

AUSTRALIAN MASTERS SWIMMING COACHES NEWSLETTER

The polls are out and the verdict is in! Swimming is the nations most participated sport. As reported in The Australian by marketing writer Katrina Strickland, the annual survey of Australians and sport released recently confirmed my long held view that swimming was the Nations favourite sporting pastime.

Conducted by market research company Sweeney Sports, the survey covered over 1500 people in six cities and 57 sports. Swimming, clearly the leader, came in ahead of bushwalking by 11%.

My unqualified judgement, which up till now had no concrete statistics to back it up, was based on the assumption that virtually every school age child, boy and girl participates in some sort of swimming programme; swimming is recommended as the best form of exercise by health professionals which more people are realising; and, since starting in the industry in the early eighties, I have witnessed growing numbers across a wide variety of aquatic programmes particularly with the adult fitness squads. Further, Swimming is not gender or age biased like sports such as Football or Netball. Lastly many other aquatic sports rely on swimming as a necessary component of the sport such as Triathlon; Water polo; Surf Life Saving etc..

One only has to look at the increasing number of participants in long distance swims to see the progress made in the last decade.

Almost without exception, pools run one or more programmes ranging from Adult squad training; specialist coaches training Triathlete swimmers; AUSSI club programmes, squads for age group children; Learn to Swim, or at the very least, lanes set aside for the serious Lap Swimmer. Many pools now even offer incentives for the regular lap swimmer who does not want to be part of a structured group. Suggested training workouts posted on a whiteboard, or mileage incentives are on offer at many pools.

In the light of this upsurge it always comes as a surprise to hear of pool closures.

Well managed pools now boast good profits. In the past Council run pools expected to run at a loss, but that loss was borne because of the service it provided to the community. Passive recreation grounds such as ovals, with their high maintenance costs year round, are still viewed in this altruistic light. Not so the council pool which is increasingly under threat of closure.

Some councils have upgraded facilities and tendered out management with good results. Others simply close. It is heartening to hear of residents in North Melbourne lobbying and reversing their council's decision to close their pool, and of Prahran council who have successfully retained management rights, out-tendering their commercial rivals.

The victim in all of this is the competitive swimmer both young and old. With ever increasing demand for water space managers opt for the capital intensive classes such as Learn to Swim, usually to the detriment of swimmers.

Swimming still is a relatively low cost sport and coaches aim to keep coaching fees to a minimum particularly for the serious swimmer who may train 20-30 hours per week.

AUSSI of course can fill a real void. As a non profit organisation, most clubs can offer inexpensive specialist coaching. Finding the pools to do it in however is becoming increasingly more difficult.

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OUR SPORTING LIVES

Favourite sportspeople

Percentage who nominated each personality

1. Sir Donald Bradman 29%
2. Greg Norman 10%
3. Dawn Fraser 9%
4. Kieren Perkins 5%
5. Cathy Freeman 2%
6. Allan Border 2%
7. Evonne Goolagong-Cawley 2%



Source:
Sweeney Sports

Participation top 10

Percentage who take part regularly

1. Swimming 43%
2. Bushwalking 32%
3. Fishing 29%
4. Gym 28%
5. Snooker, pool, billiards 26%
6. Tennis 26%
7. Golf 24%
8. Jogging 23%
9. Ten-pin bowling 20%
10. Cycling 19%

Attendance top 10

Percentage who attend regularly

1. Australian Rules 26%
2. Cricket (outdoor) 24%
3. Basketball 18%
4. Rugby League 14%
5. Horseracing 13%
6. Tennis 11%
7. Motor racing 10%
8. Soccer 10%
9. Rugby Union 8%
10. Netball 7%

The Pre-Race Warmup

WARMING UP PRE RACE

Dear Editor

Ref. "Perspective" Nov 96 Vol 8 #4

Your pre-race warmup suggestions look similar to those my own club's Head Coach and Fitness Director would recommend. What is less clear is how this fits in with the realities of swim meets, how long is the warmup effective for succeeding events, and whether swimming down is equally important. I would also be interested to hear whether you endorse the "AUSSI foundation" practice of trying officiating with swimming.

I started "Fitness, Fun and Friendship" swimming with AUSSI immediately following coronary artery surgery thirteen years ago. I swim train four days each week and walk (hard) on the other three. I have a daily Physio, dyna-rubber and stretching routine. Aside from the usual degenerative and overuse skeletal niggles I am permanently limited to a maximum of 85% Full Power to protect my bypass grafts. I play social tennis (re-action skills) and lawn bowls (competition, control and ?).

Now 69, I have been fortunate to compete with

AUSSI, on average, monthly for the last twelve years. I have swum at all six World Masters Swims and all the AUSSI National swims since 1985 except one when I timekept. I have seen most NSW AUSSI swim venues from the Sydney International Aquatic Centre to shallow six lane, 25m pools. The problem, I suggest, for the competitor is to adapt the ideal warm up to the local pool and practices.

Frequently upwards of 150 swimmers must fit their pre-race warmup into the 6 lane competition pool in an unorganised half hour. No wonder the more cautious opt for a brief pool inspection and then don the dry gear and walk out or stretch out the "travel to meet" stiffness. One interesting feature of the big International Swims, where the warm up / swim down facilities are provided, is the programme induced 'swim-a-long' of the slowest swimming down, with the elite warming up. Some there see what once they were, and the faster see what they are yet to be!

My hobby horse is what I believe to be a logical dislike of swimming ? timekeeping. I hasten to add that I enjoy both - on separate occasions. My ? mission paper to NSW AUSSI was, I understand, reproduced in Victoria. How does officiating fit in with your views on warming up?

I enclose a copy of page 3 (see page 4) of NSW Splash magazine Dec 96. Gary Stutsel has found someone's answer to one of the problems. Did I hear that USMS allow only feet t first entry to the training / warm up lanes unless dedicated for one way dive sprints ?

I continue to enjoy AMSCN, annually advertise it in our own club journal 'Waves', and wish you all the very best for 1997.

Yours,

Keith Wake

I do apologise to Keith that I couldn't always read his handwriting and hope that I have interpreted his letter correctly.

He does raise a number of issues one of which is my personal grievance that exists throughout swimming in general and not just AUSSI!

"my personal grievance that exists...is a lack of adequate warmup time and/or space that is often driven for the convenience of officials or for financial reasons."

Editorial Continued

Back to the statistics. Frequently you will hear, as I did the other day on the radio, some rather misleading facts ie that Netball is the highest participant sport. What they neglect to tell you is that this is in relation to registered members. Whilst swimming is clearly ahead as a participation sport, most of these participants swim for pleasure and are not part of any organised group. Hence our numbers are insignificant when the number of registered members are compared with sports such as Netball and Football.

Team sports by their very nature have to compete against someone. Swimming however does not require you to compete and most don't. The question I will leave you to ponder over is how can AUSSI attract members from this vast pool (!) of unregistered swimmers.

(Continued from page 2)

That is, a lack of adequate warmup time and / or space that is often driven for the convenience of the officials or for financial reasons. For instance at the State Swimming Centre in Victoria the diving pool is sometimes either not made available for warming up, or roped off to provide only a small area, because it is so close to the main pool that the timekeepers get splashed. At other meets I have been to, warmup time has not been allotted due to the added cost of hiring the pool.

To answer some of Keith's questions I have reprinted an article (see page 26) by AUSSI's own Dr Peter Reaburn.

The post race swim down was not addressed in the last issue of this magazine, but is just as important as the warm up.

Swimming down *properley* hastens the removal of lactic acid from the blood stream. Lactic acid for the uninitiated, is the toxic waste that builds up in a really hard effort and slows us down. Some swimmers know it as 'the piano dropping on my back' in the closing stages of a race.

Simply ceasing exercise will not remove the lactic acid as quickly because the circulation of the blood through the kidneys and liver slows due to the declining heart rate. These organs filter out the lactic acid from the blood. Therefore, swimming moderately with an elevated heart rate will hasten the removal and leave the swimmer feeling better.

For the swimmer competing in multiple events, the swim down also serves as the warmup for the next event, giving the swimmer the chance to mentally and physically prepare for the next event.

Even if the swimmer is not swimming again that day, they should still swim down to prevent muscle soreness the next day, especially if they are competing over meets lasting more than one day.

As a general rule, the swimmer should go straight into the swim down after completing the race and should swim long enough at an easy pace until the pulse returns to a reasonable level. This should be done on the same stroke as was used in the race, gradually introducing a bit of the stroke that will be used in the next race. This serves to warm down one set of muscles while the next set is warmed up.

As with all warm ups the swimmer should then swim some moderate paced repeats and finish with some short, sharp speed work.

One suggestion that can be used if you are unable to warmup is to stand under a hot shower and stretch.

I have used this method quite successfully and often include it in my general warmup procedures, at the conclusion of a swimming warmup.

One added advantage to warming up that rarely gets mentioned is that the swimmer has the opportunity to familiarise themselves with the new environment. All pools 'feel' different to one another. Diving blocks differ considerably from one venue to the next and may completely alter the way a swimmer dives. Backstroke flags may not be the standard distance or height and the backstroker will need to acquaint themselves to gain confidence. Some pools are dangerously shallow and meet directors would be wise to insist that starts be performed in deep water, or if non is available to have compulsory in water starts. However if either of these are not options, again, swimmers need time to practice diving to accomadate the shallow depth.

I notice that the draft 'National Safety Policy and Guidelines' booklet which has recently passed across my desk, does not address any of these issues. I feel very strongly that all sanctioned AUSSI meets should be governed by set criteria for warmup and diving procedure, stipulating contingencies for the above instances. These could include;

- Minimum of 30 minutes must be provided for warmups prior to the start of a meet unless a separate warm up pool is available.
- Where only the main pool is available, races should cease every 2 hours to allow a fifteen minute warm up / swim down time.
- Warm up pools should be laid out with slow, medium and fast lanes designated.
- Feet first entries only allowed in warm ups except where special lanes have been delegated.
- Outside lanes where practicable should be allocated as walkback lanes for dive sprints.

In a 50m pool the deep end could be for dive sprints and the shallow end could be used as a turning practice lane.

This formula (with slight modifications) is used at our Victorian State Age and Open Meets very successfully, though the on deck coaches are responsible for enforcing and policing it. The procedure is clearly printed in the programme.

In the eight lane pool they designate lane 1 and 8 for 25 m walkbacks from either end, though some near head on collisions occur. Lane 2 and 7 are also used if necessary for 50m walkbacks. These lanes become

(Continued on page 4)

(Continued from page 3)

available for this purpose a half hour before the meet start time. Prior to this they have the same status as other lanes.

In response to Keith's other point of combining swimming with officiating, while it may not be ideal it certainly is inescapable within AUSSI. I have also seen it work successfully for some. Where it does not work is when the swimmer is interchanging hats too often and cannot do either job well.

Delegating a half day to officiating and a half day to swimming allows plenty of time to split the functions and perform both well.

The reality is that in the small meets manpower is always a problem and I see no way around it. But at these low level fun meets, does it really matter? At a State and National Meet AUSSI is usually able to draw from the ranks of white coated, non swimming officials.

Maybe the answer is to recruit some of our land locked spouses into becoming accredited. But then they're just as likely to want to join in themselves when they see that all the fun is in the pool!

