the National Film and Sound Archive.



When she retired from long distance swimming Annette took to the stage. Photo from the National Film and Sound Archive.

- (1) Many of the anecdotes about Annette's life and career are told in a manuscript titled "A LIGHTEARTED BUT TRUE RESUME OF MY SPECTACULAR SISTER ANNETTE" by Marcelle Wooster. The manuscript is held in the documentation collection of the National Film and Sound Archive, Canberra. The Archive's collection also includes a short film (in black and white) of one of Annette's amazing underwater ballets, segments from her silent film *NEPTUNE'S DAUGHTER* (1914) and a brief but witty interview with her filmed during one of her trips home in the 1930s.
- (2) The Sydney Operate House Trust Museum holds a vast collection of Annette's memorabilia, including her vaudeville costumes and a black one-piece bathing costume with black stockings believed to be her 1907 suit.
- (3) A copy of *JEPHTAH'S DAUGHTER* (1919) is reputed to be held by the British Film Archive.
- (4) Annette Kellerman's books *PHYSICAL BEAUTY AND HOW TO KEEP IT*, Heinemann, London 1919 and *HOW TO SWIM*, Dornan, New York 1918.

The National Film and Sound Archive preserves, restores and gives access to an Australian Collection of Film, Television, Sound Recording and Radio Programs.

Burwell (Bumpy) Jones, M.D.
Dermatologist, Sarasota, Fl

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Burwell (Bumpy) Jones, M.D.

There are two basic skin problems for the master swimmer. The first is dehydration and dryness and second is sun damage with its associated skin degeneration and cancer. Each of these problems is worse with older people and each must be considered by those who swim regularly.

The year-round swimmer will always be bothered by asteatosis (loss of normal oils) and xerosis (dryness) of the skin. This is especially severe in winter months with lower temperatures and lower humidity. The use of hot water, excessive soaps and frequent pool immersions will produce dry, scaly and uncomfortable skin. Flaking and itching will be common and continued abuse can produce areas of hard dry scales which may appear as patches of fish scales (ichthyosis) or scattered areas of fine red, broken skin (nummular eczema). Even more significant problems such as skin ulcers or infections have had their onset with the simple problems of abuse or poor care. The swimmer must confront the normal problems of everyone with added insult of daily immersion in the pool and its chemicals.

When dryness presents and frequent swimming is necessary:

1. Keep showers or baths tepid to warm, not hot.
2. Use soap sparingly and mostly in the folds of the body (intertriginous areas) consider a super-fatted soap such as Basis or Dove.
3. Rinse pool water off after swimming and while wet cover body with a liberal amount of baby oil or bath oil such as Keri oil. Leave on for several minutes and pat dry. This helps to hydrate the outer keratin layer of the skin.
4. After drying, use a mild lubricant on at least the arms and legs. There are a number of pleasant commercial products and each person may have to experiment to find a product that is comfortable. Avoid perfumed or multiple ingredient products. Excellent products include Moisturel, Keri Lotion, Nutraderm, Nivea and plain vaseline (petrolatum). Some people may wish to apply this type of product several times a day or before swimming to help prevent dehydration. Vaseline (petrolatum) when liberally applied can help prevent chafing of thighs and axillae for long work-outs or long races.
5. Keep shaving (faces or legs) to a minimum during the "dry" season. When necessary, repeat the moisturizing steps mentioned above and avoid alcoholic after-shaves or body lotions which only increase dryness.
6. Hair should be rinsed with fresh water after each training session but shampooing is not necessary that often. A good conditioning rinse alone is often quite sufficient for good hair care and shampooing can be done intermittently with a mild product such as Johnson's or DHS shampoo. Discolored hair from pool water can often be avoided in this manner.

Sun damage is a significant summer problem in northern latitudes and a year-round problem for the southern swimmer. Actinic degeneration of the skin is seen on exposed areas even in teen-agers in the south and is progressively severe in the

older people. As most are aware, it is the major cause of lines, wrinkles, saggy skin, blotchy pigmented skin, pre-cancerous growths (actinic keratoses) and cancers of the skin (basal cell carcinomas and squamous cell carcinomas). It is also a significant factor in mole cancers (melanomas). The fair skinned swimmer has the greatest risk and must take more protective measures than darker skinned individuals. Those people with light colored eyes (blue or green) and blond or red hair must use protection, especially those who have a family history of skin cancers. However, even darker skinned swimmers can show significant damage to their skin after only a few years exposure and poor protection.