MORE ON THE PRE-RACE WARMUP

The following excerpt is from an article by Gary Stutsel called "Foreign Shores" which was printed in the AUSSI NSW Branch's "Splash" magazine Dec 1996.

Warmup Safety

The following letter is courtesy of "Master Swimmer", the UK Newsletter.

At this year's Yorkshire Masters I arranged warmups as follows.

I painted stand-up signs for both ends of each lane, based on the familiar road signs, with directions clearly indicating alternate, clockwise and anti-clockwise rotation of lanes and Lanes 1 and 6 as sprint lanes.

"No entry" signs were made for one end of the sprint lanes and "NO DIVING" was clearly displayed on the other lanes (2-5). Lane 1 was "Fly and Freestyle" and Lane 6 was "Back and Breast".

On the day I found it easy to monitor an control single handed. Only twice was it necessary to caution a swimmer for starting to return in the sprint lane, and at no time did I see anyone dive in any of the other lanes.

I believe that a separate sheet with the warmup conditions clearly described should be sent out with entry forms. I am sure that at no great expense, clubs could have similar signs done in durable plastic by local printers. What's a few quid against a claim for damages? - by John Wilkinson.

WORLD WIDE WEBS

United States Masters Swimming is pleased to announce its new Web site at:
<http://www.usms.org>.

An abundance of information can be found at this site including places to swim, training tips, fitness information, the USMS calendar of events, records, Top Ten listings, National Championship results, coaching resources, rules and information about USMS sponsor and the products and services offered to USMS members. A good place for AUSSI clubs to source ideas, and helpful for anyone planning to travel to the US.

From the UK, Julian Meldrum has established his own Web Site on the Internet for Masters Swimmers which can be accessed on; <http://www.jmeldrum@jmeldrum.demon.co.uk/swim/index.html> and you can Email him at julian@jmeldrum.demon.co.uk

Other Masters Web sites are;

Canadian Masters:
http://www.unb.ca/web/Masters_swimming/index.html

Masters swimming snippets:
<http://www.hk.super.net/~kff/wmssnip.html>

Uni Wahoos (a club in Queensland):
<http://www.thehub.com.au/~legend/wahoo/fr-main>



DIAGNOSIS

Completely Stuffed

BLOCKED SINUSES

What are they?

Had enough of coughing, sneezing, snorting, and generally felling completely blocked up? The winter wicked bugs have had their way with most of us by now, leaving in their wake snotty noses and stuffy sinuses.

'...here are a few handy hints to get you unblocked and back to normal as soon as possible.'

If you do nothing at all about this sorry situation it will cure itself eventually, but if you've had enough, here are a few handy hints to get you unblocked and back to normal as soon as possible.

What happens?

A sore throat and a bit of a runny nose are the first warnings that we've been attacked by a new and unwelcome viral visitor. The nose and mouth are the easiest ways into our bodies for a virus, and as soon as these little nasties are identified, our immune system works as fast and efficiently as it can to kick them out before they do too much damage.

Until they're ejected the virus and the immune system slug it out, using our noses as the main battlefield. If victory is short and sweet, it's just a matter of a mild cold for a day or two. If the foe is tough and tenacious, like the current Johannesburg influenza strain currently sweeping our cities, the war can be protracted and painful, with weeks of sore throats and stuffy sinuses.

Is it serious?

Even if our immune system does a pretty good job handling this viral crisis, other problems of a potentially more serious nature can occur which can make life pretty miserable. Blocked sinuses don't empty very well, and all that mucus makes the perfect environment for our resident nasal bacteria to grow in.

So the longer we stay blocked up, the more likely it is we'll go on to develop face pain, tenderness over our cheek bones, loss of taste and smell, and green thick nasal discharge. In

other words, a sinus infection.

Sometimes our immune systems get a bit confused by the virus, and completely overreact. Even when the invading virus has been vanquished, our noses pour out masses of clear sticky mucus. We may feel sneezy, have an itchy nose, be deaf as a post and be driven nearly mad by post-nasal drip and a wheezy night-time cough. This type of post-viral hay fever can last for months.

What's the treatment?

The longer we stay blocked up, the more likely it is we'll run into problems. The key to kicking this problem is drainage. Keeping the nasal passages unblocked is fairly simple most of the time - it's just a bit tedious and time consuming to attend to.

Good old fashioned inhalation of hot water vapours with eucalyptus remains one of the best ways to keep the passages clear. Put a drop of Vick's or eucalyptus oil in the bottom of a thermos flask or plastic bottle filled with hot water from the tap, then inhale the vapours for 15 minutes three or four times a day. It should keep you unblocked for hours.

Rubbing Vick's onto the chest is also good, as are menthol or eucalyptus lozenges taken regularly during the day. What about a vapouriser at night - why not if it helps you sleep?

If you're only a bit stuffy, "cold and flu" like tablet decongestants from the chemist are usually effective enough.

Adding antihistamines will help, but if you're really blocked decongestant nose sprays work best. Lie on your back, with your head hanging over the edge of the bed, with nostrils pointed up. Squirt the decongestant into each nostril, and if your ears are a bit blocked, twist your head to let some of the spray drip down into your ears. No matter what the commercials say, this is the best way to apply the stuff.

Green mucus means bacterial infection, and antibiotics are the best way to clear out the bugs from the system. You will need to take the antibiotic tablets for at least a week to 10 days for them to work effectively, so follow the directions carefully and be sure to take the full course.

Diagnosis (cont.)

What about natural therapies?

Twice daily vitamin C and zinc supplements, lots of clean fresh water and garlic and horseradish are the best natural ways to hurry up the healing process.

Written by Dr Malcolm Clarke, a practising GP.

The material in this column is of a general nature and should not be relied upon as a substitute for professional advice.

Reprinted with permission from The Melbourne-Weekly.

The following bit of humorous verse conveys a lesson about:

THE REWARD OF PERSEVERENCE

Two frogs fell into a deep cream bowl;
The one was wise a cheery soul.
The other one took a gloomy view
And bade his friend a sad adieu.

Said the other frog with a merry grin,
"I CAN'T GET OUT, BUT I WON'T GIVE IN;
I'll swim around till my strength is spent,
Then I will die the more content."

And he swam, though forever it seemed,
His struggling began to churn the cream,
Until on top of pure butter he stopped,
And out of the bowl he quickly hopped!

The moral, you ask? Oh it's easily found!
If you can't get out, keep swimming around.

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- Always use a name, organisation and city with a testimonial. This enhances your credibility.
- Your best members are your existing members. Include a warm, personal letter with their annual subscription invoice.

Tailoring a Programme

A COACHING SEMINAR WITH ANITA KILLMIER

A transcript of this 2 day seminar conducted by AUSSI Tasmania is now available in booklet form to all members. Cost is \$5.00 which includes postage and all money goes directly to purchase more videos for the AUSSI Resource Centre.

The booklet is also available as a video to borrow from your branch or the Resource Centre and contents include;

- Elements of physical fitness.
- Energy systems used in swimming and how to train these systems for specific events
- Pulse rate counting
- Goal Setting
- Devising a Seasonal Plan

PRINT OVER RUNS

Every issue I print more than the subscribed numbers of newsletters. When people re-subscribe late, they usually request to have sent the issue that they've missed.

If you have re-subscribed, requested an issue but not received it, it means I have run out of the over runs and will not be printing anymore. Your subscription will begin with the following issue.

To guarantee continuity of newsletters you must re-subscribe by the date on your envelope label.

ANNUAL SUBSCRIPTION

Your subscription renewal date is now printed on your envelope address label.

Failure to renew by this date will mean missing that month's issue.

"Person who say it cannot be done should not interrupt person doing it."

Reprinted from Queensland Masters
"Swimmer's News" September 1996.

Newsletter Snippets

FROM THE NATIONAL OFFICE

National Safety Policy and Guidelines

Your Club should have recently received the recently updated AUSSI National Safety Policy and Guidelines. Please see that it is widely circulated amongst your Executive and Committee.. You may prefer to make a few copies for your key people, then you can keep one for that mythical 'bottom draw'.

Care must be taken to ensure that at least minimum standards are in place for all AUSSI events and it is very important for all organisers to be familiar

"Care must be taken to ensure that at least minimum standards are in place for all AUSSI events..."

with the Emergency Procedures. The Injury Report Form should be used for every incident, in case complications develop later. It is necessary for making an insurance claim and could prove to be vital evidence in the case of litigation against the Club or Club Members, particularly if false or misleading accusations

are made at a later date - as has already been experienced by one AUSSI Club.

We also take this opportunity to remind Club Membership Officers of the importance to sight proof of age for new Members. People will lie about their age, if they think they can get away with it

(Ed. note - In a recent incident it has been revealed that a Policewoman admitted lying about her age at the Masters Games in Alice Springs. The woman won 6 Gold and 2 Silver medals in track and field events. She has returned her medals.)

'Australian Swimming and Fitness' magazine

Some time ago, we put out a call for Branches to seek out free-lance journalists to prepare stories about AUSSI swimmers, to sell to serial magazine publishers and we had in mind, to support ASI's own magazine when it got off the ground.

I recall that some Branches did identify willing journalists and there are articles about AUSSI swimmers in the glossies from time to time, but I am not sure of the correlation. ASI's magazine has

come and gone but we now have another on the shelves: "Australian Swimming and Fitness" put together by the same people who produce "Australian Surf Lifesaver" which carried a few articles on AUSSI in the past.

Managing Editor, Paul Oliver, is keen to see some AUSSI stories in this new magazine so we ask that you put out a call for those budding journalists again.

Please see what you can do now to get something of interest in it for us to read. The magazine is available from newsagencies.



OUT NOW

All new swim sports lifestyle magazine fully endorsed by Australian Swimming Inc. Featuring profiles and interviews, coaching and training tips, health and nutrition from leading personalities on the swim scene.

Official of the Year

At the Brisbane Convention and Exhibition Centre on the night of Monday 2 December, the AUSTRALIAN OFFICIAL AWARDS for 1996 were presented.

The award for AUSSI's Official of the Year was presented to : Kay Cox.

Kay was co-founder of AUSSI WA in 1977 and became the Coaching and Technical adviser for that group. She has acted as an Official at State level from then until the present time, usually in the position of Chief Referee at events such as the 1987 and 1995 National Swims and the Australian Masters Games in 1993.

(Continued Page 11)

Membership Marketing

MAKE BROCHURES ZING

By Lin Gensing-Pophal

The following article is reprinted from the Association Times August 1995 issue and was adapted from an article in "Small Business Opportunities" Summer 1995

Marketing is a discipline that organisations in the nonprofit business sector will need to become familiar with.

Now that the era of self help has arrived, every association of members must learn to apply professional marketing techniques that the corporate sector has known about for so long.

The marketing profession is traditionally known as a haven for "creative types". Even so, conservative association executives do admit that some of their techniques do work, and work well.

Here are some tips to consider when an association is creating a new membership marketing brochure.

"Now that the era of self help has arrived, every association of members must learn to apply professional marketing techniques that the corporate sector has known about for so long."

- Avoid humour. You'll always offend somebody.
- Never use a sans serif typeface - that's the one without the feet.
- Only sell memberships in the membership brochure. Don't complicate the sale.
- The phrase "free gift" may be stale, but it still works. The word free is a very powerful tool.
- A large mail piece will get better results. Go for an A4 size brochure; avoid DL size.
- Always use the word "you" in a headline. It helps to answer the member's query "What's in it for me?"
- Don't look too expensive or you'll turn members off.
- Tell members specifically what to do. Provide step-by-step instructions.
- Be careful about asking questions in a headline. If a member can answer "no", they are unlikely to read further.
- Strangely, window envelopes outperform closed envelopes.
- Use the phrase "Priority Mail" on the envelope. It emphasises the importance of what's inside.
- Don't list an even number of advantages - catch their eye by asymmetry.
- Set a deadline for response in your cover letter. Offer a benefit to join as a member prior to this date.
- make your mass mailings look like "legitimate" mail to boost response rates.
- Use your computer to complete the membership application. Anything that you can do to make the response easier will boost your response.
- Use high impact colours such as red and black. Avoid pale colours.
- Include plenty of "dingbats" such as arrows, stars, explosions, flashes etc.. They emphasise important points and add eye appeal.
- Don't round your fees. \$107 will draw better than \$100.
- Don't use all upper case in a headline - it's more difficult to read.
- Always include a P.S.
- Put a value on the total membership package and ensure that it far exceeds the membership fee.
- Add three options on your response card - "yes", "No" and "Maybe". Add the Maybe's to your prospect file.
- Add a 20-30 word caption to any picture used.

Continued on page 6

INTERMEDIATE

| DECEMBER | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Monday | Wednesday |
| warmup 50 fr-75 str-100 fr-125 str-100 fr-75 str-50 fr -----25 ez 6x100 free 2:20-2:20-2:15-2:20-2:05 -----50 ez 6x75 free- Hypoxic breathing 1:45 1-6 breathe each 3,4,5th stroke 7-8 each 4,5,6 stroke 8x50 25 str/25 fr 1:25 alt hard/ez 50 50 ez | 6x100 3 - free drill :10 3 - pull :10 10x75 1-4 bk/br/fr 2:00 4-8 free 1:45 9-10 bk/br/fr 2:00 12x25 kick 25 ez/25 hard 10x25 swim 25 ez/25 hard |
| Total 2150 | Total 1900 |
| Friday | Monday |
| 2x300 free build by 50's 0-150 - 200-300 6x125 (1-2) free 3:00 (3-4) choice (5-6) IM + 25 free 3:15 4x100 1,3 IM hard :30 2,4 free ez 150 ez | 10x75 5- free 25ez/25mod/25hard 5- stroke :15 16x50 1-4 & 9-12 free 5-8 & 13-16 25str/25fr :10 on ea 50 - 1:00 after ea 4 -----50 ez 16x25 1-8 alt. kick/swim :10 9-16 alt. swim/kick odd-ez even hard |
| Total 1900 | Total 2000 |
| Wednesday | Friday |
| 4x150 50 swim/50 kick/50 swim 3x ↓(1-3) (3x100) set 1,3 free 2:20 set 2 choice 2:40 -----50 ez 6x75 breathe ea. 3,4,5th stroke :15 | XMAS HOLIDAYS EAT, DRINK & BE MERRY !! |
| Total 2000 | |

"Security is mostly superstition. It does not exist in nature. Life is either a daring adventure or nothing." Hellen Keller

INTERMEDIATE

| JANUARY | |
|----------------------------------------------------------------------------------|----------------------------------------------------------------|
| Monday | Wednesday |
| 10x75 odd-free/even str. :15 | 6x100 odd - free drill :15 even- free |
| 2x300 1. free broken at 100's :15 2. choice | 16x75 1-4 & 9-11 free hard :15 5-8 & 12-16 IM steady |
| 9x50 3- free (25 smooth/25 fast 3- str. - all 1:20) 3- free | 50 ez |
| 10x25 25 drill/25 swim ez | 5 min choice kick |
| Total 2050 | Total 2050 |
| Friday | Monday |
| 10x50 25 drill/25 swim :15 | 8x75 free (25 head-up/50 swim) |
| 10x100 1-3 & 8-10 free steady 2:20 4-7 free ↓ | 4x200 free broken at 100's :05 negative split - 5:00 |
| 12x25 kick ez/mod/hard :10 -----100 ez | 10x50 25 fast - start with dive/25 ez 1:30 150 cool-down |
| Total 1900 | Total 2050 |
| Wednesday | Friday |
| 8x75 odd - free even- choice | 3x100 50 swim/50 kick/50 swim :15 |
| 9x100 1-3 free :15 at 100 4-6 stroke 1:00 at each 4 7-9 free 100 ez | 12x75 free 1:45 1-3 & 7-9 ez/mod/hard 4-6 & 10-12 hard |
| 12x25 speed drill alt. 2-smooth, 1-fast | 20x25 10 swim 10 kick |
| Total 1900 | Total 1700 |

"The real voyage of discovery consists not in seeking new landscapes, but in having new eyes." Marcel Proust

Official of the Year (continued from page 7)

Kay was on the National Technical Committee for a number of years and in 1985 contributed to the development of the first Referees Handbook. She also promoted the development of National Officials Accreditation and was part of the first National Workshop to develop courses for accreditation. In late 1995 she devised and conducted the first oral Referees exam for applicants in WA, which was used as a basis for National Accreditation.

In November 1995 she was appointed as a FINA Referee.

As a co-founder of AUSSI WA, and from her education background she has been dedicated to seeing the organisation at a State and National level develop its education of Coaches and Officials to accreditation standards to an equal standing with the rest of the sporting community.

(What is not mentioned here is Kay's involvement in developing the AUSSI Coaching Accreditation Scheme, but that would take another page to list her accomplishments. - Ed.)

A U.S study found that after two months of vigorous 30 minute sessions of regular exercise 2 to 3 times per week, subjects hearing had improved by as much as 100%. It is thought that increased blood flow to the ear may be the cause.

Susie O'Neill deservedly won the Telstra Female Athlete of the Year. She tied for the award with Triathlon's Jackie Gallagher, which was announced in Melbourne on February 7.

Australian Olympian Ryan Mitchell set a new world Short Course Record in Melbourne before Christmas at the National Short Course Championships. It came after he was disqualified during the heats for an incorrect turn. He was then given permission to swim again in a time trial setting, knowing that he was up to the record breaking swim. However the new mark was not recognised by FINA as it did not follow the strict protocol of publically advertising at least three days before the attempt.

Calendar of Events

1997

- Mar 19-22 South African Masters LC Swimming Championships. Rustenburg, North West Province. Mandy McGregor, PO Box 661 Northland 2116 South Africa. Fax: (27-11) 787 8271
- Mar 27-29 AUSSI Masters LC Championships Sydney International Aquatic Centre, Homebush Bay PO Box 580 Cronulla NSW 2230. Fax: (61 2) 9544 1383
- April 11-13 New Zealand Masters National LC Championships. Stephen Clarke PO Box 6046 Dunedin North. Phone: NZ 473 3190.
- June 24-29 Pan Pacific Masters LC Championships. Lahaina Aquatic Centre, Maui. Hawaii Sports, 1155 Olowalu Way Honolulu, Hawaii. Fax: (1 808) 396 1623.
- October 3-5 The Buckler 4th Irish Open Masters Swimming Championships. Chairman Oswald Schmidt, 82 Earlwood Estate, The Lough, Cork Ireland. Tel/Fax 353-21-968202 (hm) See details this issue.

1998

- Date to be announced Vth World Masters Swimming Championships. Casablanca
- Aug 9-14 World Masters Games. Portland, Oregon. See details this issue

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Introduction

The periodisation of athletic training forms the basis of most modern coaching programs. The popularity of this methodology of training was greatly facilitated by the successes of East European nations such as the USSR and GDR during the 1960's-1980's. The performance goal for each particular season is the basis upon which periodised training programs are designed. The progressive increase in training load (volume and intensity) is a necessary prerequisite for the achievement of high level performance. Longer-term goals lead to the development of quadrennial cycles particularly for Olympic sports.

The question is often asked whether the periodisation of training is an art or science. In essence, periodisation is both. The development of a periodised program requires the application of basic training principles such as specificity, progressive overload, reversibility and individualisation. However, the formation of a training program from these basic elements is dependent upon the creativity and imagination of each coach. This article examines the use of periodised training by three experienced international coaches to show how the basic principles can be applied, and training programs tailored, to suit the individual requirements of coaches and athletes.

Terminology

The periodisation of training is a process that divides up the training year (annual or yearly plan) into a number of smaller and more manageable training phases and cycles (Figure 1). In team sports, the training year is normally divided into pre-season, in-season and off-season phases. Each phase is further subdivided into general and specific sub-phases according to the requirements of the sport and athletes. In individual sports, the annual plan centres on the major competition(s) for that particular year. An outline of the annual plan used by the AIS Swimming Program has been discussed previously (Pyne, 1993). Details of periodised programs used in both North America (Maglischo, 1982; Colwin, 1990) and Germany (Wilke and Madsen, 1986) have also been presented previously.

Periodised training is a feature of modern sports because it facilitates the

The Periodisation of Swimming Training at the Australian Institute of Sport

by **DAVID PYNE**, Physiologist, Australian Institute of Sport

| Meso Cycle | Preparation for National Championships | | | | | | | | | | | |
|-------------|----------------------------------------|--|--|-----------|--|--|----------|--|--|-------------|--|--|
| Macro Cycle | General | | | Endurance | | | Specific | | | Competition | | |
| Micro Cycle | | | | | | | | | | | | |

Figure 1: The traditional structure of a periodised training program

ability to tolerate the volume and intensity of training required to support and improve the level of competitive performance. The creative integration and development of the volume and intensity of training is an important part of modern coaching. After a period during 1980's where low volume — high intensity swimming programs were popular in North America and Australia, there has been a return to a more balanced approach in the design of training programs.

Common Features of a Periodised Training Program

- There are a number of features or characteristics of training programs used by high level coaches in both individual and team sports.
- The long-term performance goal for the season forms the basis upon which the training program is designed.
- There is a progressive and cyclical increase in training loads.
- There is a logical sequence to the order of the training phases. Moderate intensity endurance or aerobic training is undertaken first, before development of anaerobic threshold and maximal oxygen uptake capacities, strength and general muscular endurance, general power and ultimately competitive speed.
- The training process is supported by a structured program of scientific monitoring in the areas of physiology, biomechanics, psychology and physiotherapy.
- There is intensive use of recovery or regenerative techniques throughout the training program.
- Emphasis on skill development and refinement is maintained throughout the training program.
- Emphasis is given to the improvement of general athletic abilities through the incorporation of stretching, alternative aerobic activities, ball sports, calisthenics and martial arts.



- Each part of the training program builds on the preceding phase.

Meso Cycle (Season)

This cycle represents the entire swimming season and is normally 16 to 24 weeks in duration. In Australia, most club and national level swimmers would undertake a single meso cycle for the summer season from October-March. This period includes regional and state championships, and for the more advanced swimmers the Open and/or National Age Championships in March or April. For elite and international swimmers, a second meso cycle or preparation is required for the major international competition (e.g. Olympic World Championships, Commonwealth Games, or the Pan Pacific Championships) normally held in August each year.

Macro Cycle (Major Emphasis)

The macro cycle represents a major phase of training within a season or meso cycle. The length of a macro cycle may vary from 3 to 10 weeks, with 3 or 4 weeks being the most common duration within Australian swimming. We have demonstrated previously that each macrocycle should have a specific aim of

eliciting significant improvement in a particular aspect of fitness (Pyne and Touretski, 1993). The macro cycle is used within the AIS Swimming Program to emphasise the development of such factors as general preparation, general endurance, specific preparation and competitive performance.