Some of the protective measures that can be used are:

1. Wear protective shirts (white) and brimmed hats whenever possible, essentially to and from the pool and for other activities. A thin white tee-shirt can be worn for stroke drills, kicking, starts and turns.
2. Wear a cap for outdoor work-outs (protects ears, forehead and balding heads).
3. Wear a visor or old hat for kicking.
4. WEAR A SUNSCREEN DAILY to all exposed areas. Sun damage is accumulative but some structures within the skin can repair themselves if given appropriate protection. Many sunscreens are partially absorbed into the keratin layer of the skin and a daily application in the morning after shaving or before make-up is applied will form a residual deposit which makes the sunscreen progressively more effective. All sunscreens wash off to some extent so that a better effect is obtained by more frequent applications. At least get into a habit of daily morning application for the most sensitive areas of the face, neck, chest, arms and hands.

Sunscreens are rated by a number (generally 2 - 15) on the container. This number indicates the multiple of the protection beyond the earliest burn (minimal erythema dose). Thus a number 4 protects for 4 periods of time beyond that which would cause a burn. Nearly all swimmers should use a number 15 (numbers beyond that are essentially advertising gimmicks).

Many sunscreens are available and several different chemicals are used. The commonest and most protective contains PABA or PABA esters. Unfortunately, some people are allergic to this chemical or other chemicals in the sunscreen and those people must avoid them. Common PABA containing sunscreens for swimmers include: Pre-sun, Total Eclipse and Sundown. Some non-PABA sunscreens include A-fil, Maxafil, Sol-Bar, U-Val and R. V. Paque.

For an extremely sun sensitive swimmer I have often suggested the mechanical devices as listed and then:

Apply the #15 PABA sunscreen copiously to exposed areas one hour before exposure. Repeat application at the pool followed by another application of a different sunscreen such as RVP or R.V. Paque. If possible, exposure should be avoided during the mid-day hours (10:00 a.m. to 2:00 p.m.).

Eye and eyelid problems are generally prevented with the use of protective swim goggles. Again, the use of white vaseline before and after swimming will maintain eyelid comfort and eye rinses are generally not necessary. Many forms of contact dermatitis will initially present with eyelid itching or swelling and

may indicate an abnormal reaction to a sunscreen that is otherwise well tolerated on the general skin surface. This can occur as the goggles hold the offending agent in contact with the eyelids rather than allowing it to rinse off. 20

Master swimming is designed for a life-long conditioning program. By following these simple measures the master swimmer can generally continue a year-round training program which avoids the discomfort of dry skin and helps prevent the danger of sun-damaged skin but still allows the benefits of a daily training program.

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WHAT COACHING MASTERS SWIMMING MEANS TO ME

By George E. Bole

After years, thirty-three to be exact, of coaching age group, junior, senior, International and Olympic class swimmers, I was thrust into coaching a new class of athlete, the Masters Swimmer, and now after almost five years of that, I am in a position to evaluate what this facet of my professional career has meant to me.

I learned rather quickly that Masters swimming was not "adult swimming", nor was it a geriatric therapeutic practice. Nor could I become "the minder" or "instructor" in the general sense. Masters swimmers wanted a coach and coaching, specialized too.

This new discipline, tracked up by an excellent superstructure for competition, required applicants with aims and goals. As the coach, it was my business to help set those targets and motivate those in training to get there. So, Masters swimming meant that I must approach each and every one in the squad personally. It meant that I was in the "people" business. I had to provide a service -- first class.

To provide the service meant I had to be capable of analyzing each member of my team, assessing not only his aquatic capabilities, but also his mental make-up, courage, durability, ambition and character. I have always thought that the best coaches had this special quality of knowing people and their needs, and how to get the very best from their charges. Without this talent, all the scientific data and knowledge in the world is as nothing in the business of coaching.