Micro Cycle (Weekly)

The term microcycle is used to refer to the weekly training plan and normally includes details on each individual training session. Again the microcycle is designed to contribute to the achievement of the overall training objective. The tradition in Australian swimming has been to use a six day microcycle that runs from Monday to Saturday each week. The AIS swimming coaches have introduced the European concept of a more flexible training plan, where microcycles are planned and undertaken in accordance with the overall objectives of the meso cycle, and not necessarily to fit the Australian tradition of having a rest day on Sunday. This is particularly evident with microcycles in the specific macrocycle in the weeks prior to competition. Swimmers may be required to train on consecutive days for up to three weeks, including as many as three pool-based training sessions per day. Appropriate planning and intensive use of recovery techniques permits high training volume and intensities to be achieved and facilitates improvement or progression to a higher fitness and competitive performance level.

Periodisation of Swimming Training at the AIS

The following case studies illustrate the concept that the application of a periodised approach to a training program depends on the individual requirements of each sport, coach and athlete. All these programs were used in the preparation of swimmers for the 1994 Australian Swimming Championships which served as the selection trials for the 1994 Commonwealth Games and World Swimming Championships. Examination of these programs reveals different terminology used by coaches within the macro and micro cycles. The utilisation of common terminology proves to be difficult, even within the same high level program.



Case Study 1: Sprint Program

Coaches: Gennadi Touretski and
Jim Fowlie

Gennadi Touretski, formerly with the USSR National Swimming Team, has been the Head Coach of AIS Swimming since December 1992. He is recognised as one of the leading swimming coaches in the world, particularly with the success of his swimmer Alexandre Popov, who won three gold medals at the Barcelona Olympic Games. He is the current world record holder for the 100m freestyle (short course) and ranked number 1 in the world.

Jim Fowlie is the Sprint Coach with the AIS Swimming Program, and brings a wealth of experience from his long involvement with Canadian Swimming. He currently coaches Australian representatives Anna Windsor, Petria Thomas, Adam Pine and Sarah Ryan.

The program for the sprint swimmers is based on short macrocycles structured in multiples of three weeks e.g. a typical preparation of 12 weeks may involve 4 x 3 week macrocycles. (Figure 2)

Depending on the requirements for individual swimmers, Touretski may use short microcycles of 3 days (5 training sessions) similar to the format used by the former GDR during their great successes of the 1970 and 1980's. The short microcycles are supported by scientific monitoring (routine measures of heart rate, lactate, serum concentration of creatine kinase and ammonia) and extensive use of recovery techniques (massage, flotation, spa, sauna, stretching and fluid and nutrient supplementation). Figure 3 is an example of how a microcycle may look. This pro-active approach is taken to overcome the problem of swimmers seemingly "bogged down" in the middle of a long preparation with little apparent progress in the development of endurance or speed. In this way swimmers may be required to train for up to 21 consecutive days during specific phases prior to competition.

| Week No. | Macrocycle | Volume (km) | Competition |
|----------|------------------|-------------|------------------------|
| 12 | Preparation | 40 | |
| 11 | Preparation | 50 | |
| 10 | Preparation | 60 | QLD State Titles |
| 9 | General | 40 | |
| 8 | General | 50 | |
| 7 | General | 40 | |
| 6 | Specific | 40 | |
| 5 | Specific | 50 | NSW State Titles |
| 4 | Specific | 40 | |
| 3 | Race Preparation | 40 | |
| 2 | Race Preparation | 30 | |
| 1 | Competition | 20 | National Championships |

Figure 2: Example of macrocycles used for sprint swimmers at the Australian Institute of Sport (Coaches: Gennadi Touretski and Jim Fowlie)

| Day | Microcycle | Comment |
|-----|--------------------------|----------------------------------------------------------------------------------------------------------------|
| 1 | Microcycle 1 (Endurance) | Emphasis on endurance and threshold work undertaken with correct technique. |
| 2 | | Three training sessions per day in this microcycle. |
| 3 | | Some short sprints integrated with endurance-oriented training. |
| 4 | Adaptation/Recovery | Active recovery techniques including spa, sauna, plunge pool, massage and low intensity swimming (2000-3000m). |
| 5 | Microcycle 2 (Power) | Transition from endurance to power-based activities. |
| 6 | | Use of speed resisted training techniques. |
| 7 | | Careful integration of dry-land training and specific swimming drills for power. |
| 8 | Adaptation/Recovery | Active recovery techniques including spa, sauna, plunge pool, massage and low intensity swimming (2000-3000m). |
| 9 | Microcycle 3 (Sprint) | Substantial increase in specific power and maximal swimming speed. |
| 10 | | Use of speed-assisted training techniques. |
| 11 | | Inclusion of simulated or competitive races. |

Figure 3: Example of a specific 11 day microcycle for sprint swimmers to stimulate the adaptations required to achieve a higher level of fitness and competitive performance.

| Week No. | Macrocycle | Volume (km) | Competition |
|----------|-----------------------------|-------------|------------------------|
| 1 | Aerobic | 60-70 | |
| 2 | Aerobic-Anaerobic Threshold | 50-70 | SA State |
| 3 | Anaerobic Threshold | 60-70 | |
| 4 | Max Oxygen Uptake | 50-60 | NSW State |
| 5 | Lactate Tolerance Sprint | 40-50 | |
| 6 | Lactate Production Sprint | 30-35 | |
| 7 | Sprint | 20-25 | National Championships |

Figure 4: The mesocycle of the training of the AIS form stroke swimmers using the program of coach: Barry Prime.

| Week No. | Macrocycle | Volume (km) | Competition |
|----------|------------------|-------------|------------------------|
| 19 | Endurance | 70 | |
| 18 | Endurance | 80 | Invitational |
| 17 | Endurance | 90 | |
| 16 | Adaptation | 50 | |
| 15 | Quality | 70 | Sprint Meet |
| 14 | Endurance | 90 | |
| 13 | Endurance | 100 | |
| 12 | Adaptation | 40 | |
| 11 | Sprint | 50 | |
| 10 | Quality | 70 | |
| 9 | Sprint | 40 | QLD State Titles |
| 8 | Adaptation | 50 | |
| 7 | Quality | 70 | |
| 6 | Quality | 70 | |
| 5 | Quality | 60 | |
| 4 | Sprint | 50 | NSW State Titles |
| 3 | Quality | 60 | |
| 2 | Race Preparation | 45 | |
| 1 | Race Preparation | 35 | |
| 0 | Race Preparation | 20 | National Championships |

Figure 5: An example of a traditional Australian 20 week meso cycle for middle-distance and individual medley swimmers — (Coach: Bill Nelson)



Case Study 2: Form Stroke

Coach: Barry Prime

Barry Prime has been with the AIS program since February 1993, after leaving Great Britain where he was an Olympic Coach in Barcelona. He is most well known as the coach of champion British breaststroke swimmer Nick Gillingham, a former world record holder, 1992 Olympic Silver Medallist in the 200m breaststroke event and ranked number 1 in the world in that event in 1993. Prime's training program is based on a short 7 week cycle (Figure 4) with two consecutive cycles forming a mesocycle in the preparation for each major competition. Most of the leading swimming nations, including Australia, conduct their selection trials (often at the national championships) some 12-16 weeks prior to major international competition. With this schedule, there is sufficient time to prepare swimmers with a 14 week mesocycle consisting of 2 x 7 week macrocycle. This periodised program also permits swimmers to undertake a greater number of competitions — an area in which the isolation of Australia from Northern Hemisphere competition has proved historically to be a difficulty for Australian swimming.

Case Study 3: Middle-Distance Program

Coach Bill Nelson

Australian coach Bill Nelson has six years experience at the AIS and in recent years has taken responsibility for butterfly, middle-distance (200m, 400m) and individual medley swimmers. He was an Olympic Coach in Barcelona in 1992 and has had major success with Matthew Dunn, Australian Record Holder in the 200m and 400m Individual Medley (ranked 4th, 5th in the World respectively) and Scott Miller in the 200m Butterfly (ranked 3rd in the World) and Backstroke (200m BK Commonwealth Record Holder). Nelson's program (Figure 5) is based on the traditional Australian philosophy of a fairly long preparation (meso cycle) over 16-20 weeks which has produced many champion middle-distance and distance swimmers.

The Nelson program is based on the philosophy that middle-distance and individual medley swimming requires

the development of a high level of endurance fitness. The extended duration of this long meso cycle provides the opportunity for endurance fitness to be developed to a sufficient level before proceeding on to more specific speed and quality training. The peak total weekly volume achieved by the distance freestyle and individual medley swimmers during the meso cycle is close to 100km, while the form stroke (butterfly and backstroke) swimmers reach 70-80km or approximately 20% less. Premature transfer to quality training without the necessary aerobic background makes it difficult for swimmers to tolerate the stresses of high intensity work, and may ultimately, limit the level

of competitive performance attained in the current and future meso cycles.

Summary

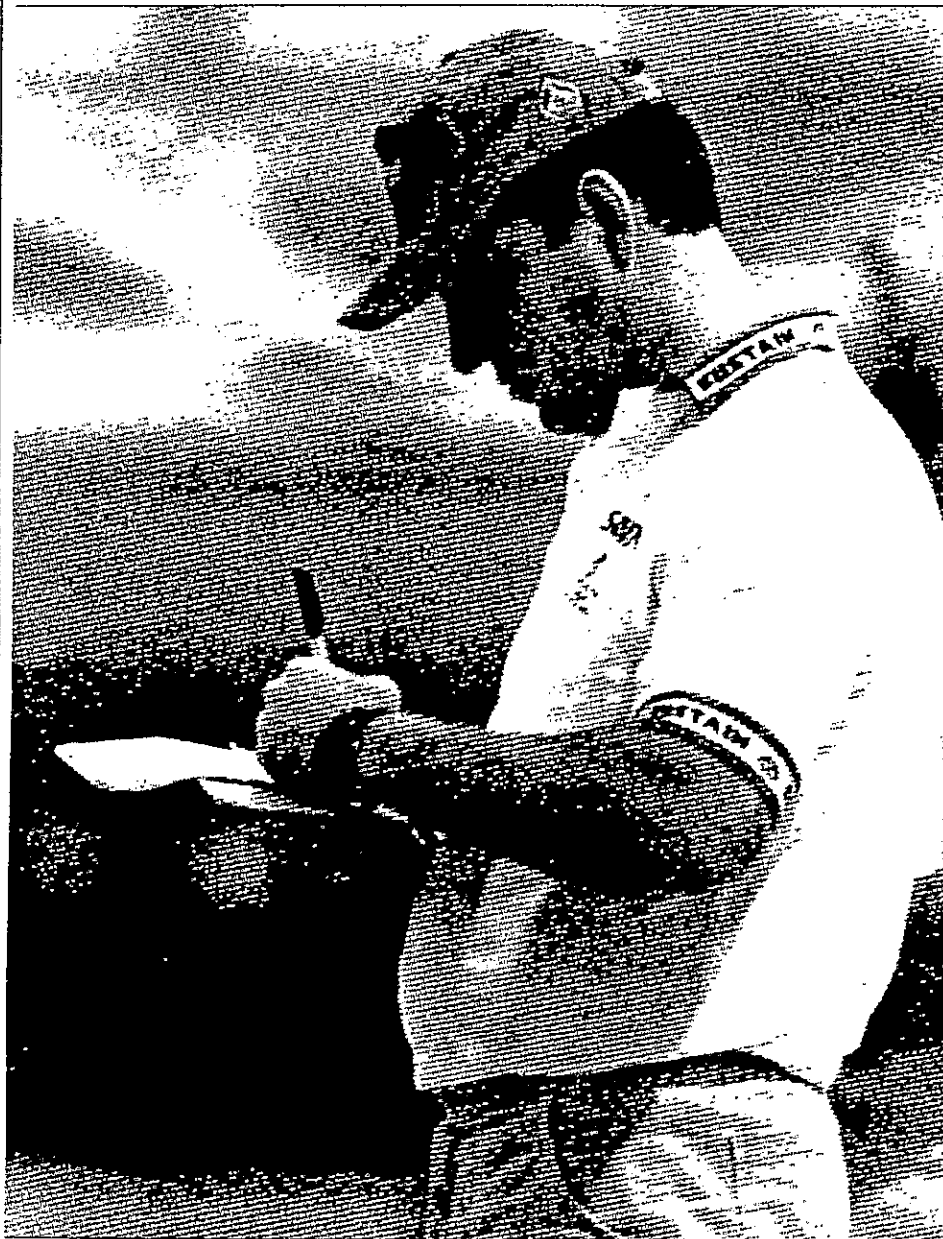
1. The periodisation of training is a commonly used method of planning training programs for both individual and teams sports. The value of periodisation lies in the appropriate application of the principles according to the individual requirements of the sport, coach and athlete.
2. The AIS Swimming Program is an internationally recognised program that has contributed to the success of Australian swimming, the nation's leading Olympic sport. The program has an international orientation