Masters swimming meant relating well to the athletes. Next, it meant, for me, a completely different approach from my previous efforts. Here I was, having people coming to me, wanting to swim well, prepared to commit their time to improving. Also, these were people capable of examining in detail what I had to say. Not enough, to say "just get on with it". I had to justify what advice I gave. Masters swimming meant that I had to be au faits with the latest trends and the reasons behind them. It meant that I was more alert and able than ever before.

Dealing with the wide range of ages and ability was just a shave more difficult, but perhaps, not too much different, from handling various ranges age-group to senior. The big change was, where you could work on and change flexibility ranges and strengths at age-group to help develop techniques. More often with ther Masters swimmers, you had to try and adapt the techniques to facilitate the performers' efforts. This required much subtlety and convincing talk and knowledge.

Aside from the technical considerations, Masters swimming coaching was so much different, because in place of stress and job worry and parent-power and dog-eat-dog of competitive swimming, I learned that coaching could be fun and pleasure and comradeship, par excellence.

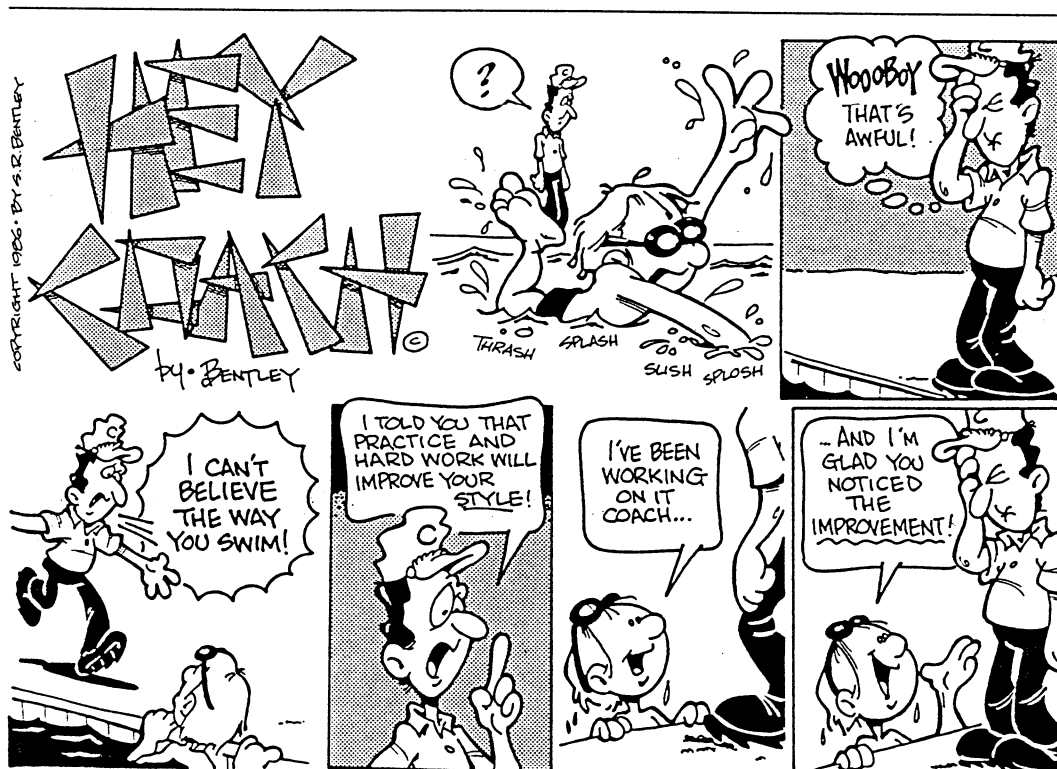
Watching my charges improve, whether it was on stroke technique or on time standards, it was so much more rewarding, and noting too, the many whose mental dispositions improved in ratio to their swimming, was enlightening. People of all ages need to feel some measure of improvement and competence. A sixty-five year old bursting to relate a personal best time is enough justification for coaching at one's best.

And finally, for me, Masters coaching took in another attribute. On the occasion of my recent illness, the incredible, indescribable generosity and kindness, not only of my own beloved St. Pete Masters, but of all those others from everywhere in the United States who sent sincere good wishes and financial aid, demonstrated very clearly that my efforts, however puny, were fully appreciated. To all those U.S. well wishers, I say that you have a big country with people of matching hearts. Without knowing Masters swimming, I would never have known such magnanimous people.

God bless you all.

REPRINTED FROM THE M.A.C.A. NEWSLETTER.

George is well remembered from his lecture on the I.M. at the World Masters games last year in Brisbane.



REPRINTED WITH PERMISSION FROM SWIMMING WORLD APRIL 1989.

Swimmer's Ear

Acute and chronic otitis externa—an ear problem so common among swimmers that it is called "swimmer's ear." The author discusses the problems and their remedies.

by John W. House, M.D.

While serving as the team physician for the U.S. national swim team at the U.S. Open in Indianapolis, it was striking how many of the medical problems which I encountered were ear infections. Because of this common condition I felt that a review article into these problems is in order. Most of them are preventable.

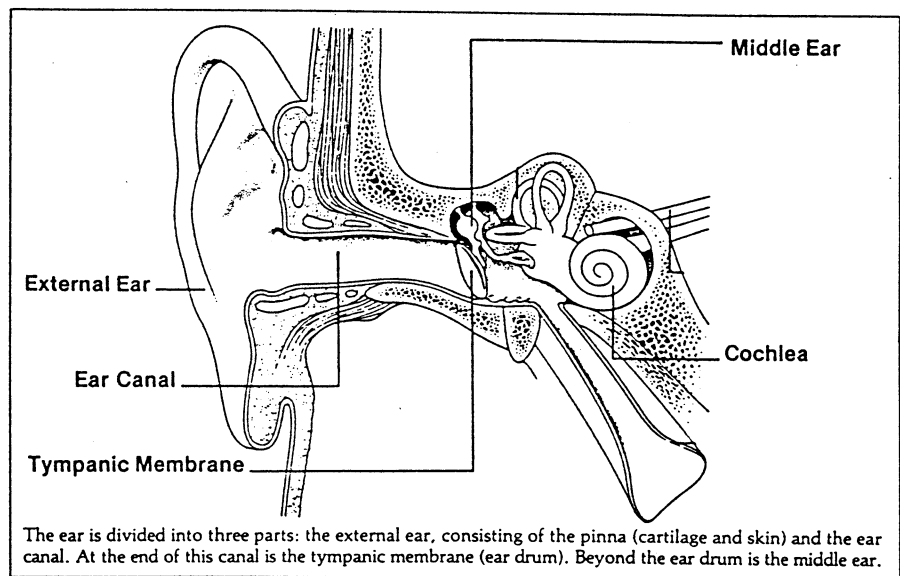
In order to understand the nature of ear infections, a review of the normal structures of the ear is helpful.

The ear is divided into three parts: the **external ear** consisting of the pinna (cartilage and skin) and the ear canal. At the end of this canal is the **tympanic membrane (ear drum)**. Beyond the ear drum is the **middle ear**.

This part of the ear is separated from the outside by the normally intact tympanic membrane and contains the three bones of hearing. The malleus (hammer), incus (anvil) and stapes (stirrup) are the smallest bones in the body. In order to equalize pressure between the outside and the air containing middle ear space, we have a tube (eustachian tube) connecting the middle ear with the back of the nose.

Sound entering the external ear travels as mechanical vibrations through the ear drum and the ear bones to the inner ear. This structure is divided into two parts, one for balance and the other for hearing.

The cochlea, which resembles a snail shell, is the hearing part of the inner ear. It has $2\frac{1}{2}$ turns. It con-



tains fluid which is set in motion by the vibration of the ear bones. Thirty thousand nerve endings (hair cells) sense this motion and convert this energy into electric impulses of one millionth of a volt. The nerve impulse is then sent to the brain where it is interpreted as sound.

The other part of the inner ear is the vestibular semi-circular canals which help us to maintain our balance. The fluid within these canals flows back and forth to stimulate the vestibular nerve endings. These impulses are sent to the brain for interpretation. Our balance is maintained by an integration of this input plus information coming from our eyes and our joints and muscles (proprioception).