reflected by a coaching staff led by Gennadi Touretski (Russia), Jim Fowling (Canada), Barry Prime (Britain) and Bill Nelson (Australia).

3. The process of periodising athletic or sports training is based on the development of meso (season), macro (major emphasis) and micro (weekly) cycles.
4. The periodisation for the sprint program is based on short macro and micro cycles.
5. The preparation of the form stroke swimmers (breaststroke and backstroke) by Barry Prime is based on a 7 week meso cycle.
6. The preparation of middle-distance swimmers is based on a more traditional long meso cycle of 14-20 weeks.
7. All coaching programs are characterised by forward planning, the use of intensive recovery techniques and nutritional support, and the support of scientific and medical services. The success of a periodised training program ultimately depends on the experience, commitment and expertise of each individual coach.

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The Coach as a Teacher

by Dr Ken Davis, School of Human Movement, Deakin University - Geelong Campus

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Introduction

Coaches with a teaching background are often a target for vitriolic remarks from the uninitiated. Yet, teaching strategies provide such a strong basis for coaching that their principles should be embraced rather than belittled.

All coaches should be good teachers. Of course, it does not follow that all good teachers will make good coaches and that may be the source of suspicion in the coaching fraternity. Coaching does require additional skills, but teaching expertise can arm the coach with useful techniques to enhance the performance of their athletes.

While some may contend that teaching skills are advisable in coaching junior players, their value with adult players is often underestimated. Utilising sound teaching principles should predominate throughout all levels of sport. The purpose of this paper is to provide some guidelines for incorporating more of a 'teaching ethos' into one's coaching. For ease of communication, the focus here will be on male football coaches but the approach could be readily adapted to all sports and gender.

The Coach's Pathways to Teaching Success

1. The vision

The first step for the coach is to see himself as a teacher. Effort should be made to rid himself of any prejudices he may have about the teaching profession. The coach should commit to learning as much as he can about the nuances of teaching.

2. Understanding of skills involved in the sport

A coach should develop a strong image of the range of model techniques that can contribute to skilled performance. Such images should be created from watching elite performers and matching these observations with biomechanical principles. The coach should identify key teaching points to enhance the skill of each player. A knowledge of the sequential components of skills is imperative to selecting parts of the movement requiring attention. Work on troublesome segments should then be sequentially developed until eventually the whole movement can be skillfully executed. My impression here is that teachers believe they can improve skill. Many coaches either believe it is too difficult or that you can't change an already established skill. All coaches should be committed to explain to players why skills should be performed in a certain way.

3. Progressively increase pressure

In teaching skills at training, appropriate progression should be incorporated. The following hierarchy of increasing pressure provides a useful framework for either developing a new skill or modifying an old one.

- no opposition - easy pace
- no opposition - faster pace
- token opposition - easy pace
- token opposition - faster pace
- real opposition - match pace

- functional practices - where selected game situations which use the skills are practised. For example the use of handball may be incorporated into a boundary throw-in drill
- conditioned games - in competition, certain conditions can be imposed that provide more practise for a particular skill. For example, players could be instructed to handball every time they take a mark.

4. Organisation

A good teacher is well prepared. A coach should prepare what is going to be said to players at both training and competition. All drills should reflect the needs of the players and should provide a comprehensive coverage of the skills.

The positioning of players and size of groups should be carefully considered to ensure maximum participation in a safe environment. Drills should be specific to the match situations. Each of the above takes precise planning to implement successfully. Whenever demonstrations are given, the coach needs to organise players so that all can clearly see the key points that are identified.

In discussions with players both at training and in competition, the coach should always either jot down or rehearse the salient points to emphasise. Whenever such occasions are imminent, the coach should quietly withdraw from the scene to gather himself in order to provide concise and purposeful communication.

On match days, the coach should prepare what he is going to say to players before, during and after the game. He should consider the emotive emphasis he wishes to convey. Very rarely should he allow his emotions to run rampant because in that state, clear, rational thought often is neglected. The coach should monitor his repeated use of phrases and try to develop new ones so that players maintain concentration and interest in his oration.

Preparation is the key to success in all performance domains. All the great coaches have highly developed organisational skills.

5. Information overload

The knowledgeable coach often falls into the trap of confusing athletes with too much or too advanced information. He should keep his instructions concise and maintain eye contact with athletes to determine if the message is understood. Look closely for all 'body language' clues such as 'frowning' or 'rolling of the eyes'

which might indicate some confusion. Ask calmly at the end of a talk, 'does anyone not understand what I've just said?'

6. Capture the moments of readiness

Good teachers become aware of children when they are absorbed in an activity such as learning a skill. These 'magic' moments may be rare for even the best of coaches, but they should be capitalised on when they do occur. Become in tune with players when they are so absorbed and enthused and let the moment extend, even if it conflicts with the plan. Frequently when coaching my own children I have been aware of this phenomenon. Often when they have been 'ready' I have been too tired or preoccupied to maximise the moment. Alternatively, when I've been 'ready' to be a 'great coach' they have often appeared disinterested! Our task as coach should be to be alert and committed, whenever the moments of readiness occur.

7. Motivation

While trying to develop intrinsic motivation of athletes all leaders can play a role in producing more desire in their charges. Here are some strategies that should enhance the motivation of players.

The coach should:

- care about each individual in the team and show it by his actions. Talk to each player about their performance and develop an interest in their life outside of sport.
- involve athletes in decisions about the rules and tactics. An involved individual who feels their opinions are valued is more likely to want to perform well.
- keep players active at training with plenty of variety. Always try to come up with something different. One can change the venue, drills, equipment, even the coach! The key is to have players wanting to train because they enjoy their time at the club.
- be purposeful but maintain a sense of humour. Engage in some light-hearted moments with the players. Show them their company is enjoyed, but always be able to focus when necessary.

Nothing great was ever achieved without enthusiasm

R.W. Emerson

- help players set realistic, challenging and measurable individual and team goals. All individual goals should be consistent with team goals. Establishing a goal setting program is one of the surest ways to maintain motivation for sport.
- promote praise and genuine encouragement whenever a player shows progress towards his goals. Try to avoid the same old phrases, such as 'good job', 'well done' - be creative and show excitement.
- encourage players to be passionate about their sport. Ask them to watch other players and make notes about their positioning etc. In trying to become a better teacher, coaches need to be aware that many of their athletes have bitter memories of their time at school and will often resist any temptation to 'scholasticise' their sport. So be careful about bringing out the note pad with some players. Be patient and try to gradually get players to think their way through a contest.

8. The coach as a performer

Teachers are performers - every day, no matter what their mood, they have to stand up and deliver a message in an enthusiastic and meaningful way. They have to entertain, cajole and inspire children. It is not sufficient to have the knowledge, you must be able to present your material in a manner that captivates the audience. So too the coach has to perform. He needs to get enervated to talk to players, to vary his tone of voice to emphasise key points, and to put on his 'game face' on match days.

9. The coach as a teacher on match days

Keep pre-game instruction brief. Feed individuals specific requirements of their task but avoid saying the same things to players each week. The coach should use all the senses in his preparation plan - write down key points on the board as well as talking about them. Use pictures as well as words to create the right focus for the contest. He should show the players that he believes they can achieve their objectives.

During the game send messages to players to reinforce good play. Only as a last resort should the coach abuse or drag a player for a mistake. If he wants players to take risks then he must accept any mistakes that may occur. Verbal abuse and dragging players from the ground undermines confidence and usually creates tentative play or complete withdrawal from the heat of competition.

Limit yelling from the boundary - be calm and analytical, always trying to process what is going on in a context and how the team's performance might be improved.

After the game a coach should not get involved in a long diatribe about the performance. Briefly mention some positives, and if maximum effort was obvious then reinforcement may be appropriate. He should wait until he has calmly dissected the performance before he discusses the areas that need improvement. He should always avoid over critical personal comments in this evaluation - he should not be attacking the person, but the action. Create a sense that a defeat can be useful because it can provide direction. Identify the direction and cover these aspects in subsequent training sessions. Don't take any player for granted - even the champions need reinforcement at times.

FIVE KINDS OF POWER

Coaches are figures of authority, sometimes leaders and often powerful people. But there are different types of power which exert a variety of responses. How do you rate yourself on the issue of power?

Leadership and power are actual relationships. The strength of the leadership depends on whether it is more advantageous for an individual to join your team as opposed to being independent or joining a rival team. The five types of leadership are:

♦ *Legitimate power.* Subordinates respond to their boss primarily on the basis of authority. This type of authority is conferred and is the basis for the hierarchy or authority in any organisation.

♦ *Reward power.* As a result of having legitimate power, some people in an organisation have the power to grant rewards in exchange for the compliance of others. If you wish to extend power in your business, give people the right to promote, give pay rises, praise and recognition.

♦ *Coercive power.* Coercive power is based on fear and some kind of punishment. It's the kind of power schoolteachers, parking police and 'enforcers' have. People obey them in order to escape a negative outcome.

♦ *Reverent power.* Some power holders are attractive in themselves. For example, a person who has 'been there, done that' gets a lot of respect from those who are trying to 'get there'. This is the power of mentors and role models. Close supervision is seldom necessary because of the subordinate's desire to please and learn.

♦ *Expert power.* In truth the leader is not necessarily always an expert. A real expert, who may have no conferred legitimate power, can easily subvert the authority of a leader who has little expertise. It is therefore sensible to keep such people onside, and to gradually promote them to the level where they rightfully belong.

LEAPS

Even though it has recently received much attention, plyometric training is not particularly new. The hopping, bounding and jumping exercises that we now call plyometrics has actually been a part of the training of athletes in a variety of sports for years — it just was not always called plyometrics.

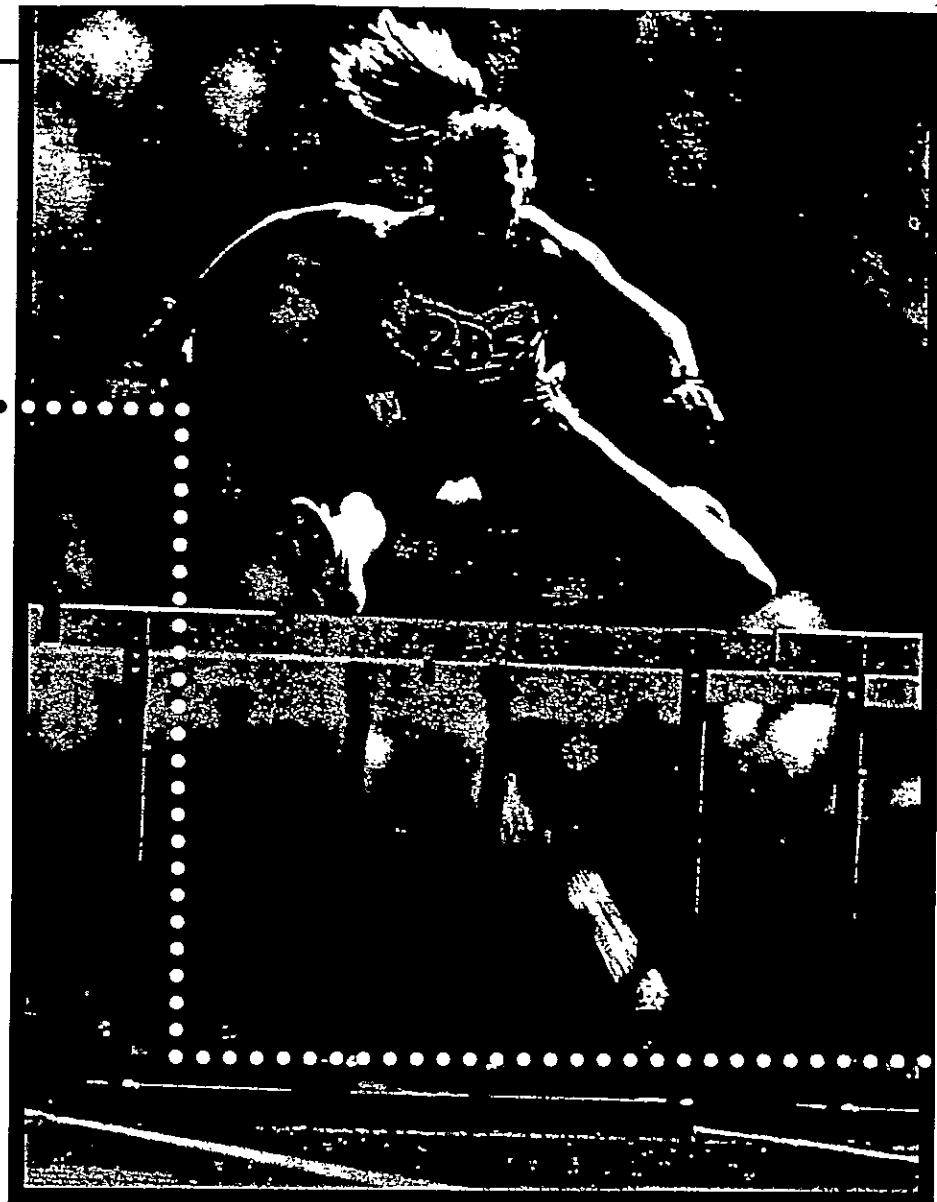
The word "plyometrics" first appeared in training literature in the late 1960s, when scientific research gave us a fundamental understanding of the elastic properties of muscle and its trainability. This then enabled the practitioner to better understand how to train muscles for explosive power and thus how to more effectively apply plyometrics.

Despite this increase in knowledge, there is still much misunderstanding concerning the application of plyometrics. Because plyometrics has received so much publicity, there have been many exorbitant claims about its effectiveness; at the same time, it has also received much undeserved blame for causing injuries and creating overtraining problems.

Plyometrics is neither a panacea nor a high-risk endeavour, but it can be an effective method for training muscles in a new and exciting way — as long as the coach or athletic trainer understands how to apply the exercises correctly. I will attempt to clear up some of the myths and misconceptions that surround plyometrics by explaining those factors that will help in designing and implementing more effective plyometric training programs.

What is plyometric training?

Plyometric training is specific work for the advancement of explosive power. Many traditional training programs aim to develop an athlete's maximum strength output, which, when tested in



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a performance setting, takes 0.5 to 0.7 seconds to exhibit. However, in most athletic events, the explosive/ballistic movements that athletes perform do not take that long. Therefore, the premium is on generating the highest possible force in the shortest period of time and reducing or stopping this force at the end of the action. This is the objective of plyometric training and is its primary role in training and rehabilitation programs.

The physiological theory behind plyometric training is to develop efficiency in the stretch/shortening cycle of muscle action. During the stretching (eccentric lengthening phase) of muscle action, a greater amount of elastic energy is stored in the muscle. This elastic energy is

then reused in the ensuing shortening (concentric) muscle action to make it stronger. The key is to shorten the coupling time, that is, the time it takes for the muscle to switch from the lengthening/yielding phase to the shortening/overcoming work phase. This leads us to a fundamental principle of plyometric training: the rate, not the magnitude, of the stretch is what determines the utilisation of elastic energy and the transfer of chemical energy into mechanical work. However, it is crucial to understand that plyometrics is only one piece of the training puzzle. The overall goal is to improve the relationship between maximum strength and explosive power; therefore, plyometrics must be used in conjunction with other power

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development methods. In other words, plyometrics can only be effective if the athlete also develops basic strength.

Training loads

When devising a plyometric program, the prime consideration, as with any training method, is determining appropriate training loads. Because plyometric exercises entail a high neuromuscular demand, understanding the training demands of the different activities and allowing enough recovery time is very important to preventing injuries.

The following factors must be considered when assigning training demand:

Displacement of centre of gravity: horizontal displacement is less stressful than vertical displacement. This is, of course, dependent on the weight of the athlete and his or her technical proficiency in performing the jumps.

athlete is — in terms of both training age and stage of physical development — the lower the volume of plyometric activities should be for that athlete.

Intensity: like volume, greater intensity will raise the training demand. However, it is important to remember that the nature of plyometric exercises inherently demands high-intensity work for optimum return. Generally, the more advanced the athlete is, the greater tolerance he or she has for a larger volume of higher intensity work.

Density: this refers to the number of times plyometrics is repeated within a particular training cycle. The greater the density, the greater the training demand. As a general rule, it is probably inadvisable to include more than three plyometric sessions in a seven-day workout cycle.

Training age: this is defined as the number of years an athlete has been

involved in a formal training program. At younger training ages, the overall training demand should be kept low. The exercises or games should be of low nervous-system demand and low motor-complexity. However, it is still possible to get a large number of contacts (volume of activity) with minimum stress through game activities such as jump rope and jumping relays.

To further quantify the task of determining appropriate training loads, I have developed a rating scale (see Table 1). The rating scale is intended as a tool to help monitor the stress of plyometric training, especially as it relates to other activities with high neuromuscular demand, such as weight training and sprinting, the underlying premise is that an activity of high nervous-system demand will take twice the recovery time as compared to a similar load of metabolic work.

and BOUNDS

By Vern Gambetta

Director of Conditioning for the Chicago White Sox and President of Optimum Sports Training in Sarasota, Florida.

Weight of the athlete: the heavier the athlete, the greater the training demand. A low-demand, in-place jump for a 150-pound athlete can be a high-demand jump for a 250-pound athlete.

Limb involvement: single-support exercises demand more than those involving double support. For example, single-leg repetitive hops are more stressful than repetitive, double-leg jumps.

Speed of execution: a faster speed of execution for exercises like single-leg hops or alternate leg bounding will raise the training demand.

External load: adding an external load, such as a weight vest, will significantly raise the training demand. It should be noted that external loading will also slow down the movement, thus negating some of the advantages of plyometric training.

Volume: the greater the volume of training, the greater the training demand. Essentially, the volume of training can be high if the intensity of the plyometric activity is low. As a rule, the younger the



Basic strength

As mentioned above, an athlete must have some basic strength in order for plyometrics to be safe and effective. Some professionals have suggested that prerequisite strength levels, such as the ability to squat two times one's body weight or leg press two-and-one-half times body weight, are necessary. However, based on my practical experience, research, and the growing understanding of the physiological basis of plyometric training, I feel that these criteria are quite high and, in many cases, unreasonable. When training young athletes, such high strength levels are not necessary or realistic, especially considering the relatively low body weight involved. This is not to say that basic strength is unimportant, rather that it is only one of many factors that must be considered before beginning plyometric training.

A better way to determine if an athlete is strong enough to handle plyometrics is to test his or her stabilisation and

eccentric strength. To begin to incorporate plyometrics into a training program, the prime concern in order to prevent injury is strength in the stabilising muscles. Stabilisation strength levels can be determined by several simple tests that may be easily administered and interpreted (see Table 2). If the athlete is unable to satisfactorily perform these tests, then he or she should begin a remedial program of balance and stabilisation exercises to bring these qualities up to acceptable standards before plyometrics are incorporated into the training program.

The next concern after stabilisation strength is eccentric strength. Especially in more complex, high-volume and high-intensity plyometric training, lack of eccentric strength can be a limiting factor. Without adequate levels of eccentric strength, rapid switching from eccentric to concentric work becomes very inefficient. It is possible to evaluate eccentric strength through stabilisation jump tests and observation of basic jumping exercises (see Table 3). If, on observation, you see an excessively long amortisation phase and a slow switching from eccentric to concentric work, then eccentric strength levels are not adequate and the training should be remedial and low in volume and intensity. The specific goal before any emphasis is placed on plyometric training should be to raise the athlete's eccentric strength to an acceptable level.

Skill

Proper execution of the exercises must be continually stressed, regardless of the athlete's proficiency level. In the beginning, it is especially important to establish a sound technical base upon which to build the higher-intensity work. Jumping is a constant interchange between force production and force reduction, which leads to a summation of forces utilising all three joints of the lower body: the hip, knee and ankle. The timing and co-ordination of all limb segments will yield a positive ground-reaction force, which results in a high rate of force production. Table 4 is a guide for analysing this skill. This guide is especially valuable when observing the athlete frame-by-frame on high-speed video.

A key element in the execution of proper technique is the landing. The shock of the landing should not be absorbed exclusively by the foot, but

Table 1: Plyometric Demand Rating Scale

| | |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1 = very low stress | Recovery very rapid. <i>Example:</i> jump rope or ankle bounces or other similar low-amplitude jumps. |
| 2 = low stress | Recovery rapid. One day required. <i>Example:</i> tuck jumps or other similar in-place jumps. |
| 3 = moderate stress | One or two days for recovery. <i>Example:</i> stair jumps or other similar short jumps. |
| 4 = high stress | Recovery slow. Two days required. <i>Example:</i> hops or bounds for distance or other similar long jumps. |
| 5 = very high stress | Recovery very slow. Three days required. Highest nervous system demand. <i>Example:</i> depth jumps or other similar shock-type jumps. |

Table 2: Balance and Stabilisation Tests

(These tests are appropriate for use with all ages and should be performed without shoes to test the stabilisers of the foot and ankle.)