Problems

The single most common problem swimmers have with their ear is **acute and chronic otitis externa**. This condition is so common in swimmers that its common name is "*swimmer's ear*."

It is caused most commonly by a bacteria called *Pseudomonas aeruginosa*, a common organism on the skin. This bacteria takes advantage of the chronic wet ear which has a lowered resistance to infection. Any scratch or irritation will allow this organism to cause an infection. Other causative organisms include *Proteus*, *staphylococcus*, *streptococcal* species and at times various fungi.

The acute infection is characterized by severe, deep ear pain. The pain is usually either accompanied or preceded by itching. The external ear is tender to palpation and manipulation. The ear canal becomes red and swollen. There is rarely discharge or hearing loss associated with acute otitis externa.

Treatment is by topical antibiotic drops instilled in the ear canal frequently. During the acute phase of the process, the ear must be kept dry. In these cases, tight-fitting ear plugs will not be tolerated because of the swelling. ►

Disclaimer

This article contains information about swimmer's ear. Persons suffering from the conditions described herein should seek the advice of their physician.

About the Author

John W. House, M.D., is president of the House Ear Institute in Los Angeles, Calif. He is a former All-American and nationally-ranked swimmer.

Swimmer's Ear

It is important for these swimmers to continue to train, so I recommend a soft ear plug such as the silicon ("ear putty") plugs by Physicians' Choice™. (Santa Barbara Medco, Inc., makers of these ear plugs, is a sponsor of the United States Swimming Sports Medicine Program and the official supplier of ear plugs to the U.S. national swimming team.)

These are also good to use during training as a way of preventing recurring infections.

Using an acidic solution in the ear after exposure to water is helpful in preventing infections in those swimmers who tend to get swimmer's ear. This can be something as simple as white vinegar diluted half by either water or alcohol. Cotton swabs are never to be used to dry or clean the ear. They tend to remove wax which helps prevent infections and can scratch or irritate the ear.

When the infection becomes chronic, the swimmer will experience recurrent acute episodes, constant itching and possibly scaling of the skin. This condition is treated by the use of ear plugs, such as Physicians' Choice, to keep water out of the ear, and topical steroid ear drops. In order to keep an acute episode of swimmer's ear from becoming chronic, the treatment has to be continued until well after the symp-

toms have subsided. This is usually several weeks.

In younger swimmers, middle ear infections may be a problem. These can be either acute or chronic. Acute otitis media starts suddenly and is associated with a fever, pain and hearing loss. It is the result of a bacterial infection of the middle ear. The common causes are Streptococ-

The swimmer should not train or compete during the early stages of acute otitis media.

cus pneumoniae, Hemophilus influenzae and Branhamella catarrhalis.

On occasions, the ear drum may rupture and the ear will drain pus. The treatment is appropriate antibiotics and at times decongestants.

The swimmer should not train or compete during the early stages of acute otitis media, but may return to the water after being on treatment for a few days and when the acute symptoms have subsided. During this time, water must be kept out of the ear with the use of ear plugs.

If the tympanic membrane ruptures, water is kept from the ear until the drum has healed. If healing does not occur, the swimmer can continue to train and compete with the use of ear plugs. In cases where persistent perforations exist, surgery can be performed in order to repair the tympanic membrane.

Young children are prone to eustachian tube problems and may develop persistent fluid in the middle ear (chronic serious otitis media). At times, an opening in the tympanic membrane is made (myringotomy), the fluid removed and tubes inserted in order to ventilate the middle ear. While these tubes are in place, the competitor must use ear plugs and even a bathing cap to keep the ears dry. Should water enter the ear, it may cause an infection by entering the middle ear through the open tube.

On rare occasions, middle ear disease can become chronic and may lead to hearing loss, a permanent perforation with destruction of the ear bones or a cholesteatoma. This later condition requires surgery as soon as it is detected.

In young adults who have been swimming for years, bony growths called exostosis may occur in the ear canal. These are not serious, but may eventually grow to a size that block the ear canal. Surgery is required to remove these growths and once again open the canal.

Summary

Because the swimmer spends many hours per day in the water, the ear is prone to certain types of infections. The most common of these is an infection of the ear canal (otitis externa). Fortunately this is not serious and may be prevented by the use of ear plugs and/or the use of ear drops after exposure.

Middle ear infections occur in younger swimmers, as in any child, and are not a contraindication to swimming.

During the acute stage, the swimmer should remain out of the water, but may return as soon as symptoms subside with the use of an ear plug. More serious problems are rare and do not preclude the active participation in water sports. ☐

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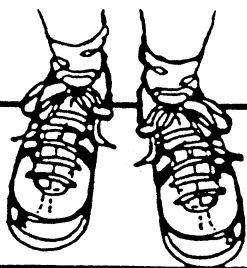
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"THE FACT OF LIVING IS DYING, BUT THE ART IS DOING IT AS LATE AS POSSIBLE."

Submitted by Les Worthington - Canberra

If you or your coach has a favourite workout please submit them by Feb. 1st.

CONTRIBUTIONS ARE DESPERATELY NEEDED !

ISSI MASTERS SWIMMING IN AUSTRALIA - VICTORIAN BRANCH

NATIONAL COACHING ACCREDITATION COURSE. LEVEL 1M

AUSSI MASTERS VICTORIAN BRANCH IN LIASON WITH

VICTORIA COLLEGE (VICTRACC)

**AUSSI MASTERS NATIONAL COACHING ACCREDITATION COURSE -
LEVEL 1M**

Victoria College in liason with Aussl Masters - Victorian Branch are organising a Level 1 coaching accreditation course to be held at the Aquatic Centre of the Burwood Campus of Victoria College on Sunday 3rd December, 1989.

The course is available to those who have completed the theoretical component of the Australian Swimming Level 1 Coaching Course. The programme designed as a supplement to that course to cater for the needs of coaches of adult swimmers. The cost for the course is \$65 which includes the \$10 registration fee to the Australian Coaching Council.

Application Forms available from:

**Victracc
C/- Victoria College
221 Burwood Highway
Burwood, 3125.**

Phone: 805 3339

Sunday, 3rd December, 1989

**Aquatic Centre
Victoria College
Burwood Campus
221 Burwood Highway
Burwood, 3125**

**C/- Victoria College,
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Further Enquiries (05) 805 3539**



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For any person who either teaches or coaches swimming, there is a possibility that he or she may at some time be sued by the person they are teaching, if that person is injured. If the person dies, the claimant could be a next of kin.

Unfortunately, neither your swimming club's Public Liability Policy, nor your own Personal Liability Insurance covers this risk. **EVEN WORSE**, you may be sued for your own personal fortune, i.e. your home, car, furniture etc.

Claims of this nature are becoming more frequent and therefore in order to provide protection for our coaches and teachers, AUSI Masters Swimming has arranged through Insurance Exchange of Aust. a group policy which you can join for a premium of \$20.00 inclusive of Stamp Duty and Policy Fee. The policy will protect you for a limit of \$2 million for each and every claim made against you. There is a policy excess for each and every claim of \$500.00

Consider what you would do if you were presented with a solicitor's letter holding you responsible for a serious accident to one of your members which has resulted in that person becoming a quadriplegic. Now you need worry no longer, as the policy extends to cover your legal costs in defending an action brought against you, as well as for the cost of the final settlement.

The policy cover commenced on 1st January 1989 and we would ask you to send a cheque for \$20.00 made payable to : Insurance Exchange of Australia and the attached form to **AUSI MASTERS SWIMMING P.O. Box 207, COMANDILLA 5033**

PLEASE NOTE: PERSONS CURRENTLY HOLDING LEVEL 1 OR LEVEL 1 M COACHES ACCREDITATION MAY APPLY DIRECT. NON ACCREDITED CLUB COACHES OR ASSISTANCE COACHES MUST APPLY THROUGH THEIR CLUB, AND THE CLUB MUST PROVIDE A STATEMENT THAT THE PERSON IS ACTIVE IN CLUB COACHING.

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