- 1. Static Stand (Hip Flexed)**
 - (a) Stand erect on one foot.
 - (b) Flex the hip and bend the knee of the non-supporting leg.
 - (c) Hold this position for 10 seconds.
 - (d) Observe the ability to hold the position with as little shaking or lateral deviation as possible.
- 2. Single Leg Squat**
 - (a) Squat bending at the ankle, knee and hip.
 - (b) Hold lowest possible position for 10 seconds.
 - (c) Observe the depth of the squat and the ability to hold the position with as little shaking or lateral deviation as possible.

— Klatt, 1988



"Take time to quietly reflect on what the purpose-vision is in your life. It will guide you through daily activities as well as through any stormy periods in your life." Bob Miller, 100 Personal Effectiveness Traps And Their Solutions.

Table 3: Stabilisation Jump Tests

1. **Hop for distance:** appropriate for use with all ages.
 - (a) Hop maximum distance. Hold the landing (like a gymnastics landing) for 10 seconds.
 - (b) Compare the distance achieved with the right and left legs.
 - (c) Check the ability to hold the landing position for 10 seconds.
 - (d) Check if the athlete lands bending at the ankle, knee, and hip, incorporating all three joints.
2. **Hop down (off 12 inch box):** use only with more mature athletes.
 - (a) Hop off the box for maximum distance. Hold the landing (like a gymnastics landing) for 10 seconds.
 - (b) Compare the distance achieved with the right and left legs.
 - (c) Check the ability to hold the landing position for 10 seconds.
 - (d) Check if the athlete lands bending at the ankle, knee, and hip, using all three joints.
3. **Repetitive jump test** (maximum effort jumps): appropriate for use with all ages.
 - (a) Jump up and down repetitively with a maximum effort jump as rapidly as possible for 30 seconds.
 - (b) Observe how rapidly the athlete can switch from eccentric (down) to concentric (up). An excessively long switching time indicates a poor level of eccentric strength.
 - (c) Observe how much the athlete deviates from the original starting position. Deviation forward, back or laterally indicates poor balance and stabilisation.
 - (d) Count the number of jumps.

— Klatt, 1988



should be addressed immediately through a core strengthening program. This program should consist of exercises to strengthen the abdomen and the spinal erector muscles as well as the rotational muscles of the trunk.

The arms make a significant contribution to correct exercise execution in terms of both balance and force production. Research has shown that the arms can enhance the jump by up to 10 percent. It is important for the athlete to learn to use the arms to transfer momentum to the whole body through a correct blocking action. It has been my experience that the torso position and the synchronisation of the arms to the exercise are the two aspects of technique that are most difficult for a beginner to master.

Progression

A well-defined progression will go a long way in eliminating some of the inherent risks of plyometric training. The key is not to rush, making sure the athlete masters each step before proceeding.

At the beginning stages, double-leg take-offs are preferable to single-leg take-offs, and appropriate activities include jumping rope, hop-scotch, sack races and various jumping and hopping relays to reinforce the natural movement patterns. Within each step there can be

Table 4: Jumping Skill Checkpoints

1. **Posture:** check head position and torso position.
2. **Foot strike:** must be on the full foot as opposed to the ball or heel of foot; should not land on flat foot.
3. **Landing:** Should be quite, not loud/slapping.
4. **Leg action:** check amplitude and synchronisation.
5. **Arm action:** must be co-ordinated.

rather by a combination of the ankle, knee and hip joints working together that will absorb the initial shock of landing and transfer that force throughout the body's muscles. Therefore, using all three joints properly is key in allowing the body to use the elasticity of the muscles to absorb the force of landing, which is then utilised in the subsequent movement.

This is not to minimise the importance of the foot strike. The foot strike must be on the full foot in order for the foot to help absorb the shock. It is incorrect to land either completely on the heel or completely on the ball of the foot; such landings will transfer high-impact forces through the foot bones and

the ankle and knee joints rather than allowing the muscle to absorb the shock. In addition, loud slapping noises created by the landing indicates that the landing technique is incorrect and the exercise should stop. During repetitive jump tests, the athlete should react to the ground as if it is hot in order to emphasise quickness off the ground.

Upright carriage of the torso is also necessary, to ensure proper projection of the centre of mass and to avoid undue strain on the lower back. Correct postural alignment is directly related to core (torso) strength. If the athlete is having problems holding the torso erect during the movements, this problem

built-in, increasing levels of difficulty, depending on the training level of the athlete and his or her aptitude for learning; as the level of mastery of the exercises increases, the amplitude of the movements should also increase. Throughout all stages, it is of paramount importance to place continual emphasis on co-ordination, fluid movement patterns and correct motor patterns — regardless of the step in the program.



The following sequential program is one that I have used for years:

1. Landing Exercises:

To teach proper foot strike, co-ordination of the ankle, knee and hip to absorb shock and correct body alignment. Have the athlete begin with a simple standing long jump, with a two foot landing. This should be a submaximal jump with an emphasis on "sticking" the landing. The athlete should learn to land quietly on the full foot and absorb shock by bending at the ankle, knee and hip. Repeat the exercise several times until the athlete is comfortable. Next, have the athlete hop on one foot, with the same objective as above. Repeat until comfortable.

2. Stabilisation Jumps:

To reinforce the correct landing technique and raise levels of eccentric and stabilisation strength. This exercise is very similar to the exercises in Landing Exercises; the main difference now is

that the athlete will hold the landing position for a five count before initiating another hump or hop. Repeat until the athlete can stick and hold three jumps, then three hops on each leg for a five count.

3. Jumping Up:

To teach the take-off action and the use of the arms. Start with a stable bench or box at knee height. Have the athlete jump up onto the bench. Emphasise a forceful swing of the arms to transfer momentum to the whole body. Gradually increase the height of the bench or box to mid-thigh height.

These first three steps should be accomplished within the first teaching or training session.

4. In-place Bouncing Movements:

To teach quick reaction off the ground and vertical displacement of the centre of gravity. Begin this step, which should be the start of the second session, by reviewing the first three steps. This will serve as a good warm-up as well as a review of the concepts. This step, step four, entails teaching an ankle-bounce movement, which is essentially like jumping rope without the rope. Then teach a tuck jump, emphasising quick reaction off the ground while bringing the knees to the chest. With both exercises, the athlete must keep the torso erect. Also check to see if the athlete has the balance and body control to stay in one place — if he or she cannot, then you should not move on. In this session, also teach a scissors jump in order to lead up to the cycling action of the legs that will come into play in the next step. All of the above should be accomplished within the second session.

5. Short Jumps:

To teach horizontal displacement of the centre of gravity. Begin by reviewing the previous four jumps. Then, start the athlete with three consecutive, repetitive standing long jumps (two-foot take-off and landing), and progress to five repetitive standing long jumps. Have the athlete do the same exercise going up stairs, jumping onto every other stair. Next, teach the single-leg hop and have the athlete work up to 10

consecutive hops on each leg. Emphasise the cyclic action of both the hopping and the free leg; the action should resemble a single-leg run. Repeat this step for two to three workouts before progressing to the next step.

6. Long Jumps:

To add more horizontal velocity. In this step, teach alternate leg bounding and various combinations of hops and bounds carried out for 10 to 20 contacts. This is as far as most athletes should progress in the first year of training. It is possible to increase the volume, intensity, and complexity of the workouts by adding exercises and combinations of these first six steps.

7. Shock Jumps:

To raise explosive power to the highest levels; high nervous system demand. This is an advanced form of training that requires a large training base. This consists of jumps off boxes or rebound jumps over hurdles placed at mid-thigh height or higher. The training stress is high, therefore this method should be used judiciously, and it is inappropriate for beginners.

Conclusion

Plyometric training has tremendous potential as a training method for all sports that require explosive power. Improperly introduced and taught, it is a high-risk, low-return training activity. To optimise the returns, it is necessary to follow the general guidelines set out in this article.

Acknowledgement

Klatt, Lois PhD, Director of Physical Performance Laboratory, Concordia College. Personal conversation on balance and stabilisation testing.



"Just as you would never allow anyone to put garbage in your car or home, never let anyone put no-sense and lies in your mind!"

John Lees, The move From Order-Taker To Sales Maker.

INSURANCE

AUSSI has entered into a new insurance agreement with Lowe Lippmann Bott Pty Ltd of Melbourne. The many details of the cover are available through your Branch Secretary, but points to note include:

- The Public Liability cover is now \$10 Million.
- It covers all Members, Coaches, Officials, Voluntary Workers, guest Swimmers and prospective Members (for up to four weeks) and includes personal injury arising from professional advice/services.
- It includes Member to Member liability.
- There is a \$1 Million professional indemnity cover for the National Board, all Branches and Clubs and all coaches (accredited or not), coaching AUSSI swimmers.

Included is: Breach of professional duty

Libel and slander

Loss of documents

Trade Practices Act cover

AUSSI Coaches will not now have to pay separate additional premiums.

Note Carefully that we do not cover AUSSI coaches coaching non-AUSSI groups. These coaches should seek additional cover such as that available through ASCA.

- **Included is:** \$1 Million Directors and Officers legal liability cover for all levels: Club, Branch and National and there is no excess.
- The Personal Accident cover is still \$100,000.00 for capital benefits, but there are a number of improved features with lower excesses and the aggregate limit of liability is now \$2 Million.

These new insurance arrangements are at a greater cost to AUSSI National, so may reflect in capitation fee considerations for the future. It should be noted that National capitation fee increases have been less than CPI over the last five years, whereas insurance costs have increased by about 50%.

Clubs are to ensure that good Risk Management practices are maintained, attendance records are kept for all training sessions, and in the event of an incident, at least an "Incident Report Form" is completed. Small injuries can become major problems eg calcification, then gangrene and so on, so good records become essential if our Members are to be given the full protection available to them. Document all decisions made by your Club Officers and keep concise and accurate minutes. We are a low risk sport and have an excellent "track record" of managing our affairs. Let's keep it that way - and our insurance premiums low.

The following article has been reprinted with permission from *The Masters Athlete* - Volume 10 December 1996. To subscribe to this informative newsletter send \$29.00 to Sports Performance Consultants PO Box 61 Central Queensland University PO, Rockhampton QLD 4701

Warming Up - A Scientific Approach

© by Dr Peter Reaburn

Over many years of pool and open water swimming competitions, one thing that continues to amaze me is that many masters swimmers have no idea of the benefits or art of warm-up.

Sure, most swimmers do it. But how many know what to do, how hard to do it, and when to do it? Let's try and throw some light on these questions with a scientific yet practical approach to the all-important warm-up.

Why warm-up?

Try this for a list of reasons:

- 1) Warmer muscles contract more powerfully
- 2) Blood and oxygen flows to the muscles, which are about to need plenty of oxygen to work hard
- 3) Hemoglobin and myoglobin, the oxygen transporters in blood and muscle, give up oxygen more quickly
- 4) Joints are looser and have a bigger range of motion for longer strokes
- 5) The movement pattern of the stroke gets grooved as the nerves and muscles remember technique
- 6) Psychological preparation
- 7) Picking landmarks (open water) or stroke counts from flags, block angles, water temperature, foot feel at the ends of the pool etc.
- 8) Injury prevention
- 9) Reduce the risk of abnormal heart patterns.

This last point is a valuable one, particularly for our older or novice middle-aged swimmers. A study as early as 1973 showed that abnormal electrocardiogram (ECG) readings were observed in 31 of 44 healthy middle-aged men when they did hard exercise without warming up. Doing the same exercise after warming up reduced the abnormal ECG traces to two out of 44. In the same study, the systolic blood pressure (the first figure we get when getting our blood pressure) got as high as 168 mmHg without warm up, but only 140 mmHg when warmed up. That finding says warm up is critical for people with blood pressure worries.

All of the above says that not only will we be safer with a warm up, but we'll perform better - as long as we do it correctly. So, Doc, what's the right way?

How hard should I go?

In the old days we used to believe just doing a slow warm up was the go. Sure that raised the muscle temperature and loosened joints, but did it warm us up for racing fast? Science now tells us that we need to rehearse race pace in order to fire up the nerves and muscle fibres that are going to be used in racing. Sure we don't flog ourselves to the point where we're producing high lactic acid levels or getting tired, but we must do some quality work after we've done our easy swimming.

For example, instead of just doing a 200-800m easy swim and some starts, have a go at 200-500m alternating 25's swim-drill, then do a set of 4-10 x 50's on a comfortable time base,

then 4-8 x 50's, 25- hard 25 easy on an easy time base, then a 200-400 swim down. Sounds a lot for some, but that's a warm-up.

If you're a sprinter you must do some sprints. For example, do the 4-8 x 50's above as starts and explosions for 10m increasing to 25m with long rests (walk backs, easy 75's).

For open water swimming, the same approach holds - we just don't have the walls or steps to judge distances.

When to warm up?

As close as possible to racing is the answer. It surprises me that so many masters swimmers warm-up when they arrive at a pool at the start of the meet but aren't racing for two hours. Sure I appreciate many meets don't have the luxury of a second pool. If that's the case, warm up well until you're told to get out then stay warm and loose by throwing on a tracksuit etc and stretching regularly. If you've got access to bands, use them regularly, particularly just before you race. Ensure you mimic race pace with the bands.

If you've got access to another pool, warm up as close as possible to the event without upsetting the marshals.

Stay warm. Get rugged up, jog or jump on the spot if you're a breaststroker or flyer, do some bands if you're a freestyler.

The whole aim of being warmed up as close as possible to the event is to have the heart pumping and blood and oxygen down at the muscles before you start the race. If you don't, it will take the first 50-100m to wake up the ticker. This time delay will mean lactic acid is produced in the absence of the oxygen. Lactic acid means slowing down and pain.

Other tips?

Here's some other ideas you might want to try.

- Hyperventilate just before getting onto the blocks for sprints. You only need 3-5 deep breaths. These can be done when sitting behind the blocks or waiting for starter's whistle. This doesn't get more oxygen in, it gets rid of carbon dioxide. Because carbon dioxide stimulates us to breathe, by getting rid of it from our blood through hyperventilating, our ability to hold our breath in sprints (25-100m) may be enhanced. A word of warning - hyperventilating too much can make us dizzy. If you do get dizzy, do it sitting down.
- Don't stretch immediately before getting onto the blocks. Some research suggests that this will inhibit the force of muscle contraction, something we don't need, particularly for sprints.
- Try a massage. It works for some and not for others. Theoretically, as long as it is a

light massage and not a deep one, a massage can warm up muscles and loosen us up at a time when we might be tight. Don't fall asleep!

Conclusion

I cannot emphasise enough how important it is to warm up close to the event, particularly for the endurance events. I also strongly believe that we should be doing race pace work within the warm up. Give the ideas above a go and watch those times drop.

Did You Know?

- The average man will spend about 145 days of his life shaving.
- Humans shed one complete layer of skin every four weeks.
- Fifteen million blood cells are produced and destroyed every second.
- You breathe nearly two gallons of air a minute.
- Beethoven used to pour iced water over his head to stimulate his brain.
- There are more living organisms on the skin of a single human being than there are human beings on the surface of the earth.

"Not Many People Know That!"
by Michael Caine

FROM COL E JOHNSON

Almost every Club or organisation has four bones:

- There are the WISHBONES, who spend all their time wishing someone else would do the work.
- The JAWBONES, who do all the talking and very little else.
- The KNUCKLEBONES, who knock everything that other folks do.
- And the BACKBONES who get on and do the work!!

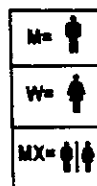
WORLD MASTERS GAMES

EVENT INFORMATION & ENTRY:

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Swimmers may enter five (5) individual events with no more than two (2) per day. Relays do not count as an entered event.



| MARK HERE WITH X | EVENT NUMBER | ENTRY TIME | EVENT | AGE GROUP | DATE |
|------------------------|-----------------|------------------|-------------------------------|----------------|-----------|
| | 01 | | W 400 Meter Individual Medley | All age groups | |
| | 03 | | W 50 Meter Freestyle | All age groups | 9 August |
| | 05 | | W 100 Meter Breast Stroke | All age groups | 9 August |
| | 07 | (see relay form) | W 200 Meter Medley Relay | All age groups | 9 August |
| | 09 | | W 200 Meter Butterfly | All age groups | 10 August |
| | 11 | | W 100 Meter Freestyle | All age groups | 10 August |
| | 13 | | W 50 Meter Backstroke | All age groups | 10 August |
| | 17 | | W 200 Meter Backstroke | All age groups | 11 August |
| | 19 | | W 50 Meter Breaststroke | All age groups | 11 August |
| | 21 | | W 400 Meter Freestyle | All age groups | 11 August |
| | 23 | | W 200 Meter Breaststroke | All age groups | 12 August |
| | 25 | | W 100 Meter Backstroke | All age groups | 12 August |
| | 27 | | W 50 Meter Butterfly | All age groups | 12 August |
| | 29 | (see relay form) | W 200 Meter Free Relay | All age groups | 12 August |
| | 31 | | W 200 Meter Individual Medley | All age groups | 13 August |
| | 33 | | W 100 Meter Butterfly | All age groups | 13 August |
| | 35 | | W 200 Meter Freestyle | All age groups | 13 August |
| | 39 | | W 800 Meter Freestyle | All age groups | 14 August |
| | 02 | | M 400 Meter Individual Medley | All age groups | 9 August |
| | 04 | | M 50 Meter Freestyle | All age groups | 9 August |
| | 06 | | M 100 Meter Breast Stroke | All age groups | 9 August |
| | 08 | (see relay form) | M 200 Meter Medley Relay | All age groups | 9 August |
| | 10 | | M 200 Meter Butterfly | All age groups | 10 August |
| | 12 | | M 100 Meter Freestyle | All age groups | 10 August |
| | 14 | | M 50 Meter Backstroke | All age groups | 10 August |
| | 18 | | M 200 Meter Backstroke | All age groups | 11 August |
| | 20 | | M 50 Meter Breaststroke | All age groups | 11 August |
| | 22 | | M 400 Meter Freestyle | All age groups | 11 August |
| | 24 | | M 200 Meter Breaststroke | All age groups | 12 August |
| | 26 | | M 100 Meter Backstroke | All age groups | 12 August |
| | 28 | | M 50 Meter Butterfly | All age groups | 12 August |
| | 30 | (see relay form) | M 200 Meter Free Relay | All age groups | 12 August |
| | 32 | | M 200 Meter Individual Medley | All age groups | 13 August |
| | 34 | | M 100 Meter Butterfly | All age groups | 13 August |
| | 36 | | M 200 Meter Freestyle | All age groups | 13 August |
| | 40 | | M 800 Meter Freestyle | All age groups | 14 August |
| | 15/16 | (see relay form) | MX 200 Meter Free Relay | All age groups | 10 August |
| | 37/38 | (see relay form) | MX 200 Meter Medley Relay | All age groups | 13 August |

REGISTRATION FORMS:

THIS FORM, YOUR ATHLETE REGISTRATION FORM AND ANY OTHER FORMS THAT APPLY TO YOUR REGISTRATION MUST BE COMPLETED AND RETURNED, WITH YOUR REGISTRATION FEES AND OTHER PAYMENTS DUE, TO:

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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 hire charges:

| | | |
|--------------|-------------|--------------|
| 1 Video | 1 week \$5 | 2 weeks \$8 |
| 2 Videos | 1 week \$8 | 2 weeks \$12 |
| 3 Video | 1 week \$10 | 2 weeks \$15 |
| 1 AudioTapes | 1 week \$3 | 2 weeks \$5 |
| 2 AudioTapes | 1 week \$5 | 2 weeks \$8 |

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

VIDEOS

♦ **Sunrice High Performance Eating Strategies**, plus booklet. A good video made better by the booklet

♦ **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

♦ **The Athletic Institute Swimming Series**
1 - Freestyle and Backstroke
2 - Breaststroke and Butterfly
3 - Starts, turns and progressive drills

♦ **AUSSI Workshop - Tailoring a Programme**, plus booklet. This video held in Tasmania features Anita Killmister

♦ **Stretching** - Bob Anderson - A really great selection of exercises demonstrating correct technique.

♦ **Food for Sport** - featuring Karen Inge. Very good!

♦ **Swimming Fastest** - John Trembley. A video and book combination. A *must* for all coaches, teachers and swimmers.

♦ **Your Backyard Pool is your Home Fitness Centre** - as the name suggests, gives ideas to utilise your pool to full advantage.

♦ **AUSKA - Swimming Strokes** - this British production covers technique and drills in all 4 strokes.

♦ **Masters Stroke Techniques** - A biomechanical analysis of the 4 strokes with demonstrations of drills by Masters.

♦ **ASCA Conference - Masters Stream** - Adelaide 1992

♦ **Strength Training** - This 30 min video provides a comprehensive update on the methods and principles of strength training, ie

Body Building
Isometrics
Maximal Weights
Eccentric exercises

Excellent for swimmers and coaches about to embark on a strength programme.

♦ **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.**

♦ **Every Second Counts** - Video plus booklet. 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.

AUDIO TAPES

♦ **The Creative Performance Institute**

1 - Guided Imagery for Racing Risk Taking and Racing

2 - Guided Imagery for Training Commitment and Training Today.

♦ **Australian Coaches Conference Series 1990**

1 - The Role of the National Coach in Australian Swimming - Don Talbot - OBE

2 - Integrating School and Club Swimming - Dick Shoulberg

3 - Managerial Perspectives of Parent, Coach, Athlete Relationships - Professor Andrew Coach

4 - Blood Lactate Responses in Masters Swimmers During Active and Passive Recovery - Dr Peter Reaburn

5 - Utilisation of Time and Space for Swimming

6 - Physiological Considerations in Tapering Swimmers - David Pyne

7 - Coaching Butterflies - Doug Frost

8 - Training and Racing the IM - Dick Shoulberg

9 - The importance of Teaching Good Technique - Laurie Lawrence

10 - The AUSTSWIM Swimming Programme - John Kilpatrick

11 - Long Distance Swimming Training - Dick Campio

12 - High Altitude Training - Ian Findlay

13 - Coaching the Elite Distance Swimmer - Ian Findlay

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AUSSI CLUB _____

I request the hire of the following items

